Aniversity of Mumbai



Revised Syllabus and Question Paper Pattern of Courses of B.Com. (Accounting and Finance) Programme Second Year Semester III and IV

Under Choice Based Credit, Grading and Semester *System*

(To be implemented from Academic Year 2017-2018) Board of Studies-in-Accountancy

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B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System

Course Structure

S.Y.B.Com. (Accounting and Finance)

(To be implemented from Academic Year- 2017-2018)

No. of No. of Credits Credits Semester III Semester IV Courses Courses **Elective Courses (EC) Elective Courses (EC)** 1 1 **Any three courses from the 1,2 & 3 *Any three courses from the 09 1,2 & 3 09 following list of the courses following list of the courses Ability Enhancement Courses (AEC) 2 2 Ability Enhancement Courses (AEC) Ability Enhancement Compulsory Ability Enhancement Compulsory 2A 2A Course (AECC) Course (AECC) Information Technology in Information Technology in 4 03 4 03 Accountancy - I Accountancy - II ****Skill Enhancement Courses (SEC)** *Skill Enhancement Courses (SEC) 2B 2B Any one course from the Any one course from the 5 02 5 02 following list of the courses following list of the courses 3 Core Courses (CC) 3 Core Courses (CC) Business Law (Company Law) -**Business Law (Business** 6 03 6 03 Regulatory Framework) - II Ш **Business Economics - II** Research Methodology in 7 03 7 03 Accounting and Finance **Total Credits** 20 **Total Credits** 20

	*List of Skill Enhancement Courses (SEC) for Semester III (Any One)		**List of Skill Enhancement Courses (SEC) for Semester IV (Any One)
1	Foundation Course in Commerce (Financial	1	Foundation Course in Management
	Market Operations) - III		(Introduction to Management) - IV
2	Foundation Course- Contemporary Issues- III	2	Foundation Course- Contemporary Issues- IV
3	Foundation Course in NSS - III	3	Foundation Course in NSS – IV
4	Foundation Course in NCC - III	4	Foundation Course in NCC – IV
5	Foundation Course in Physical Education - III	5	Foundation Course in Physical Education -IV

*List of Elective Courses (EC) for Semester III (Any Three)		**List of Elective Courses (EC) for Semester IV (Any Three)		
1	Financial Accounting (Special Accounting Areas) - III	1	Financial Accounting (Special Accounting Areas) - IV	
2	Cost Accounting (Methods of Costing) - II	2	Management Accounting (Introduction to Management Accounting)	
3	Auditing (Techniques of Auditing and Audit Procedures) - II	3	Auditing - III	
4	Taxation - II (Direct Taxes Paper- I)	4	Taxation - III (Direct Taxes- II)	
5	Principles & Practices of Banking	5	Wealth Management	
No	te: Course selected in Semester III will continue	Note: Course selected in Semester III will continue in Semester IV		

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B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2017-2018)

Semester III

No. of Courses	Semester III	Credits
1	Elective Courses (EC) *Any three courses from the following list of the course	s
1	Financial Accounting (Special Accounting Areas) - III	03
2	Cost Accounting (Methods of Costing) - II	03
3	Auditing (Techniques of Auditing and Audit Procedures) - II	03
4	Taxation - II (Direct Taxes Paper- I)	03
5	Principles & Practices of Banking	03
2	Ability Enhancement Courses (AEC)	
2A	Ability Enhancement Compulsory Course (AECC)	
4	Information Technology in Accountancy - I	03
2B	*Skill Enhancement Courses (SEC)	
5	Any one course from the following list of the courses	02
3	Core Courses (CC)	
6	Business Law (Business Regulatory Framework) II	03
7	Business Economics II	03
	Total Credits	20

	*List of Skill Enhancement Courses (SEC) for Semester III (Any One)	
1	Foundation Course in Commerce (Financial Market Operations) - III	
2	Foundation Course- Contemporary Issues- III	
3	Foundation Course in NSS - III	
4	Foundation Course in NCC - III	
5	Foundation Course in Physical Education - III	

1. Elective Courses (EC)

Financial Accounting (Special Accounting Areas) - III

Sr.	Modules	No. of
No.		Lectures
1	Partnership Final Accounts based on Adjustment of Admission or Retirement / Death of a Partner during the Year	15
2	Piecemeal Distribution of Cash	10
3	Amalgamation of Firms	15
4	Conversion / Sale of a Partnership Firm into a Ltd. Company	10
5	Accounting of Transactions of Foreign Currency	10
	Total	60

Modules at a Glance

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Sr. No.	Modules / Units
1	Partnership Final Accounts based on Adjustment of Admission or Retirement / Death of a Partner during the Year
	Simple final accounts questions to demonstrate the effect on final Accounts when a partner is admitted during the year or when partner Retires / dies during the year Allocation of gross profit prior to and after admission / retirement / death when stock on the date of admission / retirement is not given and apportionment of other expenses based on time / Sales/other given basis Ascertainment of gross profit prior to and after admission/retirement / death when stock on the date of admission / retirement is given and apportionment of other expenses based on time / Sales / other given basis Excluding Questions where admission / retirement / death takes place in the same year
2	Piecemeal Distribution of Cash
	Excess Capital Method only Asset taken over by a partner Treatment of past profits or past losses in the Balance sheet Contingent liabilities / Realization expenses/amount kept aside for expenses and adjustment of actual Treatment of secured liabilities Treatment of preferential liabilities like Govt. dues / labour dues etc Excluding: Insolvency of partner and Maximum Loss Method
3	Amalgamation of Firms
	Realization method only Calculation of purchase consideration Journal/ledger accounts of old firms Preparing Balance sheet of new firm Adjustment of goodwill in the new firm Realignment of capitals in the new firm by current accounts / cash or a combination thereof Excluding : Common transactions between the amalgamating firms
4	Conversion / Sale of a Partnership Firm into a Ltd. Company
	Realisation method only Calculation of New Purchase consideration, Journal / Ledger Accounts of old firms. Preparing Balance sheet of new company
5	Accounting of Transactions of Foreign Currency
	In relation to purchase and sale of goods, services and assets and loan and credit transactions. Computation and treatment of exchange rate differences

Note: Relevant Law/Statute/Rules in force and relevant Accounting Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

1. Elective Courses (EC)

Cost Accounting (Methods of Costing) – II

Sr. No.	Modules	No. of Lectures
1	Classification of Costs And Cost Sheets	20
2	Reconciliation of Cost and Financial Accounts	10
3	Contract Costing	15
4	Process Costing	15
	Total	60

Sr. No.	Modules / Units	
1	Classification of Costs and Cost Sheet	
	Classification of costs, Cost of Sales, Cost Centre, Cost Unit, Profit Centre and Investment Centre	
	Cost Sheet, Total Costs and Unit Costs, Different Costs for different purpose	
	Problems on preparation of cost sheet & Estimated Cost sheet	
2	Reconciliation of cost and financial accounts	
	Practical problems based on reconciliation of cost and Financial accounts	
3	Contract Costing	
	Progress payments, Retention money, Contract accounts, Accounting for material, Accounting for Tax deducted at source by the contractee, Accounting for plant used in a contract, treatment of profit on incomplete contracts, Contract profit and Balance sheet entries. Escalation clause, practical problems	
4	Process Costing	
	Process loss, Abnormal gains and losses, Joint products and by products.	
	Excluding Equivalent units, Inter-process profit	
	Practical problems Process Costing and joint and by products	

1. Elective Courses (EC)

Auditing (Techniques of Auditing and Audit Procedures) - II

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Vouching	15
2	Verification	15
3	Auditing Standards	15
4	Audit of Companies	15
	Total	60

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Sr. No.	Modules / Units
1	Vouching
1.1	Audit of Income : Revenue from Sales and Services, Rental Income, Interest & Dividends Income, Royalties Income, Recovery of Bad debts written off, Commission Received
1.2	Audit of Expenditure : Purchases, Salaries & Wages, Rent, Insurance Premium, Telephone expense, Petty cash payment, Advertisement, Travelling Salesmen's Commission, Freight Carriage and Custom Duties
2	Verification
2.1	Audit of assets : Plant & Machinery, Furniture and fixtures, Accounts Receivable, Investments, Inventory, Goodwill, Patent Rights
2.2	Audit of Liabilities: Outstanding Expenses, Accounts Payable, Secured Ioans, Unsecured Loans, Contingent Liabilities, Public Deposits
3	Auditing Standards
3.1	Meaning Procedure of issuing Auditing Standards in India Brief overview of Auditing Standards in India Scope of SAs Significance of the Auditing Standards Responsibility of auditor for auditing standards
3.2	Understanding of following standards SA 200. SA210, SA230, SA240, SA 250, SA300,SA315, SA320, SA505.
4	Audit of Companies
	Qualifications, Disqualifications, Appointments, Reappointment, Removal of auditors. Special auditors Branch auditors Rights and duties of company auditors

Note: Relevant Law/Statute/Rules in force and relevant Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

1. Elective Courses (EC)

Taxation - II (Direct Taxes Paper- I)

Sr. No.	Modules	No. of Lectures
1	Definitions u/s – 2 , Basis of Charge and Exclusions from Total Income	15
2	Heads of Income	15
3	Deductions under Chapter VI – A	15
4	Computation of Total Income	15
	Total	60

Sr. No.	Modules / Units
1	Definitions u/s – 2 , Basis of Charge and Exclusions from Total Income
	Definitions u/s – 2 :
	Section 2 – Assessee, Assessment Year, Assessment, Annual value, Business,
	Capital asset, Income, Person, Previous Year, Transfer
	Basis of Charge
	Section 3 – 9 – Previous Year, Residential Status, Scope Of Total Income, Deemed
	Income
	Exclusions from Total Income:
	Section 10 – restricted to, Agricultural Income, Sums Received From HUF By
	Member, Share of Profit from Firm, Casual & Non – Recurring Receipts,
	Scholarships, Income of Minor Child, Allowance to Members of Parliament and
	Legislative Assembly.
	Note -Exemptions related to specific Heads of Income to be covered with
	Relevant Provisions.
2	Heads of Income
-	Various Heads of Income
	Salary Income:
	Section 15 – 17, Including Section 10 relating to
	House Rent Allowance, Travel Concession, Special Allowance, Gratuity, Pension –
	Commutation, Leave Encashment, Compensation, Voluntary Retirement,
	Payment from Provident Fund
	Income From House Property :
	Section 22 – 27, Including Section 2 – Annual Value
	Profits & Gains From Business & Profession :
	Vocation Section 28-32, 36, 37, 40, 40A, 43B, 44AD, 44ADA & 44AE
	including.: Section 2 – Business
	Capital Gains :
	Section 45, 48, 49, 50, 54 and 55
	Income from Other Sources:
•	Section 56 – 59
3	Deductions under Chapter VI – A
	80 A- Restriction on claim in Chapter VI- A deductions
	80 C – Payment of LIC/PF and other eligible investments
	80CCC – Contribution to certain Pension Fund
	80D – Medical Insurance Premium
	80 DD- Maintenance and medical treatment of handicapped dependent
	80E – Interest on Educational Loan
	80 TTA- Interest on Saving Bank account
	80U – Deduction in the case of totally blind or physically handicapped or
	mentally retarded resident person
4	Computation of Total Income
	Computation of Total Income of Individual and HUF with respect to above heads
	and deductions

immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

Principles & Practices of Banking

Sr. No.	Modules	No. of Lectures
1	Indian Financial System	15
2	Functions of Banks and related issues	20
3	Banking Technology	15
4	Marketing & Services of Banking	10
	Total	60

Modules at a Glance

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Sr. No.	Modules / Units
1	Indian Financial System
	Indian Financial system – An overview Banking Regulations Introduction to Retail Banking, wholesale banking and International banking Role of money market Debt market, capital market, Forex market & SEBI Mutual funds & Insurance companies & IRDA Factoring, Forfaiting services and off Balance sheet items Risk Management, Introduction of Basel norms CIBIL, Fair Practices code for Debt collection
2	Functions of Banks and related issues
	Banker Customer relationship KYC/AML/CFT norms Bankers special relationship Consumer protection – COPRA, Banking Ombudsman Scheme Payment and collection of cheque and other negotiable instrument Opening Accounts of various types of customers Ancillary services Cash Operations Principles of lending, working capital assessment and credit monitoring Priority sector advances Agricultural finance Micro, Small and Medium Enterprises – MSMED Act, Policy package Government Sponsored schemes –SGSY; SJSRY;PMRY;SLRS Self Help Groups Credit cards, Home loans, Personal Loans & Consumer loans Documentation Different types of charging securities Types of collaterals & their characteristics Non – Performing Assets Financial inclusion
3	Banking Technology
	Payments system & Electronic Banking Data communication and EFT Systems Role of Technology & its impact on Banks
4	Marketing & Services of Banking
	Marketing, Social Marketing Consumer behaviour and Product Pricing, distribution and channel management

Note: Relevant Law/Statute/Rules in force and relevant Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

2A. Ability Enhancement Courses (AEC)

Information Technology in Accountancy - I

Sr. No.	Modules	No. of Lectures
1	Introduction to Computers	10
2	Office Productivity Tools	20
3	Web	10
4	Introduction to Internet and other emerging technologies	10
5	Electronic Commerce	10
	Total	60

Sr. No.	Modules / Units
1	Introduction to Computers
	History of Computers Parts of Computers Hardwares: Specifications and Data Storage Management Softwares: Concept of System Software and Applications Networking: Introduction and types of network topologies
2	Office Productivity Tools
	 MS Word: Creating, Editing, Formatting and Printing of Documents, Using Tools, Mailmerge and Print Review and Set-up MS Excel: Creating Worksheet, Creating Various Formulae, Creating Charts, Rename and Copy of Worksheets, Using Tools, Printing Review and Set-up Power Point: Create Project Report, Create Slides, Animation, Page Designing, Insert Image, View Page, Print Review and Set-up. Use of Tools In Accounting :- Preparation of vouchers, invoices and reports, Calculation of Interest, Depreciation, TDS, Salary, Taxes, inventory and reconciliation
3	Web
	Use of Various Web Browser Information Searching Tools Downloading Create New email ID Sending Data through email Search engine optimisation
4	Introduction to Internet and other emerging technologies
	Introduction – Internet components – electronic commerce – e-commerce applications – Electronic Data Exchange – Extranet – Payment systems – Risks and security considerations – Legal issues – Other emerging technologies
5	Electronic Commerce
	Meaning, Advantages and Limitations of E Commerce, The role of Strategy in E Commerce, Value chains in E Commerce, Infrastructure for Electronic Commerce Web Based Tools for Electronic Commerce, Electronic Commerce software, Security Threats to electronic Commerce , Implementing Security for Electronic Commerce, Electronic Payment Systems, Strategies for Marketing, Sales & Promotion Strategies for Purchasing Logistics & Support Activities, Electronic Markets & Communities, Business Plans for Implementing Electronic Commerce.

2B. Skill Enhancement Courses (SEC)

Foundation Course in Commerce (Financial Market Operations) - III

Sr. No.	Modules	No. of Lectures
1	An Overview of the Financial System	05
2	Financial Markets	15
3	Financial Instruments	10
4	Financial Services	15
	Total	45

Sr. No.	Modules / Units	
1	An Overview of the Financial System	
	Saving and Investment Money, Inflation and Interest Banking and Non Banking Financial Intermediaries	
2	Financial Markets	
	Financial Markets: Introduction and meaning, Government Economic Philosophy and Financial Market, Structure of Financial Market in India Capital Market: Introduction and meaning, Concept, Role, Importance, Evolution in India, Primary Market System and Regulations in India, Secondary Market System Bond Market in India Debt Market in India	
3	Financial Instruments	
	Meaning and types of Financial Instruments Characteristics of Financial Instruments: Liquidity, Maturity, Safety and Yield REPO, TBs, Equities, Bonds, Derivatives, others	
4	Financial Services	
	Merchant Banking : Managing of Public Equity / Debenture Issues Mobilizing Fixed Deposits, Arranging Inter-corporate Loans, Raising term Finance and Loan Syndication. Other Financial Services: Consumer Finance, Credit Cards, Mutual Funds and Commercial Paper	

2B. Skill Enhancement Courses (SEC)

Foundation Course- Contemporary Issues- III

Sr. No.	Modules	No. of Lectures
1	Human Rights Provisions, Violations and Redressal	12
2	Dealing With Environmental Concerns	11
3	Science and Technology I	11
4	Soft Skills for Effective Interpersonal Communication	11
	Total	45

Sr. No.	Modules / Units	
1	Human Rights Violations and Redressal	
_	 A. Scheduled Castes- Constitutional and legal rights, Forms of violations, Redressal mechanisms. B. Scheduled tribes- Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Women- Constitutional and legal rights, Forms of violations, Redressal mechanisms. D. Children- Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Women- Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. 	
2	Dealing With Environmental Concerns	
	 A. Concept of Disaster and general effects of Disasters on human life- physical, psychological, economic and social effects. (3 Lectures) B. Some locally relevant case studies of environmental disasters. (2 Lectures) C. Dealing with Disasters - Factors to be considered in Prevention, Mitigation (Relief and Rehabilitation) and disaster Preparedness. (3 Lectures) D. Human Rights issues in addressing disasters- issues related to compensation, equitable and fair distribution of relief and humanitarian approach to resettlement and rehabilitation. (3 Lectures) 	
3	Science and Technology – I	
	 A. Development of Science- the ancient cultures, the Classical era, the Middle Ages, the Renaissance, the Age of Reason and Enlightenment. (3 Lectures) B. Nature of science- its principles and characteristics; Science as empirical, practical, theoretical, validated knowledge. (2 Lectures) C. Science and Superstition- the role of science in exploding myths, blind beliefs and prejudices; Science and scientific temper- scientific temper as a fundamental duty of the Indian citizen. (3 Lectures) D. Science in everyday life- technology, its meaning and role in development; Interrelation and distinction between science and technology. (3 Lectures) 	
4	Soft Skills for Effective Interpersonal Communication	
	Part A (4 Lectures) I) Effective Listening - Importance and Features. II) II) Verbal and Non-Verbal Communication; Public-Speaking and Presentation Skills. Skills. III) Barriers to Effective Communication; Importance of Self-Awareness and Body Language. (4 Lectures)	
	 Formal and Informal Communication - Purpose and Types. Writing Formal Applications, Statement of Purpose (SOP) and Resume. Preparing for Group Discussions, Interviews and Presentations. Part C (3 Lectures) 	
	 I) Leadership Skills and Self-Improvement - Characteristics of Effective Leadership. II) Styles of Leadership and Team-Building. 	

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Projects / Assignments (for Internal Assessment)

- i. Projects/Assignments should be drawn for the component on Internal Assessment from the topics in **Module 1 to Module 4**.
- ii. Students should be given a list of possible topics at least 3 from each Module at the beginning of the semester.
- iii. The Project/Assignment can take the form of Street-Plays / Power-Point Presentations / Poster Exhibitions and similar other modes of presentation appropriate to the topic.
- iv. Students can work in groups of not more than 8 per topic.
- v. Students must submit a hard / soft copy of the Project / Assignment before appearing for the semester end examination.

QUESTION PAPER PATTERN (Semester III)

The Question Paper Pattern for Semester End Examination shall be as follows:

TOTAL MARKS: 75

DURATION: 150 MINUTES

QUESTION NUMBER	DESCRIPTION	MARKS ASSIGNED
1	 i. Question 1 A will be asked on the meaning / definition of concepts / terms from all Modules. ii. Question 1 B will be asked on the topic of the Project / Assignment done by the student during the Semester iii. In all 8 Questions will be asked out of which 5 	 a) Total marks: 15 b) For 1 A, there will be 3 marks for each sub-question. c) For 1 B there will be 15 marks without any break-up.
	have to be attempted.	
2	Descriptive Question with internal option (A or B) on Module 1	15
3	Descriptive Question with internal option (A or B) on Module 2	15
4	Descriptive Question with internal option (A or B) on Module 3	15
5	Descriptive Question with internal option (A or B) on Module 4	15

2B. Skill Enhancement Courses (SEC)

Foundation Course in NSS - III

Sr. No.	Modules	No. of Lectures
1	Value System & Gender sensitivity	12
2	Disaster preparedness & Disaster management	10
3	Health, hygiene & Diseases	13
4	Environment & Energy conservation	10
	Total	45

Sr. No.	Modules / Units
1	Value System & Gender sensitivity
	UNIT - I – Value System Meaning of value, Types of values- human values and social responsibilities-
	Indian value system- the concepts and its features
	UNIT - II - Gender sensitivity and woman empowerment
	Concept of gender- causes behind gender related problems- measures Meaning of woman empowerment- schemes for woman empowerment in India
2	
2	Disaster preparedness & Disaster management
	UNIT - I - Basics of Disaster preparedness
	Disaster- its meaning and types
	Disaster preparedness- its meaning and methods UNIT - II - Disaster management
	Disaster management- concept- disaster cycle - role of technology in disaster
	response- role of as first responder – the study of 'Avhan' Model
3	Health, hygiene & Diseases
	UNIT - I - Health and hygiene
	Concept of complete health and maintenance of hygiene
	UNIT - II - Diseases and disorders- preventive campaigning
	Diseases and disorders- preventive campaigning in Malaria, Tuberculosis, Dengue,
	Cancer, HIV/AIDS, Diabetes
4	Environment & Energy conservation
	UNIT - I Environment and Environment enrichment program
	Environment- meaning, features, issues, conservation of natural resources and
	sustainability in environment
	UNIT - II Energy and Energy conservation program
	Energy- the concept, features- conventional and non- conventional energy
	Energy conservation- the meaning and importance

2B. Skill Enhancement Courses (SEC)

Foundation Course in NCC - III

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	National Integration & Awareness	10
2	Drill: Foot Drill	10
3	Adventure Training and Environment Awareness and Conservation	05
4	Personality Development and Leadership	10
5	Specialized subject (ARMY)	10
	Total	45

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Sr. No.	Modules / Units
1	National Integration & Awareness
	 Desired outcome: The students will display sense of patriotism, secular values and shall be transformed into motivated youth who will contribute towards nation building through national unity and social cohesion. The students shall enrich themselves about the history of our beloved country and will look forward for the solutions based on strengths to the challenges to the country for its development. Freedom Struggle and nationalist movement in India. National interests, Objectives, Threats and Opportunities. Problems/ Challenges of National Integration.
2	Drill: Foot Drill
	 Desired outcome: The students will demonstrate the sense of discipline, improve bearing, smartness, turnout, develop the quality of immediate and implicit obedience of orders, with good reflexes. Side pace, pace forward and to the rear Turning on the march and whiling Saluting on the march Marking time, forward march and halt in quick time Changing step Formation of squad and squad drill
3	Adventure Training, Environment Awareness and Conservation
3A	Adventure Training
	 Desired outcome: The students will overcome fear & inculcate within them the sense of adventure, sportsmanship, espirit-d-corp and develop confidence, courage, determination, diligence and quest for excellence. Any Two such as – Obstacle course, Slithering, Trekking, Cycling, Rock Climbing, Para Sailing, Sailing, Scuba Diving etc.
3B	Environment Awareness and Conservation
	 Desired outcome: The student will be made aware of the modern techniques of waste management and pollution control. Waste management Pollution control, water, Air, Noise and Soil
4	Personality Development and Leadership
	 Desired outcome: The student will inculcate officer like qualities with desired ability to take right decisions. Time management Effect of Leadership with historical examples Interview Skills Conflict Motives- Resolution

5 Specialized Subject: Army Or Navy Or Air <u>Army</u> Desired outcome: It will acquaint, expose & provide know	u ,.
	u ,.
Desired outcome: It will acquaint expose & provide know	u ,.
Navy/ Air force and to acquire information about expans	
,service subjects and important battles	
A. Armed Force	
Task and Role of Fighting Arms	
Modes of Entry to Army	
Honors and Awards	_
B. Introduction to Infantry and weapons and equipment	
 Characteristics of 5.56mm INSAS Rifle, Ammunitio Assembling and Cleaning 	n, Fire power, Stripping,
 Organization of Infantry Battalion. 	
C. Military history	
 Study of battles of Indo-Pak War 1965,1971 and K 	Cargil
War Movies	
D. Communication	
 Characteristics of Walkie-Talkies 	
Basic RT Procedure	
 Latest trends and Development (Multi Media, Vide 	eo Conferencing, IT)
OR	
Navy	
A. Naval orientation and service subjects	
 Organization of Ship- Introduction on Onboard Org 	ganization
 Naval Customs and Traditions 	
 Mode of Entry into Indian Navy 	
 Branches of the Navy and their functions 	
 Naval Campaign (Battle of Atlantic, Pearl Harbour, Review/ PFR/ IFR)s 	Falkland War/Fleet
B. Ship and Boat Modelling	
Types of Models	
 Introduction of Ship Model- Competition Types of and RDC 	Model Prepare in NSC
 Care and handling of power-tools used- maintenar 	nce and nurnose of tools

Sr. No.	Modules / Units
	C. Search and Rescue
	 Role of Indian Coast Guard related to SAR
	D. Swimming
	 Floating and Breathing Techniques- Precautions while Swimming
	OR
	AIR
	A. General Service Knowledge
	Organization Of Air Force
	Branches of the IAF.
	B. Principles of Flight
	Venturi Effect
	Aerofoil
	Forces on an Aircraft
	Lift and Drag
	C. Airmanship
	ATC/RT Procedures
	Aviation Medicine
	D. Aero- Engines
	Types of Engines
	Piston Engines
	Jet Engines
	Turboprop Engines

2B. Skill Enhancement Courses (SEC)

Foundation Course in Physical Education - III

Sr. No.	Modules	No. of Lectures
1	Overview of Nutrition	10
2	Evaluation of Health, Fitness and Wellness	10
3	Prevention and Care of Exercise Injuries	10
4	Sports Training	15
	Total	45

Sr. No.	Modules / Units
1	Overview of Nutrition
	 Introduction to nutrition & its principles Role of Nutrition in promotion of health Dietary Guidelines for Good Health Regulation of water in body and factors influencing body temperature.
2	Evaluation of Health, Fitness and Wellness
	 Meaning & Concept of holistic health Evaluating Personal health-basic parameters Evaluating Fitness Activities – Walking & Jogging Myths & mis-conceptions of Personal fitness
3	Prevention and Care of Exercise Injuries
	 Types of Exercise Injuries First Aid- Importance & application in Exercise Injuries Management of Soft tissues injuries Management of bone injuries
4	Sports Training
	 Definition, aims & objectives of Sports training Importance of Sports training Principles of Sports training Drug abuse & its effects

3. Core Courses (CC)

Business Law (Business Regulatory Framework) - II

Sr. No.	Modules	No. of Lectures
1	The Indian Partnership Act - 1932	30
2	Limited Liability Partnership Act - 2008	10
3	Factories Act - 1948	20
	Total	60

Sr. No.	Modules / Units	
1	The Indian Partnership Act - 1932	
	 a) Concept of Partnership Partnership and Company Test for determination of existence for partnership Kinds of partnership b) Registration and effects of non-registration of Partnership c) Rights and Duties of Partners d) Authority and Liability of partners e) Admission, Retirement and Expulsion of Partner f) Dissolution of Partnership 	
2	Limited Liability Partnership Act – 2008	
	a)Nature of Limited Liability Partnership b)Incorporation of Limited Liability Partnership c)Extent and Limitation of Liability of Limited Liability Partnership and Partners d)Contributions e)Conversion Into Limited Liability Partnership f)Winding Up and Dissolution	
3	Factories Act – 1948	
	 a) Definitions Section 2 (k) – Manufacturing Process, Section2 (l) –Workers Section 2 (m)– Factory b) Provisions pertaining to Health- Section 11 to Section 20 Safety- Section 21 to Section 41 Welfare- Section 42 to Section 49 	

Note: Relevant Law/ Statute/ Rules in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

3. Core Courses (CC)

Business Economics - II

Sr. No.	Modules	No. of Lectures
1	Overview of Macroeconomics	10
2	Money, prices and Inflation	10
3	Introduction to Public Finance	10
4	Public revenue, Public Expenditure and Debt	20
5	Fiscal Management and Financial Administration	10
	Total	60

Sr. No.	Modules / Units
1	Overview of Macroeconomics
	Macroeconomics: Meaning, Scope and Importance. Circular flow of aggregate income and expenditure and its Importance- closed and open economy models The Measurement of National Product: Meaning and Importance of National Income Accounting- conventional and Green GNP and NNP concepts -National Income and Economic Welfare. Trade Cycles: Features and Phases Classical Macro economics : Say's law of Markets - Features, Implications and Criticism
2	Money, prices and Inflation
	 Money Supply: Determinants of Money Supply - Factors influencing Velocity of Circulation of Money Demand for Money : Classical and Keynesian approaches and Keynes' liquidity preference theory of interest - Friedman's restatement of Demand for money Money and prices : Quantity theory of money - Fisher's equation of exchange - Cambridge cash balance approach Inflation : Demand Pull Inflation and Cost Push Inflation - Effects of Inflation-Nature of inflation in a developing economy - policy measures to curb inflation-monetary policy and inflation targeting
3	Introduction to Public Finance
	 Meaning and Scope of Public finance. Major fiscal functions : allocation function, distribution function & stabilization function Principle of Maximum Social Advantage: Dalton and Musgrave Views - the Principle in Practice, Limitations. Relation between Efficiency, Markets and Governments The concept of Public Goods and the role of Government
4	Public revenue, Public Expenditure and Debt
	 Sources of Public Revenue : tax and non-tax revenues Objectives of taxation - Canons of taxation - Types of taxes : direct and indirect - Tax Base and Rates of taxation : proportional, progressive and regressive taxation Shifting of tax burden: Impact and incidence of taxation - Processes- factors influencing incidence of taxation Economic Effects of taxation: on Income and Wealth, Consumption, Savings, Investments and Production. Redistributive and Anti – Inflationary nature of taxation and their implications Public Expenditure: Canons - classification - economic effects of public spending - on production, consumption, distribution, employment and stabilization - Theories of Public Expenditure: Wagner's Hypothesis and Wiseman Peacock Hypothesis - Causes for Public Expenditure Growth. Significance of Public Expenditure: Social security contributions- Low Income Support and Social Insurance Programmes. Public Debt : Classification - Burden of Debt Finance : Internal and External- Public Debt and Fiscal Solvency

5	Fiscal Management and Financial Administration	
	Fiscal Policy: Meaning, Objectives, constituents and Limitations.	
	Contra cyclical Fiscal Policy and Discretionary Fiscal Policy : Principles of Sound	
	and Functional Finance	
	Budget- Meaning objectives and types - Structure of Union budget - Deficit concepts-Fiscal Responsibility and Budget Management Act.	
	Intergovernmental Fiscal Relations : fiscal federalism and fiscal decentralization - central-state financial relations - 14th Finance Commission recommendations	

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2017-2018)

Semester IV

No. of	Semester IV	Credits
Courses	Semester IV	Credits
1	<i>Elective Courses (EC)</i> *Any three courses from the following list of the courses	
1	Financial Accounting (Special Accounting Areas) - IV	03
2	Management Accounting (Introduction to Management Accounting)	03
3	Auditing - III	03
4	Taxation - III (Direct Taxes- II)	03
5	Wealth Management	03
2	Ability Enhancement Courses (AEC)	
2A	Ability Enhancement Compulsory Course (AECC)	
4	Information Technology in Accountancy - II	03
2B	**Skill Enhancement Courses (SEC)	
5	Any one course from the following list of the courses	02
3	Core Courses (CC)	
6	Business Law (Company Law) - III	03
7	Research Methodology in Accounting and Finance	03
	Total Credits	20

**List of Skill Enhancement Courses (SEC) for Semester IV (Any One)	
1	Foundation Course in Management (Introduction to Management) - IV
2	Foundation Course – Contemporary Issues - IV
3	Foundation Course in NSS - IV
4	Foundation Course in NCC - IV
5	Foundation Course in Physical Education - IV

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1. Elective Courses (EC)

Financial Accounting (Special Accounting Areas) - IV

Sr. No.	Modules	No. of Lectures
1	Preparation of Final Accounts of Companies.	15
2	Redemption of Preference Shares	10
3	Redemption of Debentures	15
4	Ascertainment and Treatment of Profit Prior to Incorporation	10
5	Foreign Branch	10
	Total	60

Modules at a Glance

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Sr. No.	Modules / Units		
1	Preparation of Final Accounts of Companies		
	Relevant provisions of Companies Act related to preparation of Final Account (excluding cash flow statement) Preparation of financial statements as per Companies Act. (excluding cash flow statement) AS 1 in relation to final accounts of companies (disclosure of accounting policies)		
2	Redemption of Preference Shares		
	Provision of the Companies Act for redemption of Preference Shares (Sec 55 of the Companies Act, 2013), Companies (Share and Debentures) Rules. Methods of Redemption of fully paid up Preference Shares as per Companies Act, 2013: The proceed of a fresh issue of shares, the capitalisation of undistributed profits and a combination of both, calculation of minimum fresh issue to provide the fund for redemption, (Question on entries and/or Balance Sheet) Note: Companies governed by Section 133 of the Companies Act, 2013 and comply with the accounting standards prescribed for them. Hence, the balance in security premium account not to be utilised for premium payable on redemption of preference shares.		
3	Redemption of Debentures		
	Introduction : Provisions of Section 71 (1) and (4) of the Companies Act, 2013, Creation and investment of DRR including The Companies (Share Capital and Debentures) Rules, 2014, the methods of writing-off discount/loss on issue of debentures; Terms of issue of debentures Methods of redemption of debentures: By payment in lumpsum and by payment in instalments (excluding from by purchase in open market), Conversion. (Question on entries. ledgers and/or Balance Sheet and /or redemption of preference shares)		
4	Ascertainment and Treatment of Profit Prior to Incorporation		
	Principles for ascertainment Preparation of separate, combined and columnar Profit and Loss Account including different basis of allocation of expenses/ incomes		
5	Foreign Branch		
	Conversion as per AS 11 and incorporation in HO accounts		

1. Elective Courses (EC)

Management Accounting (Introduction to Management Accounting)

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Management Accounting	05
2	Analysis and Interpretation of Accounts	10
2	Financial Statement analysis: Ratio analysis	15
3	Cash Flow Analysis	15
4	Working Capital Management	15
	Total	60

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Sr. No.	Modules / Units
1	Introduction to Management Accounting
	Meaning, Features, Scope, Importance, Functions, role of Management
	Accounting, Management Accounting Framework, Tools, Management
	Accounting and Financial Accounting
2	Analysis and Interpretation of Accounts
	a)Vertical Forms of Balance Sheet and Profit and Loss Account suitable for analysis
	b) Trend Analysis.
	c) Comparative Statement.
	d) Common Size Statement.
2	NOTE: Practical Problems based on the above (a) to (d)
3	Financial Statement analysis: Ratio analysis
	Meaning of financial Statement Analysis, steps, Objective and types of Analysis.
	Ratio analysis: Meaning, classification, Du Point Chart, advantages and Limitations.
	Balance Sheet Ratios:
	i) Current Ratio
	ii) Liquid Ratio
	iii) Stock Working Capital Ratio
	iv) Proprietary Ratio
	v) Debt Equity Ratio
	vi) Capital Gearing Ratio
	Revenue Statement Ratios:
	i) Gross Profit Ratio
	ii) Expenses Ratio
	iii) Operating Ratio
	iv) Net Profit Ratio
	v) Net Operating Profit Ratio
	vi) Stock Turnover Ratio
	Combined Ratio
	i) Return on Capital employed (Including Long Term
	Borrowings)
	 ii) Return on proprietor's Fund (Shareholders Fund and Preference Capital)
	iii) Return on Equity Capital
	iv) Dividend Payout Ratio
	v) Debt Service Ratio
	vi) Debtors Turnover
	vii) Creditors Turnover
4	Cash Flow Analysis
	Preparation of Cash Flow Statement with reference to Accounting Standard No
	.3. (Indirect method only))
5	Working Capital Management
	A. Concept, Nature of Working Capital , Planning of Working Capital
	B. Estimation / Projection of Working Capital Requirement in case of Trading and
	Manufacturing Organization
	C. Operating Cycle Practical Problems

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1. Elective Courses (EC)

Auditing - III

Sr. No.	Modules	No. of Lectures
1	Audit Report	15
2	Audit under Computerized Information System Environment	15
3	Professional Ethics	15
4	Investigation and Due Diligence	15
	Total	60

Sr. No.	Modules / Units
1	Audit Report
	Reporting requirement under the Companies Act Qualifications in Audit Report, Disclaimers in Audit Report Adverse Opinion, Disclosures, Reports & Certificate
2	Audit under Computerized Information System Environment
	Special aspects of CIS Audit Environment , Need for review of internal control especially procedure controls and facility controls Approach to audit in CIS environment Use of computer for internal and management audit purposes Audit tools, test packs, computerized audit programmes Special aspects in Audit of E-Commerce Transaction.
3	Professional Ethics
	Code of Ethics with special reference to the relevant provisions of The Chartered Accountant Act and the Regulations thereunder The Chartered Accountant Act Schedules Members who are deemed to be in Practice Significance of the Certificate of Practice Disabilities for purpose of Membership Disciplinary Procedure Professional Misconduct
4	Investigation and Due Diligence
	Introduction Auditing and Investigation Steps in Investigation Special aspects in connection with Business Investigation Types of Investigation (only introduction) Meaning of Due Diligence Purpose of Due Diligence

Note: Relevant Law/Statute/Rules in force in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

1. Elective Courses (EC)

Taxation - III (Direct Taxes- II)

Sr. No.	Modules	No. of Lectures
1	Clubbing of Income	05
2	Set Off & Carry Forward of Losses	05
3	Computation of Tax liability of Individual & HUF	05
4	Computation of Income of Partnership Firm in Relation to Sec: 40(b) & Tax Thereon With Applicable Rate of Tax	15
5	Return of Income – Sec 139	05
6	Tax Deduction at Source Advance Tax Interest Payable	15
7	DTAA U/S 90 & 91	05
8	Tax Planning & Ethics in Taxation	05
	Total	60

Sr. No.	Modules/ Units
1	Clubbing of Income - Section 60 to 65
2	Set Off & Carry Forward of Losses
	 Sec: 70 – Set off Loss from one Source against Income from another Source under the Same Head of Income Sec: 71 – Set Off Loss from One Head against Income of another Head Sec: 71B – Carry Forward & Set off Losses from House Property Sec: 72 – Carry Forward & Set Off of Losses of Business Losses Sec: 73- Losses in Speculation Business Sec: 74- Loss under the head Capital Gains
3	Computation of Tax liability of Individual & HUF
4	Computation of Income of Partnership Firm in Relation to Sec: 40(b) & Tax Thereon With Applicable Rate of Tax
5	Return of Income – Sec 139
	Excluding u/s 139(4A), 139(4B), 139(4C) & 139 (4D)
6	Tax Deduction at Source Advance Tax U/S 207, 208, 209, 210 & 211 Interest Payable U/S 234A, 234B, 234C
	Basic Aspects of Deduction of Taxes at Source Sec: 192 – TDS on Salary Sec: 194A – TDS on Interest Sec: 194C – TDS on Contractor Sec: 194H – TDS on Commission Sec: 194I – TDS on Rent Sec: 194J – TDS on Professional Fees
	Advance Tax U/S 207, 208, 209, 210 & 211
	Sec: 207 – Income Liable to Advance Tax
	Sec: 208 – Liability of Advance Tax
	Sec: 209 – Computation of Advance Tax
	Sec: 210 – Payment of Advance Tax by Assessee on His Own Account Sec: 211 – Due Dates of Payment of Advance Tax Interest Payable U/S 234A, 234B, 234C Sec: 234A – Interest for default in furnishing return of income
	Sec: 234B – Interest for default in payment of advance tax
	Sec: 234C – Interest for deferment of advance tax
7	DTAA U/S 90 & 91
8	Tax Planning & Ethics in Taxation – Basic Concepts
Note:	

1. Relevant Law / Statute in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuing examinations after relevant year.

2. The syllabus is restricted to study of particular section/s, specifically mentioned rules and notifications only.

1. Elective Courses (EC)

Wealth Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Wealth Management	10
2	Important Numerical Concepts	20
3	Wealth Management Process	15
4	Operational Aspects of Wealth Management	15
	Total	60

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Sr. No.	Modules / Units		
1	Introduction to Wealth Management		
	Definition Wealth management and its evolution Wealth management process and phases Nature and structure of Primary and Secondary capital market Comparison between various options for investing and Risk & return analysis Role of Wealth Manager : Obligation and Responsibilities of wealth manager Qualification , Capital requirement, certification to become investment advisor Code of conduct and ethics in providing financial advice		
2	Important Numerical Concepts		
	Simple interest, Compound interest, Discounted cash flow and installment calculation Correlation, Standard deviation, covariance & Beta of portfolio Share valuation Bond valuation		
3	Wealth Management Process		
	Developing a Wealth Management Plan Essentials of a Comprehensive Wealth Plan Analysis of Different financial Products for investment Risk profiling of the client Portfolio construction Modern Portfolio Theory for constructing a portfolio		
4	Operational Aspects of wealth management		
	Types of investors PAN and KYC process Dematerialization and rematerialization of securities Power of Attorney Account opening Process of Non Resident Documentation of financial advisor		

2A. Ability Enhancement Courses (AEC)

Information Technology in Accountancy - II

Sr. No.	Modules	No. of Lectures
1	Business Process	15
2	Computerized accounting system	20
3	Concept of MIS Reports in Computer Environment	15
4	IT and Auditing	10
	Total	60

Sr. No.	Modules / Units
1	Business Process
	Introduction, Definition and Meaning of business process Flow of business process for accounting, purchase, sales and finance Classification of business processes Introduction, Definition and Meaning of Business Process Management Principles and practices of Business Process Management Business Process Management life cycle Theories of Business Management Process Implementation of Business process Management – need, key factors and importance Automation of business Processes – benefits, risks, challenges Accounting systems automation IT and Business Process Management Information systems – Meaning, Use of IT in accounacy
2	Computerized accounting system
	Introduction and meaning Uses and Benefits Role Need and requirements of computerized accounting Basic requirements of computerized accounting system Limitations of computerized accounting system Understand the development and design of a computerized accounting system; determining how the accounting data will be processed, i.e. what accounts and books are needed and what is the desired output i.e. financial reports and other reports. Accounting Software Introduction and meaning Advantages of accounting software Uses of Accounting softwares Various accounting softwares Accounting software TALLY – Accounting and reports
3	Concept of MIS Reports in Computer Environment
	Introduction Concept of MIS Need for MIS Characteristic of MIS Outputs of MIS Role of MIS Guidelines for Developing MIS reports Functional Aspects of the MIS: Problems in MIS Knowledge required for studying MIS MIS and Computer
4	IT and Auditing
	Need and importance of IT in auditing Auditing in IT environment

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2B. Skill Enhancement Courses (SEC)

Foundation Course in Management (Introduction to Management) - IV

Sr. No.	Modules	No. of Lectures
1	Introduction to Basic Management Concepts	05
2	Planning	10
3	Organising	10
4	Staffing	10
5	Directing and Controlling	10
	Total	45

Sr. No.	Modules / Units
1	Introduction to Basic Management Concepts
	Introduction to Management, Definition of Management Nature of Management Objectives of Management Administration vs Management Levels of Management Principles of Management
2	Planning
	Definition and Importance of Planning Process of Planning Limitations of Planning Features of Sound Planning Features and process of decision making
3	Organising
	Definition, nature and significance Process of organisation Principles of organisation Formal and Informal organisation - features, advantages and disadvantages Centralisation and decentralisation – factors, merits and demerits Departmentation and Delegation
4	Staffing
	Meaning, Importance of Staffing Recruitment and its sources Selection procedure Distinction between Recruitment and Selection Employment tests and types of Interview
5	Directing and Controlling
	Meaning and Importance of directing Principles of Directing Leadership trails and Styles Motivation – Importance and Factors Co-ordination – Meaning, features and Importance Meaning and steps in controlling Essentials of a good control system

2B. Skill Enhancement Courses (SEC)

Foundation Course- Contemporary Issues- IV

Sr. No.	Modules	No. of Lectures
1	Significant, Contemporary Rights of Citizens	12
2	Approaches to understanding Ecology	11
3	Science and Technology –II	11
4	Introduction to Competitive Exams	11
	Total	45

Sr. No.	Modules / Units		
1	Significant, Contemporary Rights of Citizens		
	 A. Rights of Consumers-Violations of consumer rights and important provisions of the Consumer Protection Act, 2016; Other important laws to protect consumers; Consumer courts and consumer movements. (3 Lectures) 		
	 B. Right to Information- Genesis and relation with transparency and accountability; important provisions of the Right to Information Act, 2005, some success stories. (3 Lectures) 		
	C. Protection of Citizens'/Public Interest-Public Interest Litigation, need and procedure to file a PIL; some landmark cases. (3 Lectures)		
	D. Citizens' Charters, Public Service Guarantee Acts. (3 Lectures)		
2	Approaches to understanding Ecology		
	A. Understanding approaches to ecology- Eco centrism, Ecofeminism and Deep Ecology.Biocentrism, Biocentrism and (3 Lectures)		
	 B. Environmental Principles-1: the sustainability principle; the polluter pays principle; the precautionary principle. (4 Lectures) 		
	C. Environmental Principles-2: the equity principle; human rights principles the participation principle. (4 Lectures)		
3	Science and Technology –II		
	 Part A:Some Significant Modern Technologies, Features and Applications (7 Lectures) i. Laser Technology- Light Amplification by Stimulated Emission of Radiation; use of laser in remote sensing, GIS/GPS mapping, medical use. 		
	 ii. Satellite Technology- various uses in satellite navigation systems, GPS, and imprecise climate and weather analyses. iii. Information and Communication Technology- convergence of various technologies like satellite, computer and digital in the information revolution of today's society. 		
	iv. Biotechnology and Genetic engineering- applied biology and uses ir medicine, pharmaceuticals and agriculture; genetically modified plant, anima and human life.		
	v. Nanotechnology- definition: the study, control and application of phenomen and materials at length scales below 100 nm; uses in medicine, militar intelligence and consumer products.		
	Part B:Issues of Control, Access and Misuse of Technology. (4 Lectures)		

Sr. No.	Modules / Units		
4	Introduction to Competitive Exams		
	 Part A. Basic information on Competitive Examinations- the pattern, eligibility criteria and local centres: i. Examinations conducted for entry into professional courses - Graduate Record Examinations (GRE), Graduate Management Admission Test GMAT), Common Admission Test (CAT) and Scholastic Aptitude Test (SAT). 		
	 ii. Examinations conducted for entry into jobs by Union Public Service Commission, Staff Selection Commission (SSC), State Public Service Commissions, Banking and Insurance sectors, and the National and State Eligibility Tests (NET / SET) for entry into teaching profession. 		
	Part B. Soft skills required for competitive examinations- (7 Lectures)		
	i. Information on areas tested: Quantitative Ability, Data Interpretation, Verbal Ability and Logical Reasoning, Creativity and Lateral Thinking		
	ii. Motivation: Concept, Theories and Types of Motivation		
	iii. Goal-Setting: Types of Goals, SMART Goals, Stephen Covey's concept of human endowment		
	iv. Time Management: Effective Strategies for Time Management		
	 w. Writing Skills: Paragraph Writing, Report Writing, Filing an application under the RTI Act, Consumer Grievance Letter. 		

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- 10. Reza, B. K., Disaster Management, Global Publications, New Delhi, 2010.
- 11. Sathe, Satyaranjan P., Judicial Activism in India, Oxford University Press, New Delhi, 2003.
- 12. Singh, Ashok Kumar, Science and Technology for Civil Service Examination, Tata McGraw Hill, New Delhi, 2012.
- 13. Thorpe, Edgar, General Studies Paper I Volume V, Pearson, New Delhi, 2017.

Projects / Assignments (for Internal Assessment)

- i. Projects/Assignments should be drawn for the component on Internal Assessment from the topics in **Module 1 to Module 4**.
- ii. Students should be given a list of possible topics at least 3 from each Module at the beginning of the semester.
- iii. The Project/Assignment can take the form of Street-Plays / Power-Point Presentations / Poster Exhibitions and similar other modes of presentation appropriate to the topic.
- iv. Students can work in groups of not more than 8 per topic.
- v. Students must submit a hard / soft copy of the Project / Assignment before appearing for the semester end examination.

QUESTION PAPER PATTERN (Semester III)

The Question Paper Pattern for Semester End Examination shall be as follows:

TOTAL MARKS: 75

DURATION: 150 MINUTES

QUESTION NUMBER	DESCRIPTION	MARKS ASSIGNED
1	 i. Question 1 A will be asked on the meaning / definition of concepts / terms from all Modules. ii. Question 1 B will be asked on the topic of the Project / Assignment done by the student during the Semester iii. In all 8 Questions will be asked out of which 5 	 a) Total marks: 15 b) For 1 A, there will be 3 marks for each sub-question. c) For 1 B there will be 15 marks without any break-up.
	have to be attempted.	
2	Descriptive Question with internal option (A or B) on Module 1	15
3	Descriptive Question with internal option (A or B) on Module 2	15
4	Descriptive Question with internal option (A or B) on Module 3	15
5	Descriptive Question with internal option (A or B) on Module 4	15

2B. Skill Enhancement Courses (SEC)

Foundation Course in NSS - IV

Sr. No.	Modules	No. of Lectures
1	Entrepreneurship Development	10
2	Rural Resource Mobilization	10
3	Ideal village & stake of GOS and NGO	13
4	Institutional Social Responsibility and modes of Awareness	12
	Total	45

Sr. No.	Modules / Units		
1	Entrepreneurship Development		
	 UNIT - I Entrepreneurship development Entrepreneurship development- its meaning and schemes Government and self-employment schemes for Entrepreneurship development UNIT - II - Cottage Industry Cottage Industry- its meaning, its role in development process Marketing of cottage products and outlets 		
2	Rural Resource Mobilization		
	UNIT - I - Rural resource mobilization- A case study of eco-village, eco-tourism, agro-tourism UNIT - II - Micro financing with special reference to self-help groups		
3	Ideal village & stake of GOS and NGO		
	UNIT - I - Ideal village Ideal village- the concept Gandhian Concept of Ideal village Case studies on Ideal village UNIT - II - Government Organisations(GOs) and Non-Government Organisations (NGOs) The concept and functioning		
4	Institutional Social Responsibility and modes of Awareness		
	 UNIT - I - Institutional Social Responsibilities Concept and functioning- case study of adapted village UNIT - II - Modes of awareness through fine Arts Skills Basics of performing Arts as tool for social awareness, street play, creative dance, patriotic song, folk songs and folk dance. Rangoli, posters, flip charts, placards, etc. 		

2B. Skill Enhancement Courses (SEC)

Foundation Course in NCC - IV

Sr. No.	Modules	No. of Lectures
1	Disaster Management, Social Awareness and Community Development	10
2	Health and Hygiene	10
3	Drill with Arms	05
4	Weapon Training	10
5	Specialized Subject: Army Or Navy Or Air	10
	Total	45

Sr. No.	Modules / Units		
1	Disaster Management, Social Awareness and Community Development		
	 Disaster Management: Desired outcome: The student shall gain basic information about civil defence organisation / NDMA & shall provide assistance to civil administration in various types of emergencies during natural / manmade disasters Fire Services & Fire fighting Assistance during Natural / Other Calamities: Flood / Cyclone/ Earth Quake/ Accident etc. Social Awareness and Community Development: Desired outcome: The student shall have an understanding about social evils and shall inculcate sense of whistle blowing against such evils and ways to eradicate such evils. NGOs: Role & Contribution Drug Abuse & Trafficking Corruption 		
	 Social Evil viz. Dowry/ Female Foeticide/Child Abuse & trafficking etc. Traffic Control Org. & Anti drunken Driving 		
2	Health and Hygiene		
	 Desired outcome: The student shall be fully aware about personal health and hygiene lead a healthy life style and foster habits of restraint and self awareness. Hygiene and Sanitation (Personal and Food Hygiene) Basics of Home Nursing & First-Aid in common medical emergencies Wound & Fractures 		
3	Drill with Arms		
	 Desired outcome: The students will demonstrate the sense of discipline, improve bearing, smartness, and turnout, and develop the quality of immediate and implicit obedience of orders, with good reflexes. Getting on Parade with Rifle and Dressing at the Order Dismissing and Falling Out General Salute, Salami Shastra Squad Drill Short/Long tail from the order and vice-versa Examine Arms 		
4	Weapon Training		
	 Desired outcome: The student shall have basic knowledge of weapons and their use and handling. The lying position, Holding and Aiming- I Trigger control and firing a shot Range procedure and safety precautions Theory of Group and Snap Shooting Short range firing, Aiming- II -Alteration of sight 		

Sr. No.	Modules / Units		
5	Specialized Subject: Army Or Navy Or Air		
	 Army Desired outcome: The training shall instill patriotism, commitment and passion to serve the nation motivating the youth to join the defence forces. It will also acquaint, expose & provide basic knowledge about armed, naval and air-force subjects A. Map reading Setting a Map, finding North and own position Map to ground, Ground to Map Point to Point March B. Field Craft and Battle Craft Observation, Camouflage and Concealment Field Signals Types of Knots and Lashing 		
	the guest lecturers) OR		
	Navy		
	 A. Naval Communication Semaphore Phonetic Alphabets Radio Telephony Procedure Wearing of National Flag, Ensign and Admiral's Flag. 		
	 B. Seamanship Anchor work Types of Anchor, Purpose and Holding ground Boat work Demonstrate Rigging a whaler and enterprise boat- Parts of Sail and Sailing Terms 		
	 Instructions in Enterprise Class Board including theory of Sailing, Elementary Sailing Tools Types of Power Boats Used in the Navy and their uses, Knowledge of Anchoring, Securing and Towing a Boat 		
	C. Introduction to advanced weapons and role of technology (To be covered by the guest lecturers)		

Sr. No.	Modules / Units
	OR
	Air
	A. Air frames
	Fuselage
	Main and Tail Plain
	B. Instruments
	Introduction to RADAR
	C. Aero modelling
	Flying/ Building of Aero models
	D. Introduction to advanced weapons and role of technology (To be covered by
	the guest lecturers)

2B. Skill Enhancement Courses (SEC)

Foundation Course in Physical Education - III

Sr. No.	Modules	No. of Lectures
1	Stress Management	10
2	Awards, Scholarship & Government Schemes	10
3	Yoga Education	10
4	Exercise Scheduling/Prescription	15
	Total	45

Sr. No.	Modules / Units
1	Stress Management
	 Meaning & concept of Stress Causes of Stress Managing Stress Coping Strategies
2	Awards, Scholarship & Government Schemes
	 State & National level Sports Awards State Sports Policy & Scholarship Schemes National Sports Policy & Scholarship Schemes Prominent Sports Personalities
3	Yoga Education
	 Differences between Yogic Exercises & non- Yogic exercises Contribution of Yoga to Sports Principles of Asanas & Bandha Misconceptions about Yoga
4	Exercise Scheduling/Prescription
	 Daily Routine Prescription. Understanding Activity level & Calorie requirement. Adherence & Motivation for exercise. Impact of Lifestyle on Health

3. Core Courses (CC)

Business Law (Company Law) - III

Sr. No.	Modules	No. of Lectures
1	Definitions	10
2	Incorporation of companies	20
3	Public Offer	10
4	Private Placement	10
5	Share Capital and Debentures	10
	Total	60

Sr. No.	Modules / Units
1	Definitions
	Section 2 Clause (2) – Accounting Standard Clause (7) – Auditing Standard Clause (13) – Books of Accounts Clause (31) – Deposit Clause (41) – Financial Year Clause (42) – Foreign Company Clause (42) – Independent Director Clause (48) – Indian Depository Receipts Clause (62) – One Person Company Clause (85) – Small Company
2	Incorporation of companies
	Section 3 to Section 20
3	Public Offer
	Sections 23, 25 to 28, 33, 35, 39
4	Private Placement
	Section 42
5	Share Capital and Debentures
	Sections 43, 46, 47, 52 to 56, 61 to 72

Note: Relevant Law/Statute/Rules in force in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

3. Core Courses (CC)

Research Methodology in Accounting and Finance

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Research	15
2	Research Design in Accounting and Finance	15
3	Data Collection and Processing	15
4	Interpretation and Report Writing	15
	Total	60

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Sr. No.	Modules / Units
1	Introduction to Research
	Introduction and meaning of research, Objectives of research, Features and Importance of research in Accounting and Finance, Objectives and Types of research - Basic, Applied, Descriptive, Analytical and Empirical Research. Formulation of research problem : Meaning and Selection Review of Literature
2	Research Design in Accounting and Finance
	Meaning of Introduction, Need, and Good research design. Hypothesis: Formulation, Sources, Importance and Types Different Research designs
3	Data Collection and Processing
	Data Collection: Introduction and meaning, types of data Primary data: Observation, Experimentation, Interview, Schedules, Survey, Questionnaires, Limitations of Primary data Secondary data: Sources and Limitations Factors affecting the choice of method of data collection. Sampling: Significance, Methods, Factors determining sample size Data Presentation: Significance in Research, Stages in Data Processing: Editing, Coding, Classification, Tabulation, Graphic Presentation Statistical Analysis: Tools and Techniques, Measures of Central Tendency, Measures of Dispersion, Correlation Analysis and Regression Analysis. Use of computer and internet in data collection and processing
4	Interpretation and Report Writing
	Meaning and techniques of interpretation, Research Report Writing: Importance, Essentials, Structure/ layout, Types

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Business Law (Company Law) IV

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Research Methodology in Accounting and Finance

- Research Methods in Accounting, Malcolm Smith
- Research Methods and Methodology in Finance and Accounting, by Viv Beattie and Bob Ryan

Scheme of Evaluation

The performance of the learners will be evaluated in two Components. One component will be the Internal Assessment component carrying 25% marks and the second component will be the Semester-wise End Examination component carrying 75% marks. The allocation of marks for the Internal Assessment and Semester End Examinations will be as shown below:-

A) Internal Assessment: 25 %

Question Paper Pattern (Internal Assessment- Courses without Practical Courses)

Sr. No.	Particular	Marks
1	One class test (20 Marks)	
	Match the Column/ Fill in the Blanks/ Multiple Choice Questions	05 Marks
	(½ Mark each)	
	Answer in One or Two Lines (Concept based Questions)	05 Marks
	(01 Mark each)	
	Answer in Brief (Attempt Any Two of the Three)	10 Marks
	(05 Marks each)	
2	Active participation in routine class instructional deliveries and	05 Marks
	overall conduct as a responsible learner, mannerism and	
	articulation and exhibit of leadership qualities in organizing	
	related academic activities	

Question Paper Pattern

(Internal Assessment- Courses with Practical Courses)

Sr. No.	Particular	Marks
1	Semester End Practical Examination (20 Marks)	
	Journal	05 Marks
	Viva	05 Marks
	Laboratory Work	10 Marks
2	Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks

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B) Semester End Examination: 75 %

- i) Duration: The examination shall be of 2 ½ Hours duration
- ii) Theory question paper pattern
 - There shall be five questions each of 15 marks.
 - All questions shall be compulsory with internal choice within the questions.
 - Question may be subdivided into sub-questions a, b, c... and the allocation of marks depends on the weightage of the topic.
 (Detail question paper pattern has been given separately)

Passing Standard

The learners to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Internal Assessment and Semester End Examination. The learners shall obtain minimum of 40% marks (i.e. 10 out of 25) in the Internal Assessment and 40% marks in Semester End Examination (i.e. 30 Out of 75) separately, to pass the course and minimum of Grade E to pass a particular semester A learner will be said to have passed the course if the learner passes the Internal Assessment and Semester End Examination together.

Question Paper Pattern (Practical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
Q-1	Objective Questions A) Sub Questions to be asked 10 and to be answered any 08 B) Sub Questions to be asked 10 and to be answered any 07 (*Multiple choice / True or False / Match the columns/Fill in the blanks)	15 Marks
Q-2	Full Length Practical Question OR	15 Marks
Q-2	Full Length Practical Question	15 Marks
Q-3	Full Length Practical Question OR	15 Marks
Q-3	Full Length Practical Question	15 Marks
Q-4	Full Length Practical Question OR	15 Marks
Q-4	Full Length Practical Question	15 Marks
Q-5	A) Theory questionsB) Theory questionsOR	08 Marks 07 Marks
Q-5	Short Notes To be asked 05 To be answered 03	15 Marks

Note:

Practical question of 15 marks may be divided into two sub questions of 7/8 and 10/5 Marks. If the topic demands, instead of practical questions, appropriate theory question may be asked.

Question Paper Pattern (Theoretical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question	Particular	Marks
No		
Q-1	Objective Questions	15 Marks
	A) Sub Questions to be asked 10 and to be answered any 08	
	B) Sub Questions to be asked 10 and to be answered any 07	
	(*Multiple choice / True or False / Match the columns/Fill in the blanks)	
Q-2	Full Length Question	15 Marks
	OR	
Q-2	Full Length Question	15 Marks
Q-3	Full Length Question	15 Marks
	OR	
Q-3	Full Length Question	15 Marks
Q-4	Full Length Question	15 Marks
	OR	
Q-4	Full Length Question	15 Marks
Q-5	A) Theory questions	08 Marks
	B) Theory questions	07 Marks
	OR	
Q-5	Short Notes	15 Marks
	To be asked 05	
	To be answered 03	

Note:

Theory question of 15 marks may be divided into two sub questions of 7/8 and 10/5 Marks.

Aniversity of Mumbai



Revised Syllabus and Question Paper Pattern of Courses of B.Com. (Accounting and Finance) Programme Second Year Semester III and IV

Under Choice Based Credit, Grading and Semester *System*

(To be implemented from Academic Year 2017-2018) Board of Studies-in-Accountancy

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B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System

Course Structure

S.Y.B.Com. (Accounting and Finance)

(To be implemented from Academic Year- 2017-2018)

No. of No. of Credits Credits Semester III Semester IV Courses Courses **Elective Courses (EC) Elective Courses (EC)** 1 1 **Any three courses from the 1,2 & 3 *Any three courses from the 09 1,2 & 3 09 following list of the courses following list of the courses Ability Enhancement Courses (AEC) 2 2 Ability Enhancement Courses (AEC) Ability Enhancement Compulsory Ability Enhancement Compulsory 2A 2A Course (AECC) Course (AECC) Information Technology in Information Technology in 4 03 4 03 Accountancy - I Accountancy - II ****Skill Enhancement Courses (SEC)** *Skill Enhancement Courses (SEC) 2B 2B Any one course from the Any one course from the 5 02 5 02 following list of the courses following list of the courses 3 Core Courses (CC) 3 Core Courses (CC) Business Law (Company Law) -**Business Law (Business** 6 03 6 03 Regulatory Framework) - II Ш **Business Economics - II** Research Methodology in 7 03 7 03 Accounting and Finance **Total Credits** 20 **Total Credits** 20

*List of Skill Enhancement Courses (SEC) for Semester III (Any One)			**List of Skill Enhancement Courses (SEC) for Semester IV (Any One)
1	Foundation Course in Commerce (Financial	1	Foundation Course in Management
	Market Operations) - III		(Introduction to Management) - IV
2	Foundation Course- Contemporary Issues- III	2	Foundation Course- Contemporary Issues- IV
3	Foundation Course in NSS - III	3	Foundation Course in NSS – IV
4	Foundation Course in NCC - III	4	Foundation Course in NCC – IV
5	Foundation Course in Physical Education - III	5	Foundation Course in Physical Education -IV

	*List of Elective Courses (EC) for Semester III (Any Three)		**List of Elective Courses (EC) for Semester IV (Any Three)
1	Financial Accounting (Special Accounting Areas) - III	1	Financial Accounting (Special Accounting Areas) - IV
2	Cost Accounting (Methods of Costing) - II	2	Management Accounting (Introduction to Management Accounting)
3	Auditing (Techniques of Auditing and Audit Procedures) - II	3	Auditing - III
4	Taxation - II (Direct Taxes Paper- I)	4	Taxation - III (Direct Taxes- II)
5	Principles & Practices of Banking	5	Wealth Management
No	Note: Course selected in Semester III will continue in Semester IV		

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B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2017-2018)

Semester III

No. of Courses	Semester III	
1	Elective Courses (EC) *Any three courses from the following list of the course	s
1	Financial Accounting (Special Accounting Areas) - III	03
2	Cost Accounting (Methods of Costing) - II	03
3	Auditing (Techniques of Auditing and Audit Procedures) - II	03
4	Taxation - II (Direct Taxes Paper- I)	03
5	Principles & Practices of Banking	03
2	Ability Enhancement Courses (AEC)	
2A	Ability Enhancement Compulsory Course (AECC)	
4	Information Technology in Accountancy - I	03
2B	*Skill Enhancement Courses (SEC)	
5	Any one course from the following list of the courses	02
3	Core Courses (CC)	
6	Business Law (Business Regulatory Framework) II	03
7	Business Economics II	03
	Total Credits	20

	*List of Skill Enhancement Courses (SEC) for Semester III (Any One)	
1	Foundation Course in Commerce (Financial Market Operations) - III	
2	Foundation Course- Contemporary Issues- III	
3	Foundation Course in NSS - III	
4	Foundation Course in NCC - III	
5	Foundation Course in Physical Education - III	

1. Elective Courses (EC)

Financial Accounting (Special Accounting Areas) - III

Sr.	Modules	No. of
No.		Lectures
1	Partnership Final Accounts based on Adjustment of Admission or Retirement / Death of a Partner during the Year	15
2	Piecemeal Distribution of Cash	10
3	Amalgamation of Firms	15
4	Conversion / Sale of a Partnership Firm into a Ltd. Company	10
5	Accounting of Transactions of Foreign Currency	10
	Total	60

Modules at a Glance

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Sr. No.	Modules / Units
1	Partnership Final Accounts based on Adjustment of Admission or Retirement / Death of a Partner during the Year
	Simple final accounts questions to demonstrate the effect on final Accounts when a partner is admitted during the year or when partner Retires / dies during the year Allocation of gross profit prior to and after admission / retirement / death when stock on the date of admission / retirement is not given and apportionment of other expenses based on time / Sales/other given basis Ascertainment of gross profit prior to and after admission/retirement / death when stock on the date of admission / retirement is given and apportionment of other expenses based on time / Sales / other given basis Excluding Questions where admission / retirement / death takes place in the same year
2	Piecemeal Distribution of Cash
	Excess Capital Method only Asset taken over by a partner Treatment of past profits or past losses in the Balance sheet Contingent liabilities / Realization expenses/amount kept aside for expenses and adjustment of actual Treatment of secured liabilities Treatment of preferential liabilities like Govt. dues / labour dues etc Excluding: Insolvency of partner and Maximum Loss Method
3	Amalgamation of Firms
	Realization method only Calculation of purchase consideration Journal/ledger accounts of old firms Preparing Balance sheet of new firm Adjustment of goodwill in the new firm Realignment of capitals in the new firm by current accounts / cash or a combination thereof Excluding : Common transactions between the amalgamating firms
4	Conversion / Sale of a Partnership Firm into a Ltd. Company
	Realisation method only Calculation of New Purchase consideration, Journal / Ledger Accounts of old firms. Preparing Balance sheet of new company
5	Accounting of Transactions of Foreign Currency
	In relation to purchase and sale of goods, services and assets and loan and credit transactions. Computation and treatment of exchange rate differences

Note: Relevant Law/Statute/Rules in force and relevant Accounting Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

1. Elective Courses (EC)

Cost Accounting (Methods of Costing) – II

Sr. No.	Modules	No. of Lectures
1	Classification of Costs And Cost Sheets	20
2	Reconciliation of Cost and Financial Accounts	10
3	Contract Costing	15
4	Process Costing	15
	Total	60

Sr. No.	Modules / Units		
1	Classification of Costs and Cost Sheet		
	Classification of costs, Cost of Sales, Cost Centre, Cost Unit, Profit Centre and Investment Centre		
	Cost Sheet, Total Costs and Unit Costs, Different Costs for different purpose		
	Problems on preparation of cost sheet & Estimated Cost sheet		
2	Reconciliation of cost and financial accounts		
	Practical problems based on reconciliation of cost and Financial accounts		
3	Contract Costing		
	Progress payments, Retention money, Contract accounts, Accounting for material, Accounting for Tax deducted at source by the contractee, Accounting for plant used in a contract, treatment of profit on incomplete contracts, Contract profit and Balance sheet entries. Escalation clause, practical problems		
4	Process Costing		
	Process loss, Abnormal gains and losses, Joint products and by products.		
	Excluding Equivalent units, Inter-process profit		
	Practical problems Process Costing and joint and by products		

1. Elective Courses (EC)

Auditing (Techniques of Auditing and Audit Procedures) - II

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Vouching	15
2	Verification	15
3	Auditing Standards	15
4	Audit of Companies	15
	Total	60

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Sr. No.	Modules / Units
1	Vouching
1.1	Audit of Income : Revenue from Sales and Services, Rental Income, Interest & Dividends Income, Royalties Income, Recovery of Bad debts written off, Commission Received
1.2	Audit of Expenditure : Purchases, Salaries & Wages, Rent, Insurance Premium, Telephone expense, Petty cash payment, Advertisement, Travelling Salesmen's Commission, Freight Carriage and Custom Duties
2	Verification
2.1	Audit of assets : Plant & Machinery, Furniture and fixtures, Accounts Receivable, Investments, Inventory, Goodwill, Patent Rights
2.2	Audit of Liabilities: Outstanding Expenses, Accounts Payable, Secured Ioans, Unsecured Loans, Contingent Liabilities, Public Deposits
3	Auditing Standards
3.1	Meaning Procedure of issuing Auditing Standards in India Brief overview of Auditing Standards in India Scope of SAs Significance of the Auditing Standards Responsibility of auditor for auditing standards
3.2	Understanding of following standards SA 200. SA210, SA230, SA240, SA 250, SA300,SA315, SA320, SA505.
4	Audit of Companies
	Qualifications, Disqualifications, Appointments, Reappointment, Removal of auditors. Special auditors Branch auditors Rights and duties of company auditors

Note: Relevant Law/Statute/Rules in force and relevant Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

1. Elective Courses (EC)

Taxation - II (Direct Taxes Paper- I)

Sr. No.	Modules	No. of Lectures
1	Definitions u/s – 2 , Basis of Charge and Exclusions from Total Income	15
2	Heads of Income	15
3	Deductions under Chapter VI – A	15
4	Computation of Total Income	15
	Total	60

Sr. No.	Modules / Units	
1	Definitions u/s – 2 , Basis of Charge and Exclusions from Total Income	
	Definitions u/s – 2 :	
	Section 2 – Assessee, Assessment Year, Assessment, Annual value, Business,	
	Capital asset, Income, Person, Previous Year, Transfer	
	Basis of Charge	
	Section 3 – 9 – Previous Year, Residential Status, Scope Of Total Income, Deemed	
	Income	
	Exclusions from Total Income:	
	Section 10 – restricted to, Agricultural Income, Sums Received From HUF By	
	Member, Share of Profit from Firm, Casual & Non – Recurring Receipts,	
	Scholarships, Income of Minor Child, Allowance to Members of Parliament and	
	Legislative Assembly.	
	Note -Exemptions related to specific Heads of Income to be covered with	
	Relevant Provisions.	
2	Heads of Income	
-	Various Heads of Income	
	Salary Income:	
	Section 15 – 17, Including Section 10 relating to	
	House Rent Allowance, Travel Concession, Special Allowance, Gratuity, Pension –	
	Commutation, Leave Encashment, Compensation, Voluntary Retirement,	
	Payment from Provident Fund	
	Income From House Property :	
	Section 22 – 27, Including Section 2 – Annual Value	
	Profits & Gains From Business & Profession :	
	Vocation Section 28-32, 36, 37, 40, 40A, 43B, 44AD, 44ADA & 44AE	
	including.: Section 2 – Business	
	Capital Gains :	
	Section 45, 48, 49, 50, 54 and 55	
	Income from Other Sources:	
•	Section 56 – 59	
3	Deductions under Chapter VI – A	
	80 A- Restriction on claim in Chapter VI- A deductions	
	80 C – Payment of LIC/PF and other eligible investments	
	80CCC – Contribution to certain Pension Fund	
	80D – Medical Insurance Premium	
	80 DD- Maintenance and medical treatment of handicapped dependent	
	80E – Interest on Educational Loan	
	80 TTA- Interest on Saving Bank account	
	80U – Deduction in the case of totally blind or physically handicapped or	
	mentally retarded resident person	
4	Computation of Total Income	
	Computation of Total Income of Individual and HUF with respect to above heads	
	and deductions	

immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

Principles & Practices of Banking

Sr. No.	Modules	No. of Lectures
1	Indian Financial System	15
2	Functions of Banks and related issues	20
3	Banking Technology	15
4	Marketing & Services of Banking	10
	Total	60

Modules at a Glance

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Sr. No.	Modules / Units
1	Indian Financial System
	Indian Financial system – An overview Banking Regulations Introduction to Retail Banking, wholesale banking and International banking Role of money market Debt market, capital market, Forex market & SEBI Mutual funds & Insurance companies & IRDA Factoring, Forfaiting services and off Balance sheet items Risk Management, Introduction of Basel norms CIBIL, Fair Practices code for Debt collection
2	Functions of Banks and related issues
	Banker Customer relationship KYC/AML/CFT norms Bankers special relationship Consumer protection – COPRA, Banking Ombudsman Scheme Payment and collection of cheque and other negotiable instrument Opening Accounts of various types of customers Ancillary services Cash Operations Principles of lending, working capital assessment and credit monitoring Priority sector advances Agricultural finance Micro, Small and Medium Enterprises – MSMED Act, Policy package Government Sponsored schemes –SGSY; SJSRY;PMRY;SLRS Self Help Groups Credit cards, Home loans, Personal Loans & Consumer loans Documentation Different types of charging securities Types of collaterals & their characteristics Non – Performing Assets Financial inclusion
3	Banking Technology
	Payments system & Electronic Banking Data communication and EFT Systems Role of Technology & its impact on Banks
4	Marketing & Services of Banking
	Marketing, Social Marketing Consumer behaviour and Product Pricing, distribution and channel management

Note: Relevant Law/Statute/Rules in force and relevant Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

2A. Ability Enhancement Courses (AEC)

Information Technology in Accountancy - I

Sr. No.	Modules	No. of Lectures
1	Introduction to Computers	10
2	Office Productivity Tools	20
3	Web	10
4	Introduction to Internet and other emerging technologies	10
5	Electronic Commerce	10
	Total	60

Sr. No.	Modules / Units	
1	Introduction to Computers	
	History of Computers Parts of Computers Hardwares: Specifications and Data Storage Management Softwares: Concept of System Software and Applications Networking: Introduction and types of network topologies	
2	Office Productivity Tools	
	 MS Word: Creating, Editing, Formatting and Printing of Documents, Using Tools, Mailmerge and Print Review and Set-up MS Excel: Creating Worksheet, Creating Various Formulae, Creating Charts, Rename and Copy of Worksheets, Using Tools, Printing Review and Set-up Power Point: Create Project Report, Create Slides, Animation, Page Designing, Insert Image, View Page, Print Review and Set-up. Use of Tools In Accounting :- Preparation of vouchers, invoices and reports, Calculation of Interest, Depreciation,TDS, Salary, Taxes, inventory and reconciliation 	
3	Web	
	Use of Various Web Browser Information Searching Tools Downloading Create New email ID Sending Data through email Search engine optimisation	
4	Introduction to Internet and other emerging technologies	
	Introduction – Internet components – electronic commerce – e-commerce applications – Electronic Data Exchange – Extranet – Payment systems – Risks and security considerations – Legal issues – Other emerging technologies	
5	Electronic Commerce	
	Meaning, Advantages and Limitations of E Commerce, The role of Strategy in E Commerce, Value chains in E Commerce, Infrastructure for Electronic Commerce Web Based Tools for Electronic Commerce, Electronic Commerce software, Security Threats to electronic Commerce , Implementing Security for Electronic Commerce, Electronic Payment Systems, Strategies for Marketing, Sales & Promotion Strategies for Purchasing Logistics & Support Activities, Electronic Markets & Communities, Business Plans for Implementing Electronic Commerce.	

2B. Skill Enhancement Courses (SEC)

Foundation Course in Commerce (Financial Market Operations) - III

Sr. No.	Modules	No. of Lectures
1	An Overview of the Financial System	05
2	Financial Markets	15
3	Financial Instruments	10
4	Financial Services	15
	Total	45

Sr. No.	Modules / Units
1	An Overview of the Financial System
	Saving and Investment Money, Inflation and Interest Banking and Non Banking Financial Intermediaries
2	Financial Markets
	Financial Markets: Introduction and meaning, Government Economic Philosophy and Financial Market, Structure of Financial Market in India Capital Market: Introduction and meaning, Concept, Role, Importance, Evolution in India, Primary Market System and Regulations in India, Secondary Market System Bond Market in India Debt Market in India
3	Financial Instruments
	Meaning and types of Financial Instruments Characteristics of Financial Instruments: Liquidity, Maturity, Safety and Yield REPO, TBs, Equities, Bonds, Derivatives, others
4	Financial Services
	Merchant Banking : Managing of Public Equity / Debenture Issues Mobilizing Fixed Deposits, Arranging Inter-corporate Loans, Raising term Finance and Loan Syndication. Other Financial Services: Consumer Finance, Credit Cards, Mutual Funds and Commercial Paper

2B. Skill Enhancement Courses (SEC)

Foundation Course- Contemporary Issues- III

Sr. No.	Modules	No. of Lectures
1	Human Rights Provisions, Violations and Redressal	12
2	Dealing With Environmental Concerns	11
3	Science and Technology I	11
4	Soft Skills for Effective Interpersonal Communication	11
	Total	45

Sr. No.	Modules / Units	
1	Human Rights Violations and Redressal	
_	 A. Scheduled Castes- Constitutional and legal rights, Forms of violations, Redressal mechanisms. B. Scheduled tribes- Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Women- Constitutional and legal rights, Forms of violations, Redressal mechanisms. D. Children- Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Women- Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. C. Horder Constitutional and legal rights, Forms of violations, Redressal mechanisms. 	
2	Dealing With Environmental Concerns	
	 A. Concept of Disaster and general effects of Disasters on human life- physical, psychological, economic and social effects. (3 Lectures) B. Some locally relevant case studies of environmental disasters. (2 Lectures) C. Dealing with Disasters - Factors to be considered in Prevention, Mitigation (Relief and Rehabilitation) and disaster Preparedness. (3 Lectures) D. Human Rights issues in addressing disasters- issues related to compensation, equitable and fair distribution of relief and humanitarian approach to resettlement and rehabilitation. (3 Lectures) 	
3	Science and Technology – I	
	 A. Development of Science- the ancient cultures, the Classical era, the Middle Ages, the Renaissance, the Age of Reason and Enlightenment. (3 Lectures) B. Nature of science- its principles and characteristics; Science as empirical, practical, theoretical, validated knowledge. (2 Lectures) C. Science and Superstition- the role of science in exploding myths, blind beliefs and prejudices; Science and scientific temper- scientific temper as a fundamental duty of the Indian citizen. (3 Lectures) D. Science in everyday life- technology, its meaning and role in development; Interrelation and distinction between science and technology. (3 Lectures) 	
4	Soft Skills for Effective Interpersonal Communication	
	Part A (4 Lectures) I) Effective Listening - Importance and Features. II) II) Verbal and Non-Verbal Communication; Public-Speaking and Presentation Skills. Skills. III) Barriers to Effective Communication; Importance of Self-Awareness and Body Language. (4 Lectures)	
	 Formal and Informal Communication - Purpose and Types. Writing Formal Applications, Statement of Purpose (SOP) and Resume. Preparing for Group Discussions, Interviews and Presentations. Part C (3 Lectures) 	
	 I) Leadership Skills and Self-Improvement - Characteristics of Effective Leadership. II) Styles of Leadership and Team-Building. 	

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Projects / Assignments (for Internal Assessment)

- i. Projects/Assignments should be drawn for the component on Internal Assessment from the topics in **Module 1 to Module 4**.
- ii. Students should be given a list of possible topics at least 3 from each Module at the beginning of the semester.
- iii. The Project/Assignment can take the form of Street-Plays / Power-Point Presentations / Poster Exhibitions and similar other modes of presentation appropriate to the topic.
- iv. Students can work in groups of not more than 8 per topic.
- v. Students must submit a hard / soft copy of the Project / Assignment before appearing for the semester end examination.

QUESTION PAPER PATTERN (Semester III)

The Question Paper Pattern for Semester End Examination shall be as follows:

TOTAL MARKS: 75

DURATION: 150 MINUTES

QUESTION NUMBER	DESCRIPTION	MARKS ASSIGNED
1	 i. Question 1 A will be asked on the meaning / definition of concepts / terms from all Modules. ii. Question 1 B will be asked on the topic of the Project / Assignment done by the student during the Semester iii. In all 8 Questions will be asked out of which 5 	 a) Total marks: 15 b) For 1 A, there will be 3 marks for each sub-question. c) For 1 B there will be 15 marks without any break-up.
	have to be attempted.	
2	Descriptive Question with internal option (A or B) on Module 1	15
3	Descriptive Question with internal option (A or B) on Module 2	15
4	Descriptive Question with internal option (A or B) on Module 3	15
5	Descriptive Question with internal option (A or B) on Module 4	15

2B. Skill Enhancement Courses (SEC)

Foundation Course in NSS - III

Sr. No.	Modules	No. of Lectures
1	Value System & Gender sensitivity	12
2	Disaster preparedness & Disaster management	10
3	Health, hygiene & Diseases	13
4	Environment & Energy conservation	10
	Total	45

Sr. No.	Modules / Units	
1	Value System & Gender sensitivity	
	UNIT - I – Value System Meaning of value, Types of values- human values and social responsibilities-	
	Indian value system- the concepts and its features	
	UNIT - II - Gender sensitivity and woman empowerment	
	Concept of gender- causes behind gender related problems- measures Meaning of woman empowerment- schemes for woman empowerment in India	
2		
2	Disaster preparedness & Disaster management	
	UNIT - I - Basics of Disaster preparedness	
	Disaster- its meaning and types	
	Disaster preparedness- its meaning and methods	
	UNIT - II - Disaster management	
	Disaster management- concept- disaster cycle - role of technology in disaster response- role of as first responder – the study of 'Avhan' Model	
3	Health, hygiene & Diseases	
	UNIT - I - Health and hygiene	
	Concept of complete health and maintenance of hygiene	
	UNIT - II - Diseases and disorders- preventive campaigning	
	Diseases and disorders- preventive campaigning in Malaria, Tuberculosis, Dengue,	
	Cancer, HIV/AIDS, Diabetes	
4	Environment & Energy conservation	
	UNIT - I Environment and Environment enrichment program	
	Environment- meaning, features, issues, conservation of natural resources and	
	sustainability in environment	
	UNIT - II Energy and Energy conservation program	
	Energy- the concept, features- conventional and non- conventional energy	
	Energy conservation- the meaning and importance	

2B. Skill Enhancement Courses (SEC)

Foundation Course in NCC - III

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	National Integration & Awareness	10
2	Drill: Foot Drill	10
3	Adventure Training and Environment Awareness and Conservation	05
4	Personality Development and Leadership	10
5	Specialized subject (ARMY)	10
	Total	45

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Sr. No.	Modules / Units
1	National Integration & Awareness
	 Desired outcome: The students will display sense of patriotism, secular values and shall be transformed into motivated youth who will contribute towards nation building through national unity and social cohesion. The students shall enrich themselves about the history of our beloved country and will look forward for the solutions based on strengths to the challenges to the country for its development. Freedom Struggle and nationalist movement in India. National interests, Objectives, Threats and Opportunities. Problems/ Challenges of National Integration.
2	Drill: Foot Drill
	 Desired outcome: The students will demonstrate the sense of discipline, improve bearing, smartness, turnout, develop the quality of immediate and implicit obedience of orders, with good reflexes. Side pace, pace forward and to the rear Turning on the march and whiling Saluting on the march Marking time, forward march and halt in quick time Changing step Formation of squad and squad drill
3	Adventure Training, Environment Awareness and Conservation
3A	Adventure Training
	 Desired outcome: The students will overcome fear & inculcate within them the sense of adventure, sportsmanship, espirit-d-corp and develop confidence, courage, determination, diligence and quest for excellence. Any Two such as – Obstacle course, Slithering, Trekking, Cycling, Rock Climbing, Para Sailing, Sailing, Scuba Diving etc.
3B	Environment Awareness and Conservation
	 Desired outcome: The student will be made aware of the modern techniques of waste management and pollution control. Waste management Pollution control, water, Air, Noise and Soil
4	Personality Development and Leadership
	 Desired outcome: The student will inculcate officer like qualities with desired ability to take right decisions. Time management Effect of Leadership with historical examples Interview Skills Conflict Motives- Resolution

Sr. No.	Modules / Units		
5	Specialized Subject: Army Or Navy Or Air		
	Army		
	 Desired outcome: It will acquaint, expose & provide knowledge about Army/ Navy/ Air force and to acquire information about expanse of Armed Forces ,service subjects and important battles A. Armed Force 		
	Task and Role of Fighting Arms		
	Modes of Entry to Army		
	Honors and Awards		
	B. Introduction to Infantry and weapons and equipments		
	 Characteristics of 5.56mm INSAS Rifle, Ammunition, Fire power, Stripping, Assembling and Cleaning 		
	 Organization of Infantry Battalion. 		
	C. Military history		
	 Study of battles of Indo-Pak War 1965,1971 and Kargil 		
	War Movies		
	D. Communication		
	Characteristics of Walkie-Talkies		
	Basic RT Procedure		
	 Latest trends and Development (Multi Media, Video Conferencing, IT) 		
	OR		
	Navy		
	A. Naval orientation and service subjects		
	 Organization of Ship- Introduction on Onboard Organization 		
	 Naval Customs and Traditions 		
	Mode of Entry into Indian Navy		
	 Branches of the Navy and their functions 		
	 Naval Campaign (Battle of Atlantic, Pearl Harbour, Falkland War/Fleet Review/ PFR/ IFR)s 		
	B. Ship and Boat Modelling		
	• Types of Models		
	 Introduction of Ship Model- Competition Types of Model Prepare in NSC 		
	and RDC		
	Care and handling of power-tools used- maintenance and purpose of tools		

Sr. No.	Modules / Units
	C. Search and Rescue
	Role of Indian Coast Guard related to SAR
	D. Swimming
	 Floating and Breathing Techniques- Precautions while Swimming
	OR
	AIR
	A. General Service Knowledge
	Organization Of Air Force
	Branches of the IAF.
	B. Principles of Flight
	Venturi Effect
	Aerofoil
	Forces on an Aircraft
	Lift and Drag
	C. Airmanship
	ATC/RT Procedures
	Aviation Medicine
	D. Aero- Engines
	Types of Engines
	Piston Engines
	Jet Engines
	Turboprop Engines

2B. Skill Enhancement Courses (SEC)

Foundation Course in Physical Education - III

Sr. No.	Modules	No. of Lectures
1	Overview of Nutrition	10
2	Evaluation of Health, Fitness and Wellness	10
3	Prevention and Care of Exercise Injuries	10
4	Sports Training	15
	Total	45

Sr. No.	Modules / Units
1	Overview of Nutrition
	 Introduction to nutrition & its principles Role of Nutrition in promotion of health Dietary Guidelines for Good Health Regulation of water in body and factors influencing body temperature.
2	Evaluation of Health, Fitness and Wellness
	 Meaning & Concept of holistic health Evaluating Personal health-basic parameters Evaluating Fitness Activities – Walking & Jogging Myths & mis-conceptions of Personal fitness
3	Prevention and Care of Exercise Injuries
	 Types of Exercise Injuries First Aid- Importance & application in Exercise Injuries Management of Soft tissues injuries Management of bone injuries
4	Sports Training
	 Definition, aims & objectives of Sports training Importance of Sports training Principles of Sports training Drug abuse & its effects

3. Core Courses (CC)

Business Law (Business Regulatory Framework) - II

Sr. No.	Modules	No. of Lectures
1	The Indian Partnership Act - 1932	30
2	Limited Liability Partnership Act - 2008	10
3	Factories Act - 1948	20
	Total	60

Sr. No.	Modules / Units
1	The Indian Partnership Act - 1932
	 a) Concept of Partnership Partnership and Company Test for determination of existence for partnership Kinds of partnership b) Registration and effects of non-registration of Partnership c) Rights and Duties of Partners d) Authority and Liability of partners e) Admission, Retirement and Expulsion of Partner f) Dissolution of Partnership
2	Limited Liability Partnership Act – 2008
	a)Nature of Limited Liability Partnership b)Incorporation of Limited Liability Partnership c)Extent and Limitation of Liability of Limited Liability Partnership and Partners d)Contributions e)Conversion Into Limited Liability Partnership f)Winding Up and Dissolution
3	Factories Act – 1948
	 a) Definitions Section 2 (k) – Manufacturing Process, Section2 (l) –Workers Section 2 (m)– Factory b) Provisions pertaining to Health- Section 11 to Section 20 Safety- Section 21 to Section 41 Welfare- Section 42 to Section 49

Note: Relevant Law/ Statute/ Rules in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

3. Core Courses (CC)

Business Economics - II

Sr. No.	Modules	No. of Lectures
1	Overview of Macroeconomics	10
2	Money, prices and Inflation	10
3	Introduction to Public Finance	10
4	Public revenue, Public Expenditure and Debt	20
5	Fiscal Management and Financial Administration	10
	Total	60

Sr. No.	No. Modules / Units	
1	Overview of Macroeconomics	
	Macroeconomics: Meaning, Scope and Importance. Circular flow of aggregate income and expenditure and its Importance- closed and open economy models The Measurement of National Product: Meaning and Importance of National Income Accounting- conventional and Green GNP and NNP concepts -National Income and Economic Welfare. Trade Cycles: Features and Phases Classical Macro economics : Say's law of Markets - Features, Implications and Criticism	
2	Money, prices and Inflation	
 Money Supply: Determinants of Money Supply - Factors influencing Velocity Circulation of Money Demand for Money : Classical and Keynesian approaches and Keynes' liquid preference theory of interest - Friedman's restatement of Demand for money Money and prices : Quantity theory of money - Fisher's equation of exchange Cambridge cash balance approach Inflation : Demand Pull Inflation and Cost Push Inflation - Effects of Inflation Nature of inflation in a developing economy - policy measures to curb inflation monetary policy and inflation targeting 		
3	Introduction to Public Finance	
	 Meaning and Scope of Public finance. Major fiscal functions : allocation function, distribution function & stabilization function Principle of Maximum Social Advantage: Dalton and Musgrave Views - the Principle in Practice, Limitations. Relation between Efficiency, Markets and Governments The concept of Public Goods and the role of Government 	
4	Public revenue, Public Expenditure and Debt	
	 Sources of Public Revenue : tax and non-tax revenues Objectives of taxation - Canons of taxation - Types of taxes : direct and indirect - Tax Base and Rates of taxation : proportional, progressive and regressive taxation Shifting of tax burden: Impact and incidence of taxation - Processes- factors influencing incidence of taxation Economic Effects of taxation: on Income and Wealth, Consumption, Savings, Investments and Production. Redistributive and Anti – Inflationary nature of taxation and their implications Public Expenditure: Canons - classification - economic effects of public spending - on production, consumption, distribution, employment and stabilization - Theories of Public Expenditure: Wagner's Hypothesis and Wiseman Peacock Hypothesis - Causes for Public Expenditure Growth. Significance of Public Expenditure: Social security contributions- Low Income Support and Social Insurance Programmes. Public Debt : Classification - Burden of Debt Finance : Internal and External- Public Debt and Fiscal Solvency 	

5	Fiscal Management and Financial Administration	
Fiscal Policy: Meaning, Objectives, constituents and Limitations.		
	Contra cyclical Fiscal Policy and Discretionary Fiscal Policy : Principles of Sou	
	and Functional Finance	
	Budget- Meaning objectives and types - Structure of Union budget - Deficit concepts-Fiscal Responsibility and Budget Management Act.	
	Intergovernmental Fiscal Relations : fiscal federalism and fiscal decentralization - central-state financial relations - 14th Finance Commission recommendations	

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2017-2018)

Semester IV

No. of	Semester IV	Credits
Courses	Semester IV	Credits
1	<i>Elective Courses (EC)</i> *Any three courses from the following list of the courses	
1	Financial Accounting (Special Accounting Areas) - IV	03
2	Management Accounting (Introduction to Management Accounting)	03
3	Auditing - III	03
4	Taxation - III (Direct Taxes- II)	03
5	Wealth Management	03
2	Ability Enhancement Courses (AEC)	
2A	Ability Enhancement Compulsory Course (AECC)	
4	Information Technology in Accountancy - II	03
2B	**Skill Enhancement Courses (SEC)	
5	Any one course from the following list of the courses	02
3	Core Courses (CC)	
6	Business Law (Company Law) - III	03
7	Research Methodology in Accounting and Finance	03
	Total Credits	20

**List of Skill Enhancement Courses (SEC) for Semester IV (Any One)	
1	Foundation Course in Management (Introduction to Management) - IV
2	Foundation Course – Contemporary Issues - IV
3	Foundation Course in NSS - IV
4	Foundation Course in NCC - IV
5	Foundation Course in Physical Education - IV

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1. Elective Courses (EC)

Financial Accounting (Special Accounting Areas) - IV

Sr. No.	Modules	No. of Lectures
1	Preparation of Final Accounts of Companies.	15
2	Redemption of Preference Shares	10
3	Redemption of Debentures	15
4	Ascertainment and Treatment of Profit Prior to Incorporation	10
5	Foreign Branch	10
	Total	60

Modules at a Glance

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Sr. No. Modules / Units		
1 Preparation of Final Accounts of Companies		
	Relevant provisions of Companies Act related to preparation of Final Account (excluding cash flow statement) Preparation of financial statements as per Companies Act. (excluding cash flow statement) AS 1 in relation to final accounts of companies (disclosure of accounting policies)	
2	Redemption of Preference Shares	
	 Provision of the Companies Act for redemption of Preference Shares (Sec 55 of the Companies Act, 2013), Companies (Share and Debentures) Rules. Methods of Redemption of fully paid up Preference Shares as per Companies Act 2013: The proceed of a fresh issue of shares, the capitalisation of undistributed profits and a combination of both, calculation of minimum fresh issue to provid the fund for redemption, (Question on entries and/or Balance Sheet) Note: Companies governed by Section 133 of the Companies Act, 2013 and comply with the accounting standards prescribed for them. Hence, the balance security premium account not to be utilised for premium payable on redemptio of preference shares. 	
3	Redemption of Debentures	
	Introduction : Provisions of Section 71 (1) and (4) of the Companies Act, 2013, Creation and investment of DRR including The Companies (Share Capital and Debentures) Rules, 2014, the methods of writing-off discount/loss on issue of debentures; Terms of issue of debentures Methods of redemption of debentures: By payment in lumpsum and by payment in instalments (excluding from by purchase in open market), Conversion. (Question on entries. ledgers and/or Balance Sheet and /or redemption of preference shares)	
4	Ascertainment and Treatment of Profit Prior to Incorporation	
	Principles for ascertainment Preparation of separate, combined and columnar Profit and Loss Account including different basis of allocation of expenses/ incomes	
5	Foreign Branch	
	Conversion as per AS 11 and incorporation in HO accounts	

1. Elective Courses (EC)

Management Accounting (Introduction to Management Accounting)

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Management Accounting	05
2	Analysis and Interpretation of Accounts	10
2	Financial Statement analysis: Ratio analysis	15
3	Cash Flow Analysis	15
4	Working Capital Management	15
	Total	60

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Sr. No.	Modules / Units
1	Introduction to Management Accounting
	Meaning, Features, Scope, Importance, Functions, role of Management
	Accounting, Management Accounting Framework, Tools, Management
	Accounting and Financial Accounting
2	Analysis and Interpretation of Accounts
	a)Vertical Forms of Balance Sheet and Profit and Loss Account suitable for analysis
	b) Trend Analysis.
	c) Comparative Statement.
	d) Common Size Statement.
2	NOTE: Practical Problems based on the above (a) to (d)
3	Financial Statement analysis: Ratio analysis
	Meaning of financial Statement Analysis, steps, Objective and types of Analysis.
	Ratio analysis: Meaning, classification, Du Point Chart, advantages and Limitations.
	Balance Sheet Ratios:
	i) Current Ratio
	ii) Liquid Ratio
	iii) Stock Working Capital Ratio
	iv) Proprietary Ratio
	v) Debt Equity Ratio
	vi) Capital Gearing Ratio
	Revenue Statement Ratios:
	i) Gross Profit Ratio
	ii) Expenses Ratio
	iii) Operating Ratio
	iv) Net Profit Ratio
	v) Net Operating Profit Ratio
	vi) Stock Turnover Ratio
	Combined Ratio
	i) Return on Capital employed (Including Long Term
	Borrowings)
	 ii) Return on proprietor's Fund (Shareholders Fund and Preference Capital)
	iii) Return on Equity Capital
	iv) Dividend Payout Ratio
	v) Debt Service Ratio
	vi) Debtors Turnover
	vii) Creditors Turnover
4	Cash Flow Analysis
	Preparation of Cash Flow Statement with reference to Accounting Standard No
	.3. (Indirect method only))
5	Working Capital Management
	A. Concept, Nature of Working Capital, Planning of Working Capital
	B. Estimation / Projection of Working Capital Requirement in case of Trading and
	Manufacturing Organization
	C. Operating Cycle Practical Problems

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1. Elective Courses (EC)

Auditing - III

Sr. No.	Modules	No. of Lectures
1	Audit Report	15
2	Audit under Computerized Information System Environment	15
3	Professional Ethics	15
4	Investigation and Due Diligence	15
	Total	60

Sr. No.	Modules / Units
1	Audit Report
	Reporting requirement under the Companies Act Qualifications in Audit Report, Disclaimers in Audit Report Adverse Opinion, Disclosures, Reports & Certificate
2	Audit under Computerized Information System Environment
	Special aspects of CIS Audit Environment , Need for review of internal control especially procedure controls and facility controls Approach to audit in CIS environment Use of computer for internal and management audit purposes Audit tools, test packs, computerized audit programmes Special aspects in Audit of E-Commerce Transaction.
3	Professional Ethics
	Code of Ethics with special reference to the relevant provisions of The Chartered Accountant Act and the Regulations thereunder The Chartered Accountant Act Schedules Members who are deemed to be in Practice Significance of the Certificate of Practice Disabilities for purpose of Membership Disciplinary Procedure Professional Misconduct
4	Investigation and Due Diligence
	Introduction Auditing and Investigation Steps in Investigation Special aspects in connection with Business Investigation Types of Investigation (only introduction) Meaning of Due Diligence Purpose of Due Diligence

Note: Relevant Law/Statute/Rules in force in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

1. Elective Courses (EC)

Taxation - III (Direct Taxes- II)

Sr. No.	Modules	No. of Lectures
1	Clubbing of Income	05
2	Set Off & Carry Forward of Losses	05
3	Computation of Tax liability of Individual & HUF	05
4	Computation of Income of Partnership Firm in Relation to Sec: 40(b) & Tax Thereon With Applicable Rate of Tax	15
5	Return of Income – Sec 139	05
6	Tax Deduction at Source Advance Tax Interest Payable	15
7	DTAA U/S 90 & 91	05
8	Tax Planning & Ethics in Taxation	05
	Total	60

Sr. No.	Modules/ Units
1	Clubbing of Income - Section 60 to 65
2	Set Off & Carry Forward of Losses
	 Sec: 70 – Set off Loss from one Source against Income from another Source under the Same Head of Income Sec: 71 – Set Off Loss from One Head against Income of another Head Sec: 71B – Carry Forward & Set off Losses from House Property Sec: 72 – Carry Forward & Set Off of Losses of Business Losses Sec: 73- Losses in Speculation Business Sec: 74- Loss under the head Capital Gains
3	Computation of Tax liability of Individual & HUF
4	Computation of Income of Partnership Firm in Relation to Sec: 40(b) & Tax Thereon With Applicable Rate of Tax
5	Return of Income – Sec 139
	Excluding u/s 139(4A), 139(4B), 139(4C) & 139 (4D)
6	Tax Deduction at Source Advance Tax U/S 207, 208, 209, 210 & 211 Interest Payable U/S 234A, 234B, 234C
	Basic Aspects of Deduction of Taxes at Source Sec: 192 – TDS on Salary Sec: 194A – TDS on Interest Sec: 194C – TDS on Contractor Sec: 194H – TDS on Commission Sec: 194I – TDS on Rent Sec: 194J – TDS on Professional Fees
	Advance Tax U/S 207, 208, 209, 210 & 211
	Sec: 207 – Income Liable to Advance Tax
	Sec: 208 – Liability of Advance Tax
	Sec: 209 – Computation of Advance Tax
	Sec: 210 – Payment of Advance Tax by Assessee on His Own Account Sec: 211 – Due Dates of Payment of Advance Tax Interest Payable U/S 234A, 234B, 234C Sec: 234A – Interest for default in furnishing return of income
	Sec: 234B – Interest for default in payment of advance tax
	Sec: 234C – Interest for deferment of advance tax
7	DTAA U/S 90 & 91
8	Tax Planning & Ethics in Taxation – Basic Concepts
Note:	

1. Relevant Law / Statute in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuing examinations after relevant year.

2. The syllabus is restricted to study of particular section/s, specifically mentioned rules and notifications only.

1. Elective Courses (EC)

Wealth Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Wealth Management	10
2	Important Numerical Concepts	20
3	Wealth Management Process	15
4	Operational Aspects of Wealth Management	15
	Total	60

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Sr. No.	Modules / Units
1	Introduction to Wealth Management
	Definition Wealth management and its evolution Wealth management process and phases Nature and structure of Primary and Secondary capital market Comparison between various options for investing and Risk & return analysis Role of Wealth Manager : Obligation and Responsibilities of wealth manager Qualification , Capital requirement, certification to become investment advisor Code of conduct and ethics in providing financial advice
2	Important Numerical Concepts
	Simple interest, Compound interest, Discounted cash flow and installment calculation Correlation, Standard deviation, covariance & Beta of portfolio Share valuation Bond valuation
3	Wealth Management Process
	Developing a Wealth Management Plan Essentials of a Comprehensive Wealth Plan Analysis of Different financial Products for investment Risk profiling of the client Portfolio construction Modern Portfolio Theory for constructing a portfolio
4	Operational Aspects of wealth management
	Types of investors PAN and KYC process Dematerialization and rematerialization of securities Power of Attorney Account opening Process of Non Resident Documentation of financial advisor

2A. Ability Enhancement Courses (AEC)

Information Technology in Accountancy - II

Sr. No.	Modules	No. of Lectures
1	Business Process	15
2	Computerized accounting system	20
3	Concept of MIS Reports in Computer Environment	15
4	IT and Auditing	10
	Total	60

Sr. No.	Modules / Units
1	Business Process
	Introduction, Definition and Meaning of business process Flow of business process for accounting, purchase, sales and finance Classification of business processes Introduction, Definition and Meaning of Business Process Management Principles and practices of Business Process Management Business Process Management life cycle Theories of Business Management Process Implementation of Business process Management – need, key factors and importance Automation of business Processes – benefits, risks, challenges Accounting systems automation IT and Business Process Management Information systems – Meaning, Use of IT in accounacy
2	Computerized accounting system
	Introduction and meaning Uses and Benefits Role Need and requirements of computerized accounting Basic requirements of computerized accounting system Limitations of computerized accounting system Understand the development and design of a computerized accounting system; determining how the accounting data will be processed, i.e. what accounts and books are needed and what is the desired output i.e. financial reports and other reports. Accounting Software Introduction and meaning Advantages of accounting software Uses of Accounting softwares Various accounting softwares Accounting software TALLY – Accounting and reports
3	Concept of MIS Reports in Computer Environment
	Introduction Concept of MIS Need for MIS Characteristic of MIS Outputs of MIS Role of MIS Guidelines for Developing MIS reports Functional Aspects of the MIS: Problems in MIS Knowledge required for studying MIS MIS and Computer
4	IT and Auditing
	Need and importance of IT in auditing Auditing in IT environment

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2B. Skill Enhancement Courses (SEC)

Foundation Course in Management (Introduction to Management) - IV

Sr. No.	Modules	No. of Lectures
1	Introduction to Basic Management Concepts	05
2	Planning	10
3	Organising	10
4	Staffing	10
5	Directing and Controlling	10
	Total	45

Sr. No.	Modules / Units
1	Introduction to Basic Management Concepts
	Introduction to Management, Definition of Management Nature of Management Objectives of Management Administration vs Management Levels of Management Principles of Management
2	Planning
	Definition and Importance of Planning Process of Planning Limitations of Planning Features of Sound Planning Features and process of decision making
3	Organising
	Definition, nature and significance Process of organisation Principles of organisation Formal and Informal organisation - features, advantages and disadvantages Centralisation and decentralisation – factors, merits and demerits Departmentation and Delegation
4	Staffing
	Meaning, Importance of Staffing Recruitment and its sources Selection procedure Distinction between Recruitment and Selection Employment tests and types of Interview
5	Directing and Controlling
	Meaning and Importance of directing Principles of Directing Leadership trails and Styles Motivation – Importance and Factors Co-ordination – Meaning, features and Importance Meaning and steps in controlling Essentials of a good control system

2B. Skill Enhancement Courses (SEC)

Foundation Course- Contemporary Issues- IV

Sr. No.	Modules	No. of Lectures
1	Significant, Contemporary Rights of Citizens	12
2	Approaches to understanding Ecology	11
3	Science and Technology –II	11
4	Introduction to Competitive Exams	11
	Total	45

Sr. No.	Modules / Units
1	Significant, Contemporary Rights of Citizens
	 A. Rights of Consumers-Violations of consumer rights and important provisions of the Consumer Protection Act, 2016; Other important laws to protect consumers; Consumer courts and consumer movements. (3 Lectures)
	 B. Right to Information- Genesis and relation with transparency and accountability; important provisions of the Right to Information Act, 2005, some success stories. (3 Lectures)
	C. Protection of Citizens'/Public Interest-Public Interest Litigation, need and procedure to file a PIL; some landmark cases. (3 Lectures)
	D. Citizens' Charters, Public Service Guarantee Acts. (3 Lectures)
2	Approaches to understanding Ecology
	A. Understanding approaches to ecology- Eco centrism, Ecofeminism and Deep Ecology.Biocentrism, Biocentrism and (3 Lectures)
	 B. Environmental Principles-1: the sustainability principle; the polluter pays principle; the precautionary principle. (4 Lectures)
	C. Environmental Principles-2: the equity principle; human rights principles the participation principle. (4 Lectures)
3	Science and Technology –II
	 Part A:Some Significant Modern Technologies, Features and Applications (7 Lectures) i. Laser Technology- Light Amplification by Stimulated Emission of Radiation use of laser in remote sensing, GIS/GPS mapping, medical use.
	ii. Satellite Technology- various uses in satellite navigation systems, GPS, and imprecise climate and weather analyses.
	iii. Information and Communication Technology- convergence of various technologies like satellite, computer and digital in the information revolution of today's society.
	iv. Biotechnology and Genetic engineering- applied biology and uses ir medicine, pharmaceuticals and agriculture; genetically modified plant, anima and human life.
	 Nanotechnology- definition: the study, control and application of phenomena and materials at length scales below 100 nm; uses in medicine, military intelligence and consumer products.
	Part B:Issues of Control, Access and Misuse of Technology. (4 Lectures)

Sr. No.	Modules / Units	
4	Introduction to Competitive Exams	
	 Part A. Basic information on Competitive Examinations- the pattern, eligibility criteria and local centres: i. Examinations conducted for entry into professional courses - Graduate Record Examinations (GRE), Graduate Management Admission Test GMAT), Common Admission Test (CAT) and Scholastic Aptitude Test (SAT). 	
	 ii. Examinations conducted for entry into jobs by Union Public Service Commission, Staff Selection Commission (SSC), State Public Service Commissions, Banking and Insurance sectors, and the National and State Eligibility Tests (NET / SET) for entry into teaching profession. 	
	Part B. Soft skills required for competitive examinations- (7 Lectures)	
	i. Information on areas tested: Quantitative Ability, Data Interpretation, Verbal Ability and Logical Reasoning, Creativity and Lateral Thinking	
	ii. Motivation: Concept, Theories and Types of Motivation	
	iii. Goal-Setting: Types of Goals, SMART Goals, Stephen Covey's concept of human endowment	
	iv. Time Management: Effective Strategies for Time Management	
	 w. Writing Skills: Paragraph Writing, Report Writing, Filing an application under the RTI Act, Consumer Grievance Letter. 	

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- 12. Singh, Ashok Kumar, Science and Technology for Civil Service Examination, Tata McGraw Hill, New Delhi, 2012.
- 13. Thorpe, Edgar, General Studies Paper I Volume V, Pearson, New Delhi, 2017.

Projects / Assignments (for Internal Assessment)

- i. Projects/Assignments should be drawn for the component on Internal Assessment from the topics in **Module 1 to Module 4**.
- ii. Students should be given a list of possible topics at least 3 from each Module at the beginning of the semester.
- iii. The Project/Assignment can take the form of Street-Plays / Power-Point Presentations / Poster Exhibitions and similar other modes of presentation appropriate to the topic.
- iv. Students can work in groups of not more than 8 per topic.
- v. Students must submit a hard / soft copy of the Project / Assignment before appearing for the semester end examination.

QUESTION PAPER PATTERN (Semester III)

The Question Paper Pattern for Semester End Examination shall be as follows:

TOTAL MARKS: 75

DURATION: 150 MINUTES

QUESTION NUMBER	DESCRIPTION	MARKS ASSIGNED
1	 i. Question 1 A will be asked on the meaning / definition of concepts / terms from all Modules. ii. Question 1 B will be asked on the topic of the Project / Assignment done by the student during the Semester iii. In all 8 Questions will be asked out of which 5 	 a) Total marks: 15 b) For 1 A, there will be 3 marks for each sub-question. c) For 1 B there will be 15 marks without any break-up.
	have to be attempted.	
2	Descriptive Question with internal option (A or B) on Module 1	15
3	Descriptive Question with internal option (A or B) on Module 2	15
4	Descriptive Question with internal option (A or B) on Module 3	15
5	Descriptive Question with internal option (A or B) on Module 4	15

2B. Skill Enhancement Courses (SEC)

Foundation Course in NSS - IV

Sr. No.	Modules	No. of Lectures
1	Entrepreneurship Development	10
2	Rural Resource Mobilization	10
3	Ideal village & stake of GOS and NGO	13
4	Institutional Social Responsibility and modes of Awareness	12
	Total	45

Sr. No.	Modules / Units
1	Entrepreneurship Development
	 UNIT - I Entrepreneurship development Entrepreneurship development- its meaning and schemes Government and self-employment schemes for Entrepreneurship development UNIT - II - Cottage Industry Cottage Industry- its meaning, its role in development process Marketing of cottage products and outlets
2	Rural Resource Mobilization
	UNIT - I - Rural resource mobilization- A case study of eco-village, eco-tourism, agro-tourism UNIT - II - Micro financing with special reference to self-help groups
3	Ideal village & stake of GOS and NGO
	UNIT - I - Ideal village Ideal village- the concept Gandhian Concept of Ideal village Case studies on Ideal village UNIT - II - Government Organisations(GOs) and Non-Government Organisations (NGOs) The concept and functioning
4	Institutional Social Responsibility and modes of Awareness
	 UNIT - I - Institutional Social Responsibilities Concept and functioning- case study of adapted village UNIT - II - Modes of awareness through fine Arts Skills Basics of performing Arts as tool for social awareness, street play, creative dance, patriotic song, folk songs and folk dance. Rangoli, posters, flip charts, placards, etc.

2B. Skill Enhancement Courses (SEC)

Foundation Course in NCC - IV

Sr. No.	Modules	No. of Lectures
1	Disaster Management, Social Awareness and Community Development	10
2	Health and Hygiene	10
3	Drill with Arms	05
4	Weapon Training	10
5	Specialized Subject: Army Or Navy Or Air	10
	Total	45

Sr. No.	Modules / Units
1	Disaster Management, Social Awareness and Community Development
	 Disaster Management: Desired outcome: The student shall gain basic information about civil defence organisation / NDMA & shall provide assistance to civil administration in various types of emergencies during natural / manmade disasters Fire Services & Fire fighting Assistance during Natural / Other Calamities: Flood / Cyclone/ Earth Quake/ Accident etc. Social Awareness and Community Development: Desired outcome: The student shall have an understanding about social evils and shall inculcate sense of whistle blowing against such evils and ways to eradicate such evils. NGOs: Role & Contribution Drug Abuse & Trafficking Corruption
	 Social Evil viz. Dowry/ Female Foeticide/Child Abuse & trafficking etc. Traffic Control Org. & Anti drunken Driving
2	Health and Hygiene
	 Desired outcome: The student shall be fully aware about personal health and hygiene lead a healthy life style and foster habits of restraint and self awareness. Hygiene and Sanitation (Personal and Food Hygiene) Basics of Home Nursing & First-Aid in common medical emergencies Wound & Fractures
3	Drill with Arms
	 Desired outcome: The students will demonstrate the sense of discipline, improve bearing, smartness, and turnout, and develop the quality of immediate and implicit obedience of orders, with good reflexes. Getting on Parade with Rifle and Dressing at the Order Dismissing and Falling Out General Salute, Salami Shastra Squad Drill Short/Long tail from the order and vice-versa Examine Arms
4	Weapon Training
	 Desired outcome: The student shall have basic knowledge of weapons and their use and handling. The lying position, Holding and Aiming- I Trigger control and firing a shot Range procedure and safety precautions Theory of Group and Snap Shooting Short range firing, Aiming- II -Alteration of sight

Sr. No.	Modules / Units	
5	Specialized Subject: Army Or Navy Or Air	
	 Army Desired outcome: The training shall instill patriotism, commitment and passion to serve the nation motivating the youth to join the defence forces. It will also acquaint, expose & provide basic knowledge about armed, naval and air-force subjects A. Map reading Setting a Map, finding North and own position Map to ground, Ground to Map Point to Point March B. Field Craft and Battle Craft Observation, Camouflage and Concealment Field Signals Types of Knots and Lashing 	
	the guest lecturers) OR	
	Navy	
	 A. Naval Communication Semaphore Phonetic Alphabets Radio Telephony Procedure Wearing of National Flag, Ensign and Admiral's Flag. 	
	 B. Seamanship Anchor work Types of Anchor, Purpose and Holding ground Boat work Demonstrate Rigging a whaler and enterprise boat- Parts of Sail and Sailing Terms 	
	 Instructions in Enterprise Class Board including theory of Sailing, Elementary Sailing Tools Types of Power Boats Used in the Navy and their uses, Knowledge of Anchoring, Securing and Towing a Boat 	
	C. Introduction to advanced weapons and role of technology (To be covered by the guest lecturers)	

Sr. No.	Modules / Units
	OR
	Air
	A. Air frames
	Fuselage
	Main and Tail Plain
	B. Instruments
	Introduction to RADAR
	C. Aero modelling
	Flying/ Building of Aero models
	D. Introduction to advanced weapons and role of technology (To be covered by
	the guest lecturers)

2B. Skill Enhancement Courses (SEC)

Foundation Course in Physical Education - III

Sr. No.	Modules	No. of Lectures
1	Stress Management	10
2	Awards, Scholarship & Government Schemes	10
3	Yoga Education	10
4	Exercise Scheduling/Prescription	15
	Total	45

Sr. No.	Modules / Units
1	Stress Management
	 Meaning & concept of Stress Causes of Stress Managing Stress Coping Strategies
2	Awards, Scholarship & Government Schemes
	 State & National level Sports Awards State Sports Policy & Scholarship Schemes National Sports Policy & Scholarship Schemes Prominent Sports Personalities
3	Yoga Education
	 Differences between Yogic Exercises & non- Yogic exercises Contribution of Yoga to Sports Principles of Asanas & Bandha Misconceptions about Yoga
4	Exercise Scheduling/Prescription
	 Daily Routine Prescription. Understanding Activity level & Calorie requirement. Adherence & Motivation for exercise. Impact of Lifestyle on Health

3. Core Courses (CC)

Business Law (Company Law) - III

Sr. No.	Modules	No. of Lectures
1	Definitions	10
2	Incorporation of companies	20
3	Public Offer	10
4	Private Placement	10
5	Share Capital and Debentures	10
	Total	60

Sr. No.	Modules / Units
1	Definitions
	Section 2 Clause (2) – Accounting Standard Clause (7) – Auditing Standard Clause (13) – Books of Accounts Clause (31) – Deposit Clause (41) – Financial Year Clause (42) – Foreign Company Clause (47) – Independent Director Clause (48) – Indian Depository Receipts Clause (62) – One Person Company Clause (85) – Small Company
2	Incorporation of companies
	Section 3 to Section 20
3	Public Offer
	Sections 23, 25 to 28, 33, 35, 39
4	Private Placement
	Section 42
5	Share Capital and Debentures
	Sections 43, 46, 47, 52 to 56, 61 to 72

Note: Relevant Law/Statute/Rules in force in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year.

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3. Core Courses (CC)

Research Methodology in Accounting and Finance

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Research	15
2	Research Design in Accounting and Finance	15
3	Data Collection and Processing	15
4	Interpretation and Report Writing	15
	Total	60

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Sr. No.	Modules / Units			
1	Introduction to Research			
	Introduction and meaning of research, Objectives of research, Features and Importance of research in Accounting and Finance, Objectives and Types of research - Basic, Applied, Descriptive, Analytical and Empirical Research. Formulation of research problem : Meaning and Selection Review of Literature			
2	Research Design in Accounting and Finance			
	Meaning of Introduction, Need, and Good research design. Hypothesis: Formulation, Sources, Importance and Types Different Research designs			
3	Data Collection and Processing			
	Data Collection: Introduction and meaning, types of data Primary data: Observation, Experimentation, Interview, Schedules, Survey, Questionnaires, Limitations of Primary data Secondary data: Sources and Limitations Factors affecting the choice of method of data collection. Sampling: Significance, Methods, Factors determining sample size Data Presentation: Significance in Research, Stages in Data Processing: Editing, Coding, Classification, Tabulation, Graphic Presentation Statistical Analysis: Tools and Techniques, Measures of Central Tendency, Measures of Dispersion, Correlation Analysis and Regression Analysis. Use of computer and internet in data collection and processing			
4	Interpretation and Report Writing			
	Meaning and techniques of interpretation, Research Report Writing: Importance, Essentials, Structure/ layout, Types			

Revised Syllabus of Courses of B.Com. (Accounting and Finance) Programme at Semester III with effect from the Academic Year 2017-2018

Reference Books

Reference Books Financial Accounting (Special Accounting Areas) III • Introduction to Accountancy by T.S. Grewal, S. Chand and Company (P) Ltd., New Delhi • Advance Accounts by Shukla and Grewal, S. Chand and Company (P) Ltd., New Delhi • Advanced Accountancy by R.L Gupta and M. Radhaswamy, S. Chand and Company (P) Ltd., New Delhi Modern Accountancy by Mukherjee and Hanif, Tata Mc. Grow Hill and Co. Ltd., Mumbai • Financial Accounting by Lesile Chandwichk, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi • Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd., Mumbai • Financial Accounting by P.C. Tulsian, Pearson Publications, New Delhi • Accounting Principles by R.N. Anthony and J.S. Reece, Richard Irwin, Inc • Financial Accounting by Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Mayur Paper Back, Noida • Compendium of Statement and Standard of Accounting, ICAI • Indian Accounting Standards, Ashish Bhattacharya, Tata Mc. Grow Hill and Co. Ltd., Mumbai • Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai • Company Accounting Standards by Shrinivasan Anand, Taxman, New Delhi • Financial Accounting by V. Rajasekaran, Pearson Publications, New Delhi Introduction to Financial Accounting by Horngren, Pearson Publications, New Delhi • Financial Accounting by M. Mukherjee and M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi • Financial Accounting a Managerial Perspective, Varadraj B. Bapat, Mehul Raithatha, Tata McGraw Hill Education Pvt. Ltd., New Delhi Cost Accounting (Methods of Costing) II • Lectures on Costing by Swaminathan: S. Chand and Company (P) Ltd., New Delhi • Cost Accounting by C.S. Rayudu, Tata Mc. Grow Hill and Co. Ltd., Mumbai • Cost Accounting by Jawahar Lal and Seema Srivastava, Tata Mc. Grow Hill and Co. Ltd., Mumbai • Cost Accounting by Ravi M. Kishore, Taxmann Ltd., New Delhi • Principles and Practices of Cost Accounting by N.K. Prasad, Book Syndicate Pvt. Ltd., Calcutta • Cost Accounting Theory and Practice by B.K. Bhar, Tata Mc. Grow Hill and Co. Ltd., Mumbai • Cost Accounting Principles and Practice by M.N. Arora, Vikas Publishing House Pvt. Ltd., New Delhi Advanced Cost and Management Accounting: Problems and Solutions by V.K. Saxena and C.D. Vashist, S. Chand and Company (P) Ltd., New Delhi • Cost Accounting by S.P. Jain and K.L. Narang, Kalyani Publishers, Ludhiana • Modern Cost and Management Accounting by M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi

Auditing (Techniques of Auditing and Audit Procedures)- II

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- A Handbook of Practical Auditing by B N Tandon published by S Chand & Co. New Delhi
- Fundamentals of auditing by Kamal Gupta and Ashok Arora published by Tata McGraw Hills
- Textbook of Auditing by Batra and Bagradia published by Tata McGraw Hills
- Practical Auditing by S V Ghatalia published by Spicer & Pegler

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Taxation II (Direct Taxes – I)

- Direct Taxes Law & Practice by V.K. Singhania Taxman
- Systematic Approach to Direct Tax by Ahuja & Gupta Bharat Law House
- Income Tax Ready Recknoner by Dr .V.K. Singhania Taxman
- Direct Tax Laws by T.N. Manoharan Snow White

Principles and Practices of Banking

- Bank Financial Management Paperback 2010 by IIBF (Indian Institute of Banking and Finance)
- Money Banking And Finance Paperback 2009 by N K Sinha
- Principles and Practices of Banking Paperback 2015 by IIBF (Indian Institute of Banking and Finance)
- Principles and Practices of Banking 11 edition Paperback 2015 by N S Toor, Arun Deep Toor
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- Modern Banking In India , Gupta

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- Faces of Feminine in Ancient , medivial and Modern India, Mandakranta Bose Oxford University Press
- National Humana rights commission- disability Manual
- Rural, Urban Migration : Trends, challenges & Strategies, S Rajagopalan, ICFAI- 2012
- Regional Inequilities in India Bhat L SSSRD- New Delhi
- Urbanisation in India: Challenges, Opportunities & the way forward, I J Ahluwalia, Ravi Kanbur, P K Mohanty, SAGE Pub (2014)
- The Constitution of India, P M Bakshi 2011
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- National Service Scheme Manual (Revised) 2006, Government of India, Ministry of Youth Affairs and Sports, New Delhi.
- University of Mumbai National Service Scheme Manual 2009.
- Avhan Chancellor's Brigade NSS Wing, Training camp on Disaster Preparedness Guidelines, March 2012
- Rashtriya Seva Yojana Sankalpana Prof. Dr. Sankay Chakane, Dr. Pramod\Pabrekar, Diamond Publication, Pune
- National Service Scheme Manual for NSS District Coordinators, National Service Scheme Cell, Dept. of Higher and Technical Education, Mantralaya,
- Annual report of National Service Scheme (NSS) published by Dept. of Higher and Technical Education, Mantralaya,
- NSS Cell, Dept. of Higher and Technical Education, Mantralaya, UTKARSHA- Socio and cultural guidelines
- Case material as a Training Aid for Field Workers, Gurmeet Hans.
- Social service opportunities in hospitals, Kapil K. Krishnan, TISS
- New Trends in NSS, Research papers published by University of Pune
- ANOOGUNJ Research Journal, published by NSS Unit C. K. Thakur college
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- Prof. Ghatole R.N. Rural Social Science and Community Development.

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•	Joint programme of National Service Scheme, University of Mumbai & DISHA - DEEPSHIKHA Projects, Nair Hospital, 2011-12				
•	National Service Scheme in India: A Case study of Karnataka, M. B. Dishad, Trust Publications, 2001				
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•	Social psychology, Baron & Byrne, Pearson Publication, 12th Edition self awareness know yourself /				
	insight (110) Group & Individuals (374) Group discussion				
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•	Social Psychology: Understanding Human Interaction, Baron, Robert A., (302/BAR/BYR),7th Edition				
•	Seven Habits of Highly Effective People., Covey , Stephen				
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•	The Goal, Goldratt , Eliyahu, The Northriver press ; 1994				
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•	Freedom of Religion and The Indian Judiciary, Bachal V.M. , Shubhada Saraswat, (362P)				
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•	Saha Soneri Pane, Vinayak D. Savarkar				
•	Environmental Biology and Toxicology, P.D. Sharma., Rastogi Publication				
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- Computers Subramaniam N Wheeler
- Introduction to Computers Xavier C. New Age
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Basic Computer Programmes for Business – Sternberg C – New Jersey Hayden

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- An introductory guide to Central Labour Legislation W A Dawson
- Industrial Law P L Malik
- Personnel Management and Industrial relations Kapur S, Punia B Gurgaon SK
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 Cost Management by Saxena & Vashist Cost & Management Accounting by Ravi N.Kishor ,Publication Taxmonth Essential of Management Accounting by P.N.Reddy,Himalaye Advanced Management Accounting by Robert S Kailar,Holl Financial Of Management Accounting by S.R.Varshney,Wisdom Introduction Of Management Accounting by Charbs T Horngram, PHI Learnng Management Accounting by D.K.Mattal,Galgotia Management Accounting by Khan & Jain,Tata Megaw Management Accounting by R.P.Resstogi
Auditing III
 Contemporary Auditing by Kamal Gupta, Tata Mc-Graw Hill, New Delhi A Hand-Book of Practical Auditing by B.N. Tandon, S. Chand and Company, New Delhi Fundamentals of Auditing by Kamal Gupta and Ashok Arora, Tata McGraw Hill, New Delhi Auditing: Principles and Practice by Ravinder Kumar, Virender Sharma, PHI Learning Pvt. Ltd., New Delhi Auditing and Assurance for CA IPCC by Sanjib Kumar Basu, Pearson Education, New Delhi Contemporary Auditing by Kamal Gupta, McGrow Hill Education Pvt. Ltd., New Delhi Fundamentals of Auditing by Kamal Arora and Ashok Gupta, Tata McGraw Hill, New Delhi
Direct Taxes Law & Practice by V.K. Singhania - Taxman
Systematic Approach to Direct Tax by Ahuja & Gupta - Bharat Law House

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- Wealth Engine: Indian Financial Planning and Wealth Management Handbook by Sankaran S
- WEALTH MANAGEMENT, by N/A Dun & Bradstreet

Information Technology in Accountancy II

- Fundamentals of Computers Rajaram V Prentice Hall
- Computer today (3rd edition) Sanders, Donald H McGraw Hill
- Computers and Common sense Hunt, Roger and Shelly John Prentice Hall
- Computers Subramaniam N Wheeler
- Introduction to Computers Xavier C. New Age
- Computer in Business Sanders D McGraw Hill
- Computers and Information Management S C Bhatnagar & V Ramant Prentice Hall
- Internet for Business Brummer, Lavrej Cambridge
- E-mail for Everyone Leon Alexis & leon Methews
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Foundation Course in Management (Introduction to Management) - IV

- Essentials of Management by Koontz H & W published by McGraw Hill
- Principles of Management by Ramaswamy published by Himalaya
- Management Concept and Practice by Hannagain T published by McMillan
- Basic Managerial Skills for All by McGrath E.H published by Prentice Hall of India
- Management Text and Cases by VSP Rao published by Excel Books
- Essentials of Management by Massie Joseph published by Prentice Hall of India
- Management: Principles and Guidelines by Thomas Duening & John Ivancevich published by Biztantra
- Management Concepts and Strategies by J S Chandran published by Vikas Publishing House
- Principles of Management by Tripathy P C published by Tata McGraw Hill
- Principles of Management: Theory and Practice by Sarangi S K published by V M P Publishers

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- National Service Scheme Manual (Revised) 2006, Government of India, Ministry of Youth Affairs and Sports, New Delhi.
- University of Mumbai National Service Scheme Manual 2009.
- Avhan Chancellor's Brigade NSS Wing, Training camp on Disaster Preparedness Guidelines, March 2012
- Rashtriya Seva Yojana Sankalpana Prof. Dr. Sankay Chakane, Dr. Pramod\Pabrekar, Diamond Publication, Pune
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- Purushottam Sheth, Dr. Shailaja Mane, National Service Scheme
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- http://nss.nic.in/propexpan
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Foundation Course in NCC - IV

- Cadet's Hand book Common subject..all wings, BY DG NCC, New Delhi.
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- NCC OTA Precise, BY DG NCC, New Delhi.
- "AVAN" Model of Disaster Mang., Vinayak Dalvie, Proceedings of Int. Conf. on Urban Plan. and Env Strat & Challenges, Elphinstone College, Jan 2007.
- Humanistic Tradition of India, N.L.Gupta, Mohit Publication, New Delhi
- Social psychology, Baron & Byrne, Pearson Publication, 12th Edition self awareness know yourself / insight (110) Group & Individuals (374) Group discussion
- Chanakya's 7 Secrets of Leadership, Radhakrishanan Pillai and D.Shivnandhan, Jaico
- Social Psychology: Understanding Human Interaction, Baron, Robert A., (302/BAR/BYR), 7th Edition
- Seven Habits of Highly Effective People., Covey , Stephen
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- Environmental Science, S.C. Santra, New Central Book Agency
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- Companies Act 2013 by Ravi Puliani, Bharat Publication
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Revised Syllabus of Courses of B.Com. (Accounting and Finance) Programme at Semester III and IV with effect from the Academic Year 2017-2018

Scheme of Evaluation

The performance of the learners will be evaluated in two Components. One component will be the Internal Assessment component carrying 25% marks and the second component will be the Semester-wise End Examination component carrying 75% marks. The allocation of marks for the Internal Assessment and Semester End Examinations will be as shown below:-

A) Internal Assessment: 25 %

Question Paper Pattern (Internal Assessment- Courses without Practical Courses)

Sr. No.	Particular	Marks						
1	One class test (20 Marks)							
	Match the Column/ Fill in the Blanks/ Multiple Choice Questions	05 Marks						
	(½ Mark each)							
	Answer in One or Two Lines (Concept based Questions)	05 Marks						
	(01 Mark each)							
	Answer in Brief (Attempt Any Two of the Three)							
	(05 Marks each)							
2	Active participation in routine class instructional deliveries and	05 Marks						
	overall conduct as a responsible learner, mannerism and							
	articulation and exhibit of leadership qualities in organizing							
	related academic activities							

Question Paper Pattern

(Internal Assessment- Courses with Practical Courses)

Sr. No.	Particular	Marks
1	Semester End Practical Examination (20 Marks)	
	Journal	05 Marks
	Viva	05 Marks
	Laboratory Work	10 Marks
2	Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks

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B) Semester End Examination: 75 %

- i) Duration: The examination shall be of 2 ½ Hours duration
- ii) Theory question paper pattern
 - There shall be five questions each of 15 marks.
 - All questions shall be compulsory with internal choice within the questions.
 - Question may be subdivided into sub-questions a, b, c... and the allocation of marks depends on the weightage of the topic.
 (Detail question paper pattern has been given separately)

Passing Standard

The learners to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Internal Assessment and Semester End Examination. The learners shall obtain minimum of 40% marks (i.e. 10 out of 25) in the Internal Assessment and 40% marks in Semester End Examination (i.e. 30 Out of 75) separately, to pass the course and minimum of Grade E to pass a particular semester A learner will be said to have passed the course if the learner passes the Internal Assessment and Semester End Examination together.

Question Paper Pattern (Practical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
Q-1	Objective Questions A) Sub Questions to be asked 10 and to be answered any 08 B) Sub Questions to be asked 10 and to be answered any 07 (*Multiple choice / True or False / Match the columns/Fill in the blanks)	15 Marks
Q-2	Full Length Practical Question OR	15 Marks
Q-2	Full Length Practical Question	15 Marks
Q-3	Full Length Practical Question OR	15 Marks
Q-3	Full Length Practical Question	15 Marks
Q-4	Full Length Practical Question OR	15 Marks
Q-4	Full Length Practical Question	15 Marks
Q-5	A) Theory questionsB) Theory questionsOR	08 Marks 07 Marks
Q-5	Short Notes To be asked 05 To be answered 03	15 Marks

Note:

Practical question of 15 marks may be divided into two sub questions of 7/8 and 10/5 Marks. If the topic demands, instead of practical questions, appropriate theory question may be asked.

Question Paper Pattern (Theoretical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question	Particular	Marks
No		
Q-1	Objective Questions	15 Marks
	A) Sub Questions to be asked 10 and to be answered any 08	
	B) Sub Questions to be asked 10 and to be answered any 07	
	(*Multiple choice / True or False / Match the columns/Fill in the blanks)	
Q-2	Full Length Question	15 Marks
	OR	
Q-2	Full Length Question	15 Marks
Q-3	Full Length Question	15 Marks
	OR	
Q-3	Full Length Question	15 Marks
Q-4	Full Length Question	15 Marks
	OR	
Q-4	Full Length Question	15 Marks
Q-5	A) Theory questions	08 Marks
	B) Theory questions	07 Marks
	OR	
Q-5	Short Notes	15 Marks
	To be asked 05	
	To be answered 03	

Note:

Theory question of 15 marks may be divided into two sub questions of 7/8 and 10/5 Marks.

Aniversity of Mumbai



Revised Syllabus and Question Paper Pattern of Courses

of

Bachelor of Management Studies (BMS) Programme Second Year Semester III and IV

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year- 2017-2018) Board of Studies-in-Business Management, University of Mumbai

Bachelor of Management Studies (BMS) Programme

Under Choice Based Credit, Grading and Semester System

Course Structure

SYBMS

(To be implemented from Academic Year- 2017-2018)

No. of Courses	Semester III	Credits	No. of Courses	Semester IV	Credits
1	Elective Courses (EC)		1	Elective Courses (EC)	
1 & 2	*Any one group of courses from the following list of the courses	06	1 & 2	** Any one group of courses from the following list of the courses	06
2	Ability Enhancement Courses (A	AEC)	2	Ability Enhancement Courses (AEC)
2A	Ability Enhancement Compulsory Courses (AECC)		2A	Ability Enhancement Compulsory Courses (AECC)	
3	Information Technology in Business Management - I	03	3	Information Technology in Business Management-II	03
2B	Skill Enhancement Courses (SEC)	2B	Skill Enhancement Courses (SEC)	
4	Foundation Course – III	02	4	Foundation course-IV	02
3	Core Courses (CC)		3	Core Courses (CC)	
5	Business Planning & Entrepreneurial Management	03	5	Business Economics-II	03
6	Accounting for Managerial Decisions	03	6	Business Research Methods	03
7	Strategic Management	03	7	Production & Total Quality Management	03
Total Credits		20		Total Credits	20

*List of Skill Enhancement Courses (SEC) for Semester III (Any One)		**List of Skill Enhancement Courses (SEC) for Semester II (Any One)	
1	Foundation Course (Environmental Management) - III	1	Foundation Course (Ethics & Governance)- IV
2	Foundation Course-Contemporary Issues-III	2	Foundation Course-Contemporary Issues-IV
3	Foundation Course in NSS - III	3	Foundation Course in NSS - IV
4	Foundation Course in NCC - III	4	Foundation Course in NCC - IV
5	Foundation Course in Physical Education- III	5	Foundation Course in Physical Education- IV
Note: Course selected in Semester I will continue in Semester III & IV			

*List of group of Elective Courses(EC) for Semester III (Any two)		** List of group of Elective Courses(EC) for Semester IV (Any two)			
	Group A: Finance Electives (Any Two Courses)				
1	Basics of Financial Services	1	Financial Institutions & Markets		
2	Introduction to Cost Accounting	2	Auditing		
3	Equity & Debt Market	3	Strategic Cost Management		
4	Corporate Finance	4	Corporate Restructuring		
	Group B:Marketing Elec	ctives	s (Any Two Courses)		
1	Consumer Behaviour	1	Integrated Marketing Communication		
2	Product Innovations Management	2	Rural Marketing		
3	Advertising	3	Event Marketing		
4	Social Marketing	4	Tourism Marketing		
	Group C: Human Resource	Elect	tives(Any Two Courses)		
1	Recruitment & Selection	1	Human Resource Planning & Information System		
2	Motivation and Leadership	2	Training & Development in HRM		
3	Employees Relations & Welfare	3	Change Management		
4	Organisation Behaviour & HRM	4	Conflict & Negotiation		
Note: Group Selected in Semester III will continue in Semester IV.					

Bachelor of Management Studies (BMS) Programme

Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

Semester III

No. of Courses	Semester III	Credits	
1	Elective Courses (EC)		
1 & 2	*Any one group of courses from the following list of the courses	06	
2	Ability Enhancement Courses (AEC)		
2A	Ability Enhancement Compulsory Course (AECC)		
3	3 Information Technology in Business Management - I		
2B	*Skill Enhancement Courses (SEC)		
4	Any one course from the following list of the courses		
3 Core Courses (CC)			
5	Business Planning & Entrepreneurial Management	03	
6	6 Accounting for Managerial Decisions		
7	7 Strategic Management		
	Total Credits	20	

	undation Course (Environmental Management) - III
2 Fou	
	undation Course-Contemporary Issues-III
3 Fou	undation Course in NSS - III
4 Fou	undation Course in NCC - III
5 Fou	undation Course in Physical Education - III

Elective Courses (EC) Group A. Finance Electives

1. Basics of Financial Services

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Financial System	14
2	Commercial Banks, RBI And Development Banks	16
3	Insurance	15
4	Mutual Funds	15
	Total	60

SN	Objectives
1	The course aims at explaining the core concepts of business finance and its importance in managing a business
2	The objectives of develop a conceptual frame work of finance function and to
	acquaint the participants with the tools, types, instruments of financial system in the realm of Indian Financial Market.

Sr. No.	Modules / Units	
1	Financial System:	
	 An overview of Financial System, Financial Markets, Structure of Financial Market (Organised and Unorganized Market), Components of Financial System, Major Financial Intermediaries, Financial Products, Function of Financial System, Regulatory Framework of Indian Financial System(Overview of SEBI and RBI-Role and Importance as regulators). 	
2	Commercial Banks, RBI And Development Banks	
	 Concept of Commercial Banks- Functions, Investment Policy of Commercial Banks, Liquidity in Banks, Asset Structure of Commercial Banks, Non-Performing Assets, Interest Rate reforms, Capital Adequacy Norms. Reserve Bank of India-Organisation & Management, Role And Functions Development Banks-Characteristics of Development Banks, Need And Emergence of Development Financial Institutions In India, Function of Development Banks. 	
3	Insurance:	
	 Concept, Basic Characteristics of Insurance, Insurance Company Operations, Principles of Insurance, Reinsurance, Purpose And Need Of Insurance, Different Kinds of Life Insurance Products, Basic Idea About Fire And Marine Insurance and Bancassurance 	
4	Mutual Funds:	
	 Concept of Mutual Funds, Growth of Mutual Funds in India, Features and Importance of Mutual Fund. Mutual Fund Schemes, Money Market Mutual Funds, Private Sector Mutual Funds, Evaluation of the Performance Of Mutual Funds, Functioning of Mutual Funds In India. 	

Elective Courses (EC) Group A. Finance Electives

2. Introduction to Cost Accounting

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction	15
2	Elements of Cost	20
3	Cost Projection	15
4	Emerging Cost Concepts	10
	Total	60

SN	Objectives
1	This course exposes the students to the basic concepts and the tools used in
	Cost Accounting
2	To enable the students to understand the principles and procedure of cost
	accounting and to apply them to different practical situations

Sr. No.	Modules / Units	
1	Introduction	
	 Meaning, Nature and scope-Objective of Cost Accounting-Financial Accounting v/s Cost Accounting- Advantages and disadvantages of Cost Accounting- Elements of Costs-Cost classification (concept only) Installation of Cost Accounting System, Process (Simple and Inter process) and Job Costing (Practical Problems) 	
2	Elements of Cost	
	 Material Costing- Stock valuation (FIFO & weighted average method), EOQ, EOQ with discounts, Calculation of Stock levels (Practical Problems) Labour Costing – (Bonus and Incentive Plans) (Practical Problems) Overhead Costing (Primary and Secondary Distribution) 	
3	Cost Projection	
	 Cost Sheet (Current and Estimated)) (Practical Problems) Reconciliation of financial accounts and cost accounting (Practical Problems) 	
4	Emerging Cost Concepts	
	Uniform Costing and Interfirm Comparison, Emerging Concepts – Target Costing, Benchmarking, JIT, The Balanced Scorecard; Strategic Based Control; concept, process, implementation of Balanced Scorecard, Challenges in implementation of Balanced Scorecard	

Elective Courses (EC) Group A. Finance Electives

3. Equity and Debt Market

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Financial Market	15
2	Dynamics of Equity Market	15
3	Players in Debt Markets	15
4	Valuation of Equity & Bonds	15
Total		60

SN	Objectives
1	This paper will enable the students to understand the evolution of various aspects of financial markets which in turn will help them in framing the financial policies, development of financial instruments and processes and evolving the strategies during crisis. The teaching will be done mainly through materials available on internet and published research papers

Sr. No.	Modules / Units	
1	Introduction to Financial Market	
	Equity market – meaning & definitions of equity share; Growth of	
	Corporate sector & simultaneous growth of equity shareholders; divorce	
	between ownership and management in companies; development of Equity	
	culture in India & current position.	
	Debt market – Evolution of Debt markets in India; Money market & Debt	
	markets in India; Regulatory framework in the Indian Debt market.	
2	Dynamics of Equity Market	
	Primary:	
	1)IPO – methods followed (simple numerical)	
	2) Book building	
	3)Role of merchant bankers in fixing the price	
	4)Red herring prospectus – unique features	
	5)Numerical on sweat equity, ESOP & Rights issue of shares	
	Secondary:	
	1)Definition & functions of stock exchanges	
	2)Evolution & growth of stock exchanges	
	3)Stock exchanges in India	
	4)NSE, BSE OTCEI & overseas stock exchanges	
	5)Recent developments in stock exchanges	
	6)Stock market Indices	
3	Players in debt markets:	
	Players in debt markets:	
	1)Govt. securities	
	2)Public sector bonds & corporate bonds	
	3)open market operations	
	4)Security trading corp. of India	
	5)Primary dealers in Govt. securities	
	Bonds:	
	1)Features of bonds	
	2)Types of bonds	
4	Valuation of Equity & Bonds	
	Valuation of equity:	
	1. Balance sheet valuation	
	2. Dividend discount model(zero growth, constant growth & multiple growth)	
	3. Price earning model	
	Valuation of bonds	
	1. Determinants of the value of bonds	
	2. Yield to Maturity	
	3. Interest rate risk	
	4. Determinants of Interest Rate Risk	

Elective Courses (EC) Group A. Finance Electives

4. Corporate Finance

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction	15
2	Capital Structure and Leverage	15
3	Time Value of Money	15
4	Mobilisation of Funds	15
	Total	60

SN	Objectives
1	The objectives of develop a conceptual frame work of finance function and to
	acquaint the participants with the tools techniques and process of financial
	management in the realm of financial decision making
2	The course aims at explaining the core concepts of corporate finance and its
	importance in managing a business
3	To providing understanding of nature, importance, structure of corporate
	finance related areas and to impart knowledge regarding source of finance for
	a business

Sr. No.	Modules / Units	
1	Introduction	
	 Introduction To Corporate Finance: Meaning, Principles of Corporate Finance, Significance of Corporate Finance, Amount of Capitalisation, Over Capitalisation and Under Capitalisation, Fixed capital and Working Capital funds. Introduction to ownership securities– Ordinary Shares, Reference Shares, Creditor Ship Securities, Debtors and Bonds, Convertible Debentures, Concept of Private Placement of Securities. 	
2	Capital Structure and Leverage	
	 Introduction to Capital Structure theories, EBIT – EPS analysis for Capital Structure decision. Cost of Capital – Cost of Debt, Cost of Preference Shares, Cost of Equity Shares and Cost of Retained Earnings, Calculation of Weighted Cost of Capital. Introduction to concept of Leverage - Operating Leverage, Financial Leverage and Combined Leverage. 	
3	Time Value of Money	
	 Introduction to Time Value of Money – compounding and discounting Introduction to basics of Capital Budgeting (time value of money based methods) – NPV and IRR (Net Present Value and Internal Rate of Return) Importance of Risk and Return analysis in Corporate Finance 	
4	Mobilisation of Funds	
	 Public deposits and RBI regulations, Company deposits and SEBI regulations, Protection of depositors, RBI and public deposits with NBFC's. Foreign capital and collaborations, Foreign direct Investment (FDI) Emerging trends in FDI Global Depositary Receipts, Policy development, Capital flows and Equity Debt. Brief introduction & sources of short term Finance Bank Overdraft, Cash Credit, Factoring 	

Elective Courses (EC) Group B. Marketing Electives

1. Consumer Behaviour

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction To Consumer Behaviour:	14
2	Individual- Determinants of Consumer Behaviour	16
3	Environmental Determinants of Consumer Behaviour	15
4	Consumer decision making models and New Trends	15
	Total	60

SN	Objectives
1	The basic objective of this course is to develop an understanding about the consumer decision making process and its applications in marketing function of firms
2	This course is meant to equip undergraduate students with basic knowledge about issues and dimensions of Consumer Behaviour. Students are expected to develop the skill of understanding and analysing consumer information and using it to create consumer- oriented marketing strategies.

Sr. No.	Modules / Units
1	Introduction To Consumer Behaviour:
	 Meaning of Consumer Behaviour, Features and Importance Types of Consumer (Institutional & Retail), Diversity of consumers and their behaviour- Types Of Consumer Behaviour Profiling the consumer and understanding their needs Consumer Involvement Application of Consumer Behaviour knowledge in Marketing Consumer Decision Making Process and Determinants of Buyer Behaviour, factors affecting each stage, and Need recognition.
2	Individual- Determinants of Consumer Behaviour
	 Consumer Needs & Motivation (Theories - Maslow, Mc Cleland). Personality – Concept, Nature of personality, Freudian, non - Freudian and Trait theories, Personality Traits and it's Marketing significance, Product personality and brand personification. Self Concept – Concept Consumer Perception Learning - Theory, Nature of Consumer Attitudes, Consumer Attitude Formation & Change. Attitude - Concept of attitude
3	Environmental Determinants of Consumer Behaviour
	 Family Influences on Buyer Behaviour, Roles of different members, needs perceived and evaluation rules. Factors affecting the need of the family, family life cycle stage and size. Social Class and Influences. Group Dynamics & Consumer Reference Groups, Social Class & Consumer Behaviour - Reference Groups, Opinion Leaders and Social Influences In- group versus out-group influences, role of opinion leaders in diffusion of innovation and in purchase process. Cultural Influences on Consumer Behaviour Understanding cultural and sub- cultural influences on individual, norms and their role, customs, traditions and value system.
4	Consumer decision making models and NewTrends
	 Consumer Decision making models: Howard Sheth Model, Engel Blackwell, Miniard Model, Nicosia Models of Consumer Decision Making Diffusion of innovations Process of Diffusion and Adoption, Innovation, Decision process, Innovator profiles E-Buying behaviour The E-buyer vis-a vis the Brick and Mortar buyer, Influences on E-buying

Elective Courses (EC) Group B. Marketing Electives

2. Product Innovations Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Innovations Management	15
2	Managerial Aspects of Innovations functions	15
3	Product innovations, Process Innovations and Innovations Diffusion	15
4	New Product Development Strategy	15
	Total	60

SN	Objectives
1	To understand the concept of innovations and relevance of innovations in the present day scenario.
2	To understand the importance of protecting innovations and legal aspects related to innovations
3	To study product innovations, process innovations and innovations diffusion
4	To acquaint the students with stages in new product development

Sr. No.	Modules / Units		
1	Innovations Management		
	Introduction -Innovations Management		
	Innovations: Concept; Features; Types of Innovations; Innovations management;		
	Features of Innovations Management; Significance of innovations; Principles of		
	innovations.		
	Thinking Tools for Innovations		
	Left and right brain thinking; Creative thinking; Traditional V/S Creative thinking;		
	Intuition; Introduction to creativity; Process of creativity; Creativity methods		
	 Legal Aspects of innovations 		
	Safeguarding innovations; Concept of Intellectual Property Rights; Patents; Patenting		
	trends; trademarks; Industrial designs; Copyrights ;Trade secrets		
2	Managerial Aspects of Innovations functions		
	Organizing for Innovations		
	Introduction; Concepts; Organizational theories and structures; Traits of innovative		
	organization; Factors influencing organizational design and Size decision.		
	 Strategizing Innovations 		
	Introduction; Innovations as a strategy component; Developing innovation strategy;		
	Innovation strategies; Market standing based strategies.		
	Managing Innovations Functions Introductions Stude at the top: Diagning: Organizing: Staffing: Controlling:		
	Introduction; Style at the top; Planning; Organizing; Staffing; Controlling;		
	Characteristics of good management		
	Climate and culture for innovations		
	Introduction; Need for creative organizations; Characteristics of creative		
	organizations; Creating creative organizations – 7s framework; Fostering innovations		
3	climate and culture.		
- 3	Product innovations, Process Innovations and Innovations Diffusion		
	Introduction to product innovations		
	Types of new products; Technology strategy for product innovation; New product		
	development process; Packaging innovations; Positioning innovations; New product		
	failures; Cases of Innovating companies.		
	Process Innovations		
	Introduction; Concept of Process; Features of process; Types of process innovations;		
	Process Management; Process improvement methods; Business process		
	reengineering; Benchmarking.		
	Innovations Diffusion		
	Introduction; Concept of diffusion and adoption; Impact of innovations; Diffusion as		
	an integral part of innovation strategy; Innovations diffusion theories; Factors		
	influencing diffusion strategy; Internalization of innovations.		
4	New Product Development Strategy		
	New Product Development and Product specifications Concert of new product development, specifications.		
	Concept of new product development, specifications: Establishment of specifications,		
	Establishing Target specifications; Setting the final specifications.		
	Concept Generation, Selection and Testing		
	5 step methods of concept generation, Methods for selecting a concept; Benefits of		
	choosing a structured method; Concept screening; Concept scoring, 7- Test method		
	of concept testing.		
	Product testing		
	Introduction, Purpose of product testing; Overriding concerns of product testing;		
	Major decision in constructing a product test.		

Elective Courses (EC) Group B. Marketing Electives

3. Advertising

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Advertising	15
2	Strategy and Planning Process in Advertising	15
3	Creativity in Advertising	15
4	Budget, Evaluation, Current trends and careers in Advertising	15
	Total	60

SN	Objectives
1	To understand and examine the growing importance of advertising
2	To understand the construction of an effective advertisement
3	To understand the role of advertising in contemporary scenario
4	To understand the future and career in advertising

Sr. No.	Modules / Units	
1	Introduction to Advertising	
	 Definition, Evolution of Advertising, Importance, Scope, Features, Benefits, Five M's of Advertising Types of Advertising –consumer advertising, industrial advertising, institutional advertising, classified advertising, national advertising, generic advertising Theories of Advertising : Stimulus Theory, AIDA, Hierarchy Effects Model, Means – End Theory, Visual Verbal Imaging, Cognitive Dissonance Ethics and Laws in Advertising : Puffery, Shock Ads, Subliminal Advertising, Weasel Claim, Surrogate Advertising, Comparative Advertising Code of Ethics, Regulatory Bodies, Laws and Regulation – CSR, Public Service Advertising, Corporate Advertising, Advocacy Advertising Social, cultural and Economic Impact of Advertising, the impact of ads on Kids, Women and Advertising 	
2	Strategy and Planning Process in Advertising	
	 Advertising Planning process & Strategy : Introduction to Marketing Plan, Advertising Plan- Background, situational analysis related to Advertising issues, Marketing Objectives, Advertising Objectives, Target Audience, Brand Positioning (equity, image personality), creative Strategy, message strategy, media strategy, Integration of advertising with other communication tools Role of Advertising in Marketing Mix : Product planning, product brand policy, price, packaging, distribution, Elements of Promotion, Role of Advertising in PLC Advertising Agencies – Functions – structure – types - Selection criteria for Advertising agency – Maintaining Agency–client relationship, Agency Compensation. 	
3	Creativity in Advertising	
	 Introduction to Creativity – definition, importance, creative process, Creative strategy development – Advertising Campaign – determining the message theme/major selling ideas – introduction to USP – positioning strategies – persuasion and types of advertising appeals – role of source in ads and celebrities as source in Indian ads – execution styles of presenting ads. Role of different elements of ads – logo, company signature, slogan, tagline, jingle, illustrations, etc – Creating the TV commercial – Visual Techniques, Writing script, developing storyboard, other elements (Optical, Soundtrack, Music) Creating Radio Commercial – words, sound, music – scriptwriting the commercial – clarity, coherence, pleasantness, believability, interest, distinctiveness Copywriting: Elements of Advertisement copy – Headline, sub-headline, Layout, Body copy, slogans. Signature, closing idea, Principles of Copywriting for print, OOH, essentials of good copy, Types of Copy, Copy Research 	

Sr. No.	Modules / Units		
4	Budget, Evaluation, Current trends and careers in Advertising		
	 Advertising Budget – Definition of Advertising Budget, Features, Methods of Budgeting 		
	 Evaluation of Advertising Effectiveness – Pre-testing and Post testing Objectives, Testing process for Advertising effectiveness, Methods of Pre- testing and Post-testing, Concept testing v/s Copy testing 		
	 Current Trends in Advertising : Rural and Urban Advertising, Digital Advertising, Content Marketing (Advertorials), retail advertising, lifestyle advertising, Ambush Advertising, Global Advertising – scope and challenges – current global trends 		
	 Careers in Advertising : careers in Media and supporting firms, freelancing options for career in advertising, role of Advertising Account Executives, campaign Agency family tree – topmost advertising agencies and the famous advertisements designed by them 		

Elective Courses (EC) Group B. Marketing Electives

4. Social Marketing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Social Marketing & Its Environment	15
2	Social Marketing Plan, STP and Marketing Mix	15
3	Managing Behaviour for Social Change & NPO & CSR	15
4	Social marketing – A Sectoral Overview & Careers	15
	Total	60

SN	Objectives
1	Understand the concept of social marketing, compare and contrast
2	marketing in a profit-oriented corporate and a nonprofit social environment. Analyze the impact of environment on social marketing & study the various behavior models/frameworks/theories for social change.
3	To study the basis of Segmentation, Targeting and Positioning and identify marketing mix of social marketing.
4	To provide an overview of the Not for Profit Sector (NPO) and comment on the CSR provision in the companies act of 2013.
5	To study overview of social marketing in various key sectors and
	Identify basic ethical issues in Social marketing and appreciate the careers in Social
	Marketing

Introduction to Social Marketing & Its Environment Definition of Social Marketing, Features, Need for Social Marketing, Evolution of Social Marketing, Social Marketing v/s Commercial Marketing, Challenges of
Definition of Social Marketing, Features, Need for Social Marketing, Evolution of
Social Marketing. Social Marketing Unique Value Preposition, Relevance of Social marketing. Environment in Social Marketing, Components, Impact of Environment on Social
Marketing.
Social Marketing Plan, STP and Marketing Mix
• Social Marketing Plan, Segmentation, Targeting & Positioning Social Marketing Plan, Steps in developing social marketing plan, importance of planning. Segmentation, Basis of Segmentation, Criteria for evaluating segments, Targeting, Selecting Target Audience for Social Marketing, Positioning and Types of positioning.
 Social Marketing Mix Product: Social Product, Level of Product, Social Product Branding Decision. Price: Monetary and non-monetary incentives for desired behavior, Pricing Objectives, Pricing Strategies. Place: 5 A's of Distribution of Product in social marketing, Types of distribution channel Promotion: Developing a Promotion Mix for social product, Message
Strategy, Messenger Strategy, Creativity Strategy, selecting communication channel.
Managing Behaviour for Social Change & NPO & CSR
 Managing Behaviour for Social Change Types of Behaviour Objectives, Knowledge objectives and belief objectives, Behaviour Change Models, Theories and Frameworks: Social Norm Theory, The diffusion of innovation model, The health belief model, The ecological model, Theory of reasoned action and theory of planned behaviour. Social Cognitive theory/social learning, The behavioural economics framework and the nudge factor, the science of habit framing, Not for Profit Organization (NPO) & CSR
Meaning, NGO, Voluntary Organization, Third Sector, NPO Sector. Status of Voluntary sector in India. Starting a Voluntary Organization in India: Trust, Society, Section 8 Company under the Companies Act of 2013. CSR, Meaning, Overview of CSR in India, Overview of CSR rules for corporation under Companies Act of 2013, CSR Impact Evaluation. Need for Governance in Not for Profit Sector, Ethics in Social Marketing
Social Marketing – A Sectoral Overview & Careers
 Marketing Health Marketing Education Marketing Medicare Marketing Sanitation Marketing Financial Literacy & Savings

Elective Courses (EC) Group C. Human Resource Electives

1. Recruitment & Selection

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Recruitment	18
2	Selection	15
3	Induction	15
4	Soft Skills	12
	Total	60

SN	Objectives
1	The objective is to familiarize the students with concepts and principles, procedure of Recruitment and Selection in an organization.
2	To give an in depth insight into various aspects of Human Resource management and make them acquainted with practical aspect of the subject.

Sr. No.	Modules / Units
1	Recruitment
	 Concepts of RecruitmentMeaning, Objectives, Scope & Definition, Importance and relevance of Recruitment. Job AnalysisConcept, Specifications, Description, Process And Methods, Uses of Job Analysis Job DesignIntroduction, Definition, Modern Techniques, Factors affecting Job Design, Contemporary Issues in Job Designing. Source or Type of Recruitment- a) Direct/Indirect, b)Internal/ External. Internal-Notification, Promotion- Types, Transfer -Types, Reference External-Campus Recruitment, Advertisement, Job Boards Website/Portals, Internship, Placement Consultancies-Traditional (In- House, Internal Recruitment, On Campus, Employment And Traditional Agency). Modern (Recruitment Books, Niche Recruitments, Internet Recruitment, Service Recruitment, Website and Job, Search Engine, Social Recruiting and Candidate Paid Recruiters). Technique of Recruitment-Traditional Vs Modern Recruitment
2	Evaluation of Recruitment-Outsourcing Programme Selection
	 Selection-Concept of Selection, Criteria for Selection, Process, Advertisement and Application (Blank Format). Screening-Pre and Post Criteria for Selection, Steps of Selection Interviewing-Types and Guidelines for Interviewer & Interviewee, Types of Selection Tests, Effective Interviewing Techniques. Selection Hurdles and Ways to Overcome Them
3	Induction
	 Induction-Concept, Types-Formal /Informal, Advantages of Induction ,How to make Induction Effective Orientation & On boarding-Programme and Types, Process. Socialisation-Types-Anticipatory, Encounter, Setting in, Socialisation Tactics Current trends in Recruitment and Selection Strategies- with respect to Service, Finance, I.T., Law And Media Industry
4	Soft Skills
	 Preparing Bio-data and C.V. Social and Soft Skills – Group Discussion & Personal Interview, Video and Tele Conferencing Skills, Presentation and Negotiation Skills, Aesthetic Skills, Etiquettes-Different Types and Quitting Techniques. Exit Interview-Meaning, importance.

Elective Courses (EC) Group C. Human Resource Electives

2. Motivation & Leadership

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Motivation -I	12
2	Motivation-II	15
3	Leadership-I	17
4	Leadership-II	16
	Total	60

SN	Objectives
1	To gain knowledge of the leadership strategies for motivating people and
	changing organizations
2	To study how leaders facilitate group development and problem solving and
	work through problems and issues as well as transcend differences
3	To acquaint the students about practical approaches to Motivation and
	Leadership & its application in the Indian context

Sr. No.	Modules / Units	
1	Motivation-I	
	 Concept of motivation, Importance, Tools of Motivation. Theory Z, Equity theory. Process Theories-Vroom's Expectancy Theory, Valency-Four drive model. 	
2	Motivation-II	
	 East v/s West, motivating workers (in context to Indian workers) The Indian scene – basic differences. Work –Life balance – concept, differences, generation and tips on work life balance. 	
3	Leadership-I	
	 Leadership- Meaning, Traits and Motives of an Effective Leader, Styles of Leadership. Theories –Trait Theory, Behavioural Theory, Path Goal Theory. Transactional v/s Transformational leaders. Strategic leaders- meaning, qualities. Charismatic Leaders- meaning of charisma, Qualities, characteristics, types of charismatic leaders (socialized, personalized, office-holder, personal, divine) 	
4	Leadership-II	
	 Great leaders, their style, activities and skills (Ratan Tata, Narayan Murthy, Dhirubhai Ambani, Bill Gates, Mark Zuckerberg, Donald Trump) Characteristics of creative leaders and organization methods to enhance creativity (Andrew Dubrein). Contemporary issues in leadership–Leadership roles, team leadership, mentoring, self leadership, online leadership, finding and creating effective leader. 	

Elective Courses (EC) Group C. Human Resource Electives

3. Employees Relations & Welfare

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Overview of Employee Relations and Collective Bargaining	15
2	Overview of Employee Welfare	15
3	Welfare and Work Environment Management	15
4	Workers Participation and Employee Grievance	15
	Total	60

SN	Objectives
1	To understand the nature and importance of employee relations in an organization
2	To understand the importance of collective bargaining and Workers participation
3	To understand the causes and effects of employee grievances as well as the procedure to solve the same

Sr. No.	Modules / Units
1	Overview of Employee Relations and Collective Bargaining
	• Employee Relations - Meaning, Scope, Elements of Employee Relations, Role of HR in Employee Relations
	 Employee Relation Policies – Meaning and Scope.
	Ways to Improve Employee Relations
	• Collective Bargaining – Meaning, Characteristics, Need and Importance, Classification of collective bargaining - Distributive bargaining, Integrative
	bargaining, Attitudinal structuring and Intra-organizational bargaining; Principles of Collective Bargaining, Process, Causes for Failure of Collective Bargaining, Conditions for Successful Collective Bargaining
	 Collective Bargaining Strategies - Parallel or Pattern Bargaining, Multi-employer or Coalition Bargaining, Multi-unit or Coordinated Bargaining, and Single-unit
	Bargaining
	Current Trends in Collective Bargaining
2	Overview of Employee Welfare
	 Meaning, Need for Employee Welfare, Principles of Employee/ Labour Welfare, Scope for Employee/ Labour Welfare in India, Types of Welfare Services – Individual and Group.
	 Historical Development of Employee/ Labour Welfare in India – Pre and Post- Independence, Employee/ Labour Welfare Practices in India
	• Approaches to Employee/ Labour Welfare – Paternalistic, Atomistic,
	Mechanistic, Humanistic approach
	• Theories of Employee Welfare–Policing Theory, Religion Theory, Philanthropic
	Theory, Trusteeship Theory, Public Relations Theory, Functional Theory
	• Administration of Welfare Facilities – Welfare Policy, Organisation of Welfare,
	Assessment of Effectiveness.
3	Welfare and Work Environment Management
	Agencies for Labour Welfare – Central Government, State Government, Employers, Trade Union
	Women Welfare - Meaning, Need for women welfare, Provision of Factories Act as applicable for women welfare
	Responsibility of Employers towards labour welfare
	Work Environment Management – Meaning, Need for healthy work anvironment measures for providing healthy work. Fatigue at work
	environment, measures for providing healthy work, Fatigue at work – Meaning, Causes and Symptoms of Fatigue, Boredom at Workplace – Meaning, Hazards at
	Workplace – Meaning, Types of Hazards – Physical and Social, Hazard
	Management – Meaning and Process, Hazard Audit - Concept
	 Accidents and Safety Issues at Workplace – Safety, Safety Culture
4	Workers Participation and Employee Grievance
	• Workers Participation in Management – Concept, Pre-requisites, forms & levels
	of participation, Benefit of Workers Participation in Management, Importance of
	employee stock option plans as a method of participation.
	• Employee Grievance – Meaning, Features, Causes and Effects of Employee
	Grievances, Employee Grievance Handling Procedure, Effective Ways of Handling
	Grievance
	 Role of Industrial Relations Manager in Promoting & Establishing Peaceful Employee Relations

Elective Courses (EC) Group C. Human Resource Electives

4. Organisation Behaviour & HRM

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Organisational Behaviour I	12
2	Organisational Behaviour II	13
3	Human Resource Management-I	17
4	Human Resource Management-II	18
Total		60

SN	Objectives
1	The objective of this course is to familiarize the student with the fundamental aspects of Various issues associated with Human Resource Management as a whole.
2	The course aims to give a comprehensive overview of Organization Behaviour as a separate area of management.
3	To introduce the basic concepts, functions and processes & create an awareness of the role, functions and functioning of Human Resource Management & OB.

Sr. No.	Modules / Units	
1	Organisational Behaviour-I	
	 Introduction to Organizational Behaviour-Concept, definitions, Evolution of OB 	
	 Importance of Organizational Behaviour-Cross Cultural Dynamics, Creating Ethical Organizational Culture& Climate 	
	 Individual and Group Behaviour-OB models–Autocratic, Custodial, 	
	Supportive, Collegial & SOBC in context with Indian OB	
	Human Relations and Organizational Behaviour	
2	Organisational Behaviour-II	
	Managing Communication: Conflict management techniques.	
	Time management strategies.	
	 Learning Organization and Organizational Design 	
	Rewards and Punishments-Termination, layoffs, Attrition, Retrenchment,	
	Separations, Downsizing	
3	Human Resource Management-I	
	HRM-Meaning, objectives, scope and functions	
	HRP-Definition, objectives, importance, factors affecting HRP, Process of	
	HRP, Strategies of HRM, Global HR Strategies	
	HRD-Concept ,meaning, objectives, HRD functions	
4	Human Resource Management-II	
	 Performance Appraisal: concept, process, methods and problems, KRA'S Compensation-concept, components of Pay Structure, Wage and salary 	
	administration, Incentives and Employee benefits.	
	 Career planning-concept of career Planning, Career stages and carrier planning 	

2. Ability Enhancement Courses (AEC) 2A.Ability Enhancement Compulsory Course

3. Information Technology in Business Management-I

Sr. No.	Modules	No. of Lectures
1	Introduction to IT Support in Management	15
2	Office Automation using MS-Office	15
3	Email, Internet and its Applications	15
4	E-Security	15
	Total	60

Modules at a Glance

SN	Objectives
1	To learn basic concepts of Information Technology, its support and role in Management, for managers
2	Module II comprises of practical hands on training required for office automation. It is expected to have practical sessions of latest MS-Office software
3	To understand basic concepts of Email, Internet and websites, domains and security therein
4	To recognize security aspects of IT in business, highlighting electronic transactions, advanced security features

Sr. No.	Modules / Units
1	Introduction to IT Support in Management
	Information Technology concepts
	Concept of Data, Information and Knowledge
	Concept of Database
	Introduction to Information Systems and its major components.
	Types and Levels of Information systems.
	Main types of IT Support systems
	Computer based Information Systems (CBIS)
	 Types of CBIS - brief descriptions and their interrelationships/hierarchies
	 Office Automation System(OAS)
	 Transaction Processing System(TPS)
	 Management Information System(MIS)
	 Decision Support Systems (DSS)
	 Executive Information System(EIS)
	 Knowledge based system, Expert system
	Success and Failure of Information Technology.
	Failures of Nike and AT&T
	IT Development Trends.
	Major areas of IT Applications in Management
	Concept of Digital Economy and Digital Organization.
	• IT Resources
	Open Source Software - Concept and Applications.
2	Study of Different Operating Systems. (Windows / Linux/ DOS) Office Automation using MS Office
-	
	Learn Word: Creating/Saving of Document
	Editing and Formatting Features
	Designing a title page, Preparing Index,
	Use of SmartArt
	Cross Reference, Bookmark and Hyperlink.
	Mail Merge Feature.
	 Spreadsheet application (e.g. MS-Excel/openoffice.org)
	Creating/Saving and editing spreadsheets
	Drawing charts.
	Using Basic Functions: text, math & trig, statistical, date & time, database,
	financial, logical
	Using Advanced Functions : Use of VLookup/HLookup
	Data analysis – sorting data, filtering data (AutoFilter, Advanced Filter), data
	validation, what-if analysis (using data tables/scenarios), creating sub-totals and
	grand totals, pivot table/chart, goal seek/solver,
	Presentation Software
	Creating a presentation with minimum 20 slides with a script. Presenting in
	different views,
	different views, Inserting Pictures, Videos, Creating animation effects on them

Sr. No.	Modules / Units	
3	Email, Internet and its Applications	
	 Introduction to Email Writing professional emails Creating digitally signed documents. Use of Outlook : Configuring Outlook, Creating and Managing profile in outlook, Sending and Receiving Emails through outlook Emailing the merged documents. Introduction to Bulk Email software Internet Understanding Internet Technology Concepts of Internet, Intranet, Extranet Networking Basics, Different types of networks. Concepts (Hubs, Bridges, Routers, IP addresses) Study of LAN, MAN, WAN DNS Basics. Domain Name Registration, Hosting Basics. Emergence of E-commerce and M-Commerce Concept of E-commerce and M-Commerce Business models of e-commerce: models based on transaction party (B2B, B2C,B2G, C2B, C2C, E-Governance) 	
	Models based on revenue models, Electronics Funds Transfer, Electronic Data	
4	Interchange. E-Security Systems	
	Threats to Computer systems and control measures.	
	 Types of threats- Virus, hacking, phishing, spyware, spam, physical threats (fire, flood, earthquake, vandalism) Threat Management IT Risk 	
	Definition, Measuring IT Risk, Risk Mitigation and Management	
	Information Systems Security Security on the internet	
	 Security on the internet Network and website security risks Website Hacking and Issues therein. Security and Email 	
	,	
	 E-Business Risk Management Issues Firewall concept and component, Benefits of Firewall 	
	E-Business Risk Management Issues	
	 E-Business Risk Management Issues Firewall concept and component, Benefits of Firewall Understanding and defining Enterprise wide security framework Information Security Environment in India with respect to real Time Application in Business 	
	 E-Business Risk Management Issues Firewall concept and component, Benefits of Firewall Understanding and defining Enterprise wide security framework Information Security Environment in India with respect to real Time Application 	
	 E-Business Risk Management Issues Firewall concept and component, Benefits of Firewall Understanding and defining Enterprise wide security framework Information Security Environment in India with respect to real Time Application in Business Types of Real Time Systems, Distinction between Real Time, On – line and Batch Processing System. Real Time Applications viz. Railway / Airway / Hotel Reservation System, ATMs, EDI Transactions - definition, advantages, examples;E- 	

> 2. Ability Enhancement Courses (AEC) 2B. Skill Enhancement Courses (SEC)

4. Foundation Course –III Environmental Management

Sr. No.	Modules	No. of Lectures
1	Environmental Concepts	12
2	Environment degradation	11
3	Sustainability and role of business	11
4	Innovations in business- an environmental Perspective	11
	Total	45

Sr. No.	Modules / Units
1	Environmental Concepts:
	 Environment: Definition and composition, Lithosphere, Atmosphere, Hydrosphere, Biosphere Biogeochemical cycles - Concept and water cycle Ecosystem & Ecology; Food chain, food web & Energy flow pyramid Resources: Meaning, classification(Renewable & non-renewable), types & Exploitation of Natural resources in sustainable manner
2	Environment degradation
	 Degradation-Meaning and causes, degradation of land, forest and agricultural land and its remedies Pollution – meaning, types, causes and remedies (land, air, water and others) Global warming: meaning, causes and effects. Disaster Management: meaning, disaster management cycle. Waste Management: Definition and types -solid waste management anthropogenic waste, e-waste & biomedical waste (consumerism as a cause of waste)
3	Sustainability and role of business
	 Sustainability: Definition, importance and Environment Conservation. Environmental clearance for establishing and operating Industries in India. EIA, Environmental auditing, ISO 14001 Salient features of Water Act, Air Act and Wildlife Protection Act. Carbon bank & Kyoto protocol
4	Innovations in business- an environmental perspective
	Non-Conventional energy sources - Wind, Bio-fuel, Solar, Tidal and Nuclear Energy. Innovative Business Models: Eco-tourism, Green marketing, Organic farming, Eco-friendly packaging, Waste management projects for profits ,other business projects for greener future

2. Ability Enhancement Courses (AEC)2B. Skill Enhancement Courses (SEC)

Foundation Course- Contemporary Issues- III

Sr. No.	Modules	No. of Lectures
1	Human Rights Provisions, Violations and Redressal	12
2	Dealing With Environmental Concerns	11
3	Science and Technology I	11
4	Soft Skills for Effective Interpersonal Communication	11
	Total	45

Sr. No.	Modules / Units	
1	Human Rights Violations and Redressal	
	 A. Scheduled Castes- Constitutional and legal rights, Forms of violations Redressal mechanisms. (2 Lectures) B. Scheduled tribes- Constitutional and legal rights, Forms of violations Redressal mechanisms. (2 Lectures) C. Women- Constitutional and legal rights, Forms of violations, Redressa mechanisms. (2 Lectures) D. Children- Constitutional and legal rights, Forms of violations, Redressa mechanisms. (2 Lectures) E. People with Disabilities, Minorities, and the Elderly population- Constitutional and legal rights, Forms of violations. (4 Lectures) 	
2	Dealing With Environmental Concerns	
	 A. Concept of Disaster and general effects of Disasters on human life- physical, psychological, economic and social effects. (3 Lectures) B. Some locally relevant case studies of environmental disasters. (2 Lectures) C. Dealing with Disasters - Factors to be considered in Prevention, Mitigation (Relief and Rehabilitation) and disaster Preparedness. (3 Lectures) D. Human Rights issues in addressing disasters- issues related to compensation, equitable and fair distribution of relief and humanitarian approach to resettlement and rehabilitation. (3 Lectures) 	
3	Science and Technology – I	
	 A. Development of Science- the ancient cultures, the Classical era, the Middle Ages, the Renaissance, the Age of Reason and Enlightenment. (3 Lectures) B. Nature of science- its principles and characteristics; Science as empirical, practical, theoretical, validated knowledge. (2 Lectures) C. Science and Superstition- the role of science in exploding myths, blind beliefs and prejudices; Science and scientific temper- scientific temper as a fundamental duty of the Indian citizen. (3 Lectures) D. Science in everyday life- technology, its meaning and role in development; Interrelation and distinction between science and technology. (3 Lectures) 	
	D. Science in everyday life- technology, its meaning and role in development;	
4	 D. Science in everyday life- technology, its meaning and role in development; Interrelation and distinction between science and technology. (3 Lectures) Soft Skills for Effective Interpersonal Communication 	
4	 D. Science in everyday life- technology, its meaning and role in development; Interrelation and distinction between science and technology. (3 Lectures) Soft Skills for Effective Interpersonal Communication Part A (4 Lectures) I) Effective Listening - Importance and Features. II) Verbal and Non-Verbal Communication; Public-Speaking and Presentation Skills. III) Barriers to Effective Communication; Importance of Self-Awareness and Body 	
4	 D. Science in everyday life- technology, its meaning and role in development; Interrelation and distinction between science and technology. (3 Lectures) Soft Skills for Effective Interpersonal Communication Part A (4 Lectures) I) Effective Listening - Importance and Features. II) Verbal and Non-Verbal Communication; Public-Speaking and Presentation Skills. 	
4	 D. Science in everyday life- technology, its meaning and role in development Interrelation and distinction between science and technology. (3 Lectures) Soft Skills for Effective Interpersonal Communication Part A (4 Lectures) I) Effective Listening - Importance and Features. II) Verbal and Non-Verbal Communication; Public-Speaking and Presentation Skills. III) Barriers to Effective Communication; Importance of Self-Awareness and Body Language. 	

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- 7. Motilal, Shashi, and Nanda, Bijoy Lakshmi, *Human Rights: Gender and Environment*, Allied Publishers, New Delhi, 2007.
- 8. Murthy, D. B. N., *Disaster Management: Text and Case Studies*, Deep and Deep Publications, New Delhi, 2013.
- 9. Parsuraman, S., and Unnikrishnan, ed., India Disasters Report II, Oxford, New Delhi, 2013
- 10. Reza, B. K., Disaster Management, Global Publications, New Delhi, 2010.
- 11. Sathe, Satyaranjan P., Judicial Activism in India, Oxford University Press, New Delhi, 2003.
- 12. Singh, Ashok Kumar, *Science and Technology for Civil Service Examination*, Tata McGraw Hill, New Delhi, 2012.
- 13. Thorpe, Edgar, General Studies Paper I Volume V, Pearson, New Delhi, 2017.

Projects / Assignments (for Internal Assessment)

- i. Projects/Assignments should be drawn for the component on Internal Assessment from the topics in **Module 1 to Module 4**.
- ii. Students should be given a list of possible topics at least 3 from each Module at the beginning of the semester.
- iii. The Project/Assignment can take the form of Street-Plays / Power-Point Presentations / Poster Exhibitions and similar other modes of presentation appropriate to the topic.
- iv. Students can work in groups of not more than 8 per topic.
- v. Students must submit a hard / soft copy of the Project / Assignment before appearing for the semester end examination.

QUESTION PAPER PATTERN (Semester III)

The Question Paper Pattern for Semester End Examination shall be as follows:

TOTAL MARKS: 75

DURATION: 150 MINUTES

QUESTION NUMBER	DESCRIPTION	MARKS ASSIGNED
1	 i. Question 1 A will be asked on the meaning / definition of concepts / terms from all Modules. ii. Question 1 B will be asked on the topic of the Project / Assignment done by the student during the Semester iii. In all 8 Questions will be asked out of which 5 have to be attempted. 	 a) Total marks: 15 b) For 1 A, there will be 3 marks for each sub-question. c) For 1 B there will be 15 marks without any break-up.
2	Descriptive Question with internal option (A or B) on Module 1	15
3	Descriptive Question with internal option (A or B) on Module 2	15
4	Descriptive Question with internal option (A or B) on Module 3	15
5	Descriptive Question with internal option (A or B) on Module 4	15

> 2. Ability Enhancement Courses (AEC) 2B. Skill Enhancement Courses (SEC)

4. Foundation Course in NSS - III

Sr. No.	Modules	No. of Lectures
1	Value System & Gender sensitivity	12
2	Disaster preparedness & Disaster management	10
3	Health, hygiene & Diseases	13
4	Environment & Energy conservation	10
	Total	45

Sr. No.	Modules / Units
1	Value System & Gender sensitivity
	 UNIT - I – Value System Meaning of value, Types of values- human values and social responsibilities- Indian value system- the concepts and its features UNIT - II - Gender sensitivity and woman empowerment Concept of gender- causes behind gender related problems- measures Meaning of woman empowerment- schemes for woman empowerment in India
2	Disaster preparedness & Disaster management
	 UNIT - I - Basics of Disaster preparedness Disaster- its meaning and types Disaster preparedness- its meaning and methods UNIT - II - Disaster management Disaster management- concept- disaster cycle - role of technology in disaster response- role of as first responder – the study of 'Avhan' Model
3	Health, hygiene & Diseases
	 UNIT - I - Health and hygiene Concept of complete health and maintenance of hygiene UNIT - II - Diseases and disorders- preventive campaigning Diseases and disorders- preventive campaigning in Malaria, Tuberculosis, Dengue, Cancer, HIV/AIDS, Diabetes
4	Environment & Energy conservation
	 UNIT - I Environment and Environment enrichment program Environment- meaning, features , issues, conservation of natural resources and sustainability in environment UNIT - II Energy and Energy conservation program Energy- the concept, features- conventional and non- conventional energy Energy conservation- the meaning and importance

2. Ability Enhancement Courses (AEC)2B. Skill Enhancement Courses (SEC)

4. Foundation Course in NCC - III

Sr. No.	Modules	No. of Lectures
1	National Integration & Awareness	10
2	Drill: Foot Drill	10
3	Adventure Training and Environment Awareness and Conservation	05
4	Personality Development and Leadership	10
5	Specialized subject (ARMY)	10
	Total	45

Sr. No.	Modules / Units	
1	National Integration & Awareness	
	 Desired outcome: The students will display sense of patriotism, secular values and shall be transformed into motivated youth who will contribute towards nation building through national unity and social cohesion. The students shall enrich themselves about the history of our beloved country and will look forward for the solutions based on strengths to the challenges to the country for its development. Freedom Struggle and nationalist movement in India. National interests, Objectives, Threats and Opportunities. Problems/ Challenges of National Integration. Unity in Diversity 	
2	Drill: Foot Drill	
	 Desired outcome: The students will demonstrate the sense of discipline, improve bearing, smartness, turnout, develop the quality of immediate and implicit obedience of orders, with good reflexes. Side pace, pace forward and to the rear Turning on the march and whiling Saluting on the march Marking time, forward march and halt in quick time Changing step Formation of squad and squad drill 	
3	Adventure Training, Environment Awareness and Conservation	
3A	Adventure Training	
	 Desired outcome: The students will overcome fear & inculcate within them the sense of adventure, sportsmanship, espirit-d-corp and develop confidence, courage, determination, diligence and quest for excellence. Any Two such as – Obstacle course, Slithering, Trekking, Cycling, Rock Climbing, Para Sailing, Sailing, Scuba Diving etc. 	
3B	Environment Awareness and Conservation	
	 Desired outcome: The student will be made aware of the modern techniques of waste management and pollution control. Waste management Pollution control, water, Air, Noise and Soil 	
4	Personality Development and Leadership	
	 Desired outcome: The student will inculcate officer like qualities with desired ability to take right decisions. Time management Effect of Leadership with historical examples Interview Skills Conflict Motives- Resolution 	

Sr. No.	Modules / Units
5	Specialized Subject: Army Or Navy Or Air
	Army
	Desired outcome: It will acquaint, expose & provide knowledge about Army/
	Navy/ Air force and to acquire information about expanse of Armed Forces , service subjects and important battles
	A. Armed Force
	Task and Role of Fighting Arms
	Modes of Entry to Army
	Honors and Awards
	B. Introduction to Infantry and weapons and equipments
	• Characteristics of 5.56mm INSAS Rifle, Ammunition, Fire power, Stripping,
	Assembling and Cleaning
	Organization of Infantry Battalion.
	C. Military history
	 Study of battles of Indo-Pak War 1965,1971 and Kargil
	War Movies
	D. Communication
	Characteristics of Walkie-Talkies
	Basic RT Procedure
	Latest trends and Development (Multi Media, Video Conferencing, IT)
	OR
	Navy A. Naval orientation and service subjects
	Organization of Ship- Introduction on Onboard Organization
	 Naval Customs and Traditions
	Mode of Entry into Indian Navy
	 Branches of the Navy and their functions
	 Naval Campaign (Battle of Atlantic, Pearl Harbour, Falkland War/Fleet
	Review/ PFR/ IFR)s
	B. Ship and Boat Modelling
	Types of Models
	 Introduction of Ship Model- Competition Types of Model Prepare in NSC
	and RDC
	• Care and handling of power-tools used- maintenance and purpose of tools

Sr. No.	Modules / Units
	C. Search and Rescue
	Role of Indian Coast Guard related to SAR
	D. Swimming
	 Floating and Breathing Techniques- Precautions while Swimming
	OR
	AIR
	A. General Service Knowledge
	Organization Of Air Force
	Branches of the IAF.
	B. Principles of Flight
	Venturi Effect
	Aerofoil
	Forces on an Aircraft
	Lift and Drag
	C. Airmanship
	ATC/RT Procedures
	Aviation Medicine
	D. Aero- Engines
	Types of Engines
	Piston Engines
	Jet Engines
	Turboprop Engines

> 2. Ability Enhancement Courses (AEC) 2B. Skill Enhancement Courses (SEC)

4. Foundation Course in Physical Education - III

Sr. Modules No. of No. Lectures **Overview of Nutrition** 1 10 2 Evaluation of Health, Fitness and Wellness 10 Prevention and Care of Exercise Injuries 3 10 4 **Sports Training** 15 Total 45

Sr. No.	Modules / Units
1	Overview of Nutrition
	 Introduction to nutrition & its principles Role of Nutrition in promotion of health
	 Dietary Guidelines for Good Health
	Regulation of water in body and factors influencing body temperature.
2	Evaluation of Health, Fitness and Wellness
	 Meaning & Concept of holistic health Evaluating Personal health-basic parameters Evaluating Fitness Activities – Walking & Jogging Myths & mis-conceptions of Personal fitness
3	Prevention and Care of Exercise Injuries
	 Types of Exercise Injuries First Aid- Importance & application in Exercise Injuries Management of Soft tissues injuries Management of bone injuries
4	Sports Training
	 Definition, aims & objectives of Sports training Importance of Sports training Principles of Sports training Drug abuse & its effects

3. Core Courses (CC)

5.Business Planning & Entrepreneurial Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Foundations of Entrepreneurship Development	15
2	Types & Classification Of Entrepreneurs	15
3	Entrepreneur Project Development & Business Plan	15
4	Venture Development	15
	Total	60

SN	Objectives		
1	Entrepreneurship is one of the major focus areas of the discipline of		
	Management. This course introduces Entrepreneurship to budding managers.		
2	To develop entrepreneurs & to prepare students to take the responsibility of		
	full line of management function of a company with special reference to SME		
	sector.		

Sr. No.	Modules / Units		
1	Foundations of Entrepreneurship Development:		
	 Foundations of Entrepreneurship Development: Concept and Need of Entrepreneurship Development Definition of Entrepreneur, Entrepreneurship, Importance and significance of growth of entrepreneurial activities Characteristics and qualities of entrepreneur Theories of Entrepreneurship: Innovation Theory by Schumpeter &Imitating Theory of High Achievement by McClelland X-Efficiency Theory by Leibenstein Theory of Profit by Knight Theory of Social change by Everett Hagen External Influences on Entrepreneurship Development: Socio-Cultural, Political, Economical, Personal. Role of Entrepreneurial culture in Entrepreneurship Development. 		
2	Types & Classification Of Entrepreneurs		
	 Intrapreneur –Concept and Development of Intrapreneurship Women Entrepreneur – concept, development and problems faced by Women Entrepreneurs, Development of Women Entrepreneurs with reference to Self Help Group Social entrepreneurship–concept, development of Social entrepreneurship in India. Importance and Social responsibility of NGO's. Entrepreneurial development Program (EDP)– concept, factor influencing EDP. Option available to Entrepreneur. (Ancillarisation, BPO, Franchise, M&A) 		
3	Entrepreneur Project Development &Business Plan		
	 Innovation, Invention, Creativity, Business Idea, Opportunities through change. Idea generation- Sources-Development of product /idea, Environmental scanning and SWOT analysis Creating Entrepreneurial Venture-Entrepreneurship Development Cycle Business Planning Process-The business plan as an Entrepreneurial tool, scope and value of Business plan. Elements of Business Plan, Objectives, Market and Feasibility Analysis, Marketing, Finance, Organization &Management, Ownership, Critical Risk Contingencies of the proposal, Scheduling and milestones. 		
4	Venture Development		
	 Steps involved in starting of Venture Institutional support to an Entrepreneur Venture funding, requirements of Capital (Fixed and working) Sources of finance, problem of Venture set-up and prospects Marketing: Methods, Channel of Marketing, Marketing Institutions and Assistance. Now tronds in entrepreneurchin 		
	New trends in entrepreneurship		

3. Core Courses (CC)

6. Accounting for Managerial Decisions

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Analysis and Interpretation of Financial statements	15
2	Ratio analysis and Interpretation	15
3	Cash flow statement	15
4	Working capital	15
	Total	60

SN	Objectives
1	To acquaint management learners with basic accounting fundamentals.
2	To develop financial analysis skills among learners.
3	The course aims at explaining the core concepts of business finance and its importance in managing a business

Sr. No.	Modules / Units		
1	Analysis and Interpretation of Financial statements		
	 Study of balance sheet of limited companies. Study of Manufacturing, Trading, Profit and Loss A/c of Limited Companies Vertical Form of Balance Sheet and Profit & Loss A/c-Trend Analysis, Comparative Statement &Common Size. 		
2	Ratio analysis and Interpretation		
	 Ratio analysis and Interpretation(based on vertical form of financial statements)including conventional and functional classification restricted to: Balance sheet ratios: Current ratio, Liquid Ratio, Stock Working capital ratio, Proprietory ratio, Debt Equity Ratio, Capital Gearing Ratio. Revenue statement ratios: Gross profit ratio, Expenses ratio, Operating ratio, Net profit ratio, Net Operating Profit Ratio, Stock turnover Ratio, Debtors Turnover , Creditors Turnover Ratio Combined ratios: Return on capital Employed (including Long term borrowings), Return on Proprietors fund (Shareholder fund and Preference Capital), Return on Equity Capital, Dividend Payout Ratio, Debt Service Ratio, Different modes of expressing ratios:-Rate, Ratio, Percentage, Number. Limitations of the use of Ratios. 		
3	Cash flow statement		
	Preparation of cash flow statement(AccountingStandard-3(revised)		
4	Working capital		
	 Working capital-Concept, Estimation of requirements in case of Trading & Manufacturing Organizations. Receivables management-Meaning &Importance, Credit Policy Variables, methods of Credit Evaluation(Traditional and Numerical- Credit Scoring); Monitoring the Debtors Techniques [DSO, Ageing Schedule] 		

3. Core Courses (CC)

7. Strategic Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction	12
2	Strategy Formulation	16
3	Strategic Implementation	18
4	Strategic Evaluation & Control	14
	Total	60

SN	Objectives
1	The objective of this course is to learn the management policies and strategies at every Level to develop conceptual skills in this area as well as their application in the corporate world.
2	The focus is to critically examine the management of the entire enterprise from the Top Management view points.
3	This course deals with corporate level Policy & Strategy formulation areas. This course aims to developing conceptual skills in this area as well as their application in the corporate world.

Sr. No.	Modules / Units	
1	Introduction	
	 Business Policy-Meaning, Nature, Importance Strategy-Meaning, Definition Strategic Management-Meaning, Definition, Importance, Strategic management Process & Levels of Strategy and Concept and importance of Strategic Business Units (SBU's) Strategic Intent-Mission, Vision, Goals, Objective, Plans 	
2	Strategy Formulation	
	 Environment Analysis and Scanning(SWOT) Corporate Level Strategy (Stability, Growth, Retrenchment, Integration and Internationalization) Business Level Strategy(Cost Leadership, Differentiation, Focus) Functional Level Strategy(R&D, HR, Finance, Marketing, Production) 	
3	Strategic Implementation	
	 Models of Strategy making. Strategic Analysis& Choices &Implementation: BCG Matrix, GE 9Cell, Porter5 Forces, 7S Frame Work Implementation: Meaning, Steps and implementation at Project, Process, Structural ,Behavioural ,Functional level. 	
4	Strategic Evaluation & Control	
	Strategic Evaluation & Control- Meaning, Steps of Evaluation & Techniques of Control Synergy: Concept, Types, evaluation of Synergy. Synergy as a Component of Strategy & its Relevance. Change Management- Elementary Concept	

Bachelor of Management Studies (BMS) Programme

Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

Semester IV

No. of Courses	Semester IV	Credits
1	Elective Courses (EC)	
1& 2	*Any one group of courses from the following list of the courses	06
2	Ability Enhancement Courses (AEC)	
2A	Ability Enhancement Compulsory Course (AECC)	
3	Information Technology in Business Management-II	03
2B	**Skill Enhancement Courses (SEC)	
4	Any one course from the following list of the courses	02
3	Core Courses (CC)	
5	Business Economics-II	03
6	Business Research Methods	03
7	Production & Total Quality Management	03
	Total Credits	20

**List of Skill Enhancement Courses (SEC) for Semester IV (Any One)	
1	Foundation Course (Ethics & Governance)- IV
2	Foundation Course- Contemporary Issues- IV
3	Foundation Course in NSS - IV
4	Foundation Course in NCC - IV
5	Foundation Course in Physical Education - IV

Elective Courses (EC) Group A. Finance Electives

1. Financial Institutions & Markets

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Financial System in India	16
2	Financial Regulators & Institutions in India (detail discussion on their role and functions)	16
3	Financial Markets (In Details)	16
4	Managing Financial Systems Design	12
	Total	60

SN	Objectives
1	The Course aims at providing the students basic knowledge about the structure, role and functioning of financial institutions and markets in the financial system in India.
2	To inculcate understanding relating to managing of financial system

Sr. No.	Modules / Units	
1	Financial System in India	
	 Financial System Theoretical Settings – Meaning, Importance, Functions of financial system, Indian financial system from financial neutrality to financial activism and from financial volatility to financial stability. Role of government in Financial development, Phases of Indian financial system since independence (State Domination – 1947-1990, Financial sector reforms 1991 till Financial sector Legislative Reforms Commission 2013) (Only an Overview) Monitoring Framework for financial Conglomerates, Structure of Indian financial system – Financial Institutions (Banking & Non-Banking), Financial Markets (Organized and Unorganized) Financial Assets/Instruments, Financial Services(Fund based & Free Based) – (In details) Microfinance - Conceptual Framework – Origin, Definitions, Advantages, Barriers, Microfinance Models in India 	
2	Financial Regulators & Institutions in India (detail discussion on their role and functions)	
	 Financial Regulators – Ministry of Finance (Dept of DEA, Expenditure ,Revenue, financial services and disinvestment) RBI- Changing role of RBI in the financial sector, global crisis and RBI, Ministry of Corporate Affairs, SEBI, Pension Fund Regulatory and Development Authority, IRDA. Financial Institutions- Role, Classification, Role of Commercial banks, IFCI, IDBI, Industrial Credit and Investment Corporation of India, SFC, Investment institutions in India (LIC, GIC) NBFC services provided by NBFC. Specialized Financial Institutions – EXIM, NABARD, SIDBI, NHB, SIDC, SME Rating agency of India Ltd, IIFCL, IWRFC (Their role, functions and area of concerns) 	
3	Financial Markets (In Details)	
	 Indian Money Market – Meaning, Features, Functions, Importance, Defects, Participants, Components (Organized and Unorganized) (in details) and Reforms Indian Capital Market - Meaning, Features, Functions, Importance, Participants, Instruments, Reforms in Primary and Secondary Market, Stock Indices, NSE, BSE, ADR and GDR Introduction of Commodity and Derivative Markets Insurance and Mutual funds – An introduction 	
4	Managing Financial Systems Design	
	 Financial System Design – Meaning, Stakeholder Lender Conflict, Manager Stock holder conflict, Conflict Resolution and Financial System Design, Bank oriented systems and Market oriented systems its advantages and drawbacks, Dimensions of well-functioning financial systems At global level – Financial system designs of Developed countries (Japan, Germany, UK and USA) (Brief Summary) Case studies relating to disinvestments polices of PSU in India, Global crises and failures in market systems around world 	

Elective Courses (EC) Group A. Finance Electives

2. Auditing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Auditing	15
2	Audit Planning, Procedures and Documentation	15
3	Auditing Techniques and Internal Audit Introduction	15
4	Auditing Techniques: Vouching &Verification	15
	Total	60

SN	Objectives
1	To enable students get acquaint with the various concepts of auditing.
2	To ensure students understand and practice the various techniques of auditing while managing their finances

Sr. No.	Modules / Units					
1	Introduction to Auditing					
	 Basics – Financial Statements, Users of Information, Definition of Auditing, Objectives of Auditing – Primary and Secondary, Expression of opinion, Detection of Frauds and Errors, Inherent limitations of Audit. Difference between Accounting and Auditing, Investigation and Auditing. Errors & Frauds – Definitions, Reasons and Circumstances, Types of Error – Commission, Omission, Compensating error. Types of frauds, Risk of fraud ar Error in Audit, Auditors Duties and Responsibilities in case of fraud Principles of Audit – Integrity, Objectivity, Independence, Skills, Competence Work performed by others, Documentation, Planning, Audi Evidence, Accounting System and Internal Control, Audit Conclusions and Reporting Types of Audit – Meaning, Advantages, Disadvantages of Balance sheet Audi Interim Audit, Continuous Audit, Concurrent Audit and Annual Audit 					
2	Audit Planning, Procedures and Documentation					
	 Audit Planning – Meaning, Objectives, Factors to be considered, Sources of obtaining information, Discussion with Client, Overall Audit Approach. Audit Program – Meaning, Factors, Advantages and Disadvantages, Overcoming Disadvantages, Methods of Work, Instruction before commencing Work, Overall Audit Approach Audit Working Papers - Meaning, importance, Factors determining Form and Contents, Main Functions / Importance, Features, Contents of Permanent Audit File, Temporary Audit File, Ownership, Custody, Access of Other Parties to Audit Working Papers, Auditors Lien on Working Papers, Auditors Lien on Client's Books Audit Notebook – Meaning, structure, Contents, General Information, Current Information, Importance 					
3	Auditing Techniques and Internal Audit Introduction					
	 Test Check - Test Checking Vs Routing Checking, test Check meaning, features, factors to be considered, when Test Checks can be used, advantages disadvantages precautions. Audit Sampling - Audit Sampling, meaning, purpose, factors in determining sample size -Sampling Risk, Tolerable Error and expected error, methods of selecting Sample Items Evaluation of Sample Results auditors Liability in conducting audit based on Sample Internal Control - Meaning and purpose, review of internal control, advantages, auditors duties, review of internal control, Inherent Limitations of Internal control, internal control samples for sales and debtors, purchases and creditors, wages and salaries. Internal Checks Vs Internal Control, Internal Checks Internal Audit - Meaning, basic principles of establishing Internal audit, objectives, evaluation of internal Audit Vs External Audit,, Internal Checks Vs Internal Audit, Internal Audit Vs External Audit,, Internal Checks Vs Internal Audit 					

Sr. No.	Modules / Units					
4	Auditing Techniques: Vouching & Verification					
	 Audit of Income - Cash Sales, Sales on Approval, Consignment Sales, Sales Returns Recovery of Bad Debts written off, Rental Receipts, Interest and Dividends Received Royalties Received Audit of Expenditure - Purchases, Purchase Returns, Salaries and Wages, Rent, Insurance Premium, Telephone expense Postage and Courier, Petty Cash Expenses, Travelling Commission Advertisement, Interest Expense Audit of Assets Book Debts / Debtors, Stocks - Auditors General Duties; Patterns, Dies and Loose Tools, Spare Parts, Empties and Containers Quoted Investments and Unquoted Investment Trade Marks / Copyrights Patents Know-How Plant and Machinery Land and Buildings Furniture and Fixtures Audit of Liabilities - Outstanding Expenses, Bills Payable Secured Ioans Unsecured Loans, Contingent Liabilities 					

Elective Courses (EC) Group A. Finance Electives

3. Strategic Cost Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Strategic Cost Management(Only Theory)	20
2	Activity Based Costing	20
3	Strategic Cost Management performance assessment (Only theory)	08
4	Variance Analysis & Responsibility Accounting (Practical Problems)	12
	Total	60

SN	Objectives
1	Learners should develop skills of analysis, evaluation and synthesis in cost and management accounting
2	The subject covers the complex modern industrial organizations within which the various facets of decision-making and controlling operations take place.

Sr. No.	Modules / Units			
1	Introduction to Strategic Cost Management(Only Theory)			
	• Strategic Cost Management (SCM): Concept and Philosophy-Objectives of SCM-Environmental influences on cost management practices, Key elements in SCM-Different aspects of Strategic Cost Management: Value Analysis & Value Engineering, Wastage Control, Disposal Management, Business Process Reengineering, Total Quality Management, Total Productive Maintenance, Energy Audit, Control of Total Distribution Cost & Supply Cost, Cost Reduction & Product Life Cycle Costing(An Overview)			
2	Activity Based Costing			
	 Activity Based Management and Activity Based Budgeting: Concept, rationale, issues, limitations. Design and Implementation of Activity Based Costing (Practical Problems on ABC), Life Cycle Costing, Kaizen Costing, Back Flush Costing. Evaluation criterion; Return on Cash Systems; Transfer Pricing and Divisional Performance. Transfer Pricing in International Business, Marginal Costing and Managerial Decision Mix (Practical Problems) 			
3	Strategic Cost Management performance assessment (Only theory)			
	 Cost Audit & Management Audit under companies Act, with reference to strategic assessment of cost & managerial performance- Strategic Cost-Benefit Analysis of different business restructuring propositions-Entrepreneurial approach to cost Management, with reference to core competencies, strategic advantages & long-term perspective of cost Management. Six Sigma, Learning Curve, Praise Analysis and Simulation 			
4	Variance Analysis & Responsibility Accounting (Practical Problems)			
	 Standard Costing (Material, Labour, Overhead, Sales & Profit) Responsibility Accounting –Introduction, Types & Evaluation of Profit Centre and Investment Centre 			

Elective Courses (EC) Group A. Finance Electives

4. Corporate Restructuring

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Corporate Restructuring – Introduction and Concepts (Only Theory)	15
2	Accounting of Internal Reconstruction (Practical and theory)	15
3	Accounting of External Reconstruction (Amalgamation/ Mergers/ Takeovers and Absorption)(Practical and theory)	15
4	Impact of Reorganization on the Company - An Introduction (Only Theory)	15
	Total	60

SN	J	Objectives								
1		То	impart	knowledge	relating	to	legal,	accounting	and	practical
		implementation of corporate restructuring.								
2		The subject covers the complex facets of corporate restructuring process								

Sr. No.	Modules / Units					
1	Corporate Restructuring – Introduction and Concepts (Only Theory)					
	 Corporate Restructuring - Historical Background, Meaning of Corporate Restructuring, Corporate Restructuring as a Business Strategy, Need and Scope of Corporate Restructuring. Planning, Formulation and Execution of Various Restructuring Strategies, Important Aspects to be considered while Planning or Implementing Corporate Restructuring Strategies. Forms of Restructuring - Merger, Demerger, Reverse merger, Disinvestment, Takeover/acquisition, Joint Venture (JV), Strategic Alliance, Franchising and Slump sale 					
2	Accounting of Internal Reconstruction (Practical and theory)					
	 Need for reconstruction and Company Law provisions, Distinction between internal and external reconstructions Methods including alteration of share capital, variation of share-holder rights, sub division, consolidation, surrender and reissue/cancellation, reduction of share capital, with relevant legal provisions and accounting treatments for same. 					
3	Accounting of External Reconstruction (Amalgamation/ Mergers/ Takeovers and Absorption) (Practical and theory)					
	 In the nature of merger and purchase with corresponding accounting treatments of pooling of interests and purchase methods respectively Computation and meaning of purchase consideration and Problems based on purchase method of accounting only. 					
4	Impact of Reorganization on the Company - An Introduction (Only Theory)					
	 Change in the Internal Aspects on Reorganization – Change of Name and Logo, Revised Organization Chart, Communication, Employee Compensation, Benefits and Welfare Activities, Aligning Company Policies, Aligning Accounting and Internal Database Management Systems, Re-Visiting Internal Processes and Re-Allocation of People Change in External Aspects on Reorganization - Engagement with Statutory Authorities, Revised ISO Certification and Similar Other Certifications, Revisiting past Government approvals, decisions and other contracts. Impact of Reorganization - Gain or Loss to Stakeholders, Implementation of Objectives, Integration of Businesses and Operations, Post Merger Success and Valuation and Impact on Human and Cultural Aspects. 					

Elective Courses (EC) Group B. Marketing Electives

1. Integrated Marketing Communication

Modules at a Glance

Sr. No.	Modules		
1	Introduction to Integrated Marketing Communication	15	
2	Elements of IMC – I	15	
3	Elements of IMC – II	15	
4	Evaluation & Ethics in Marketing Communication	15	
	Total	60	

SN	Objectives
1	To equip the students with knowledge about the nature, purpose and complex construction in the planning and execution of an effective Integrated Marketing Communication (IMC) program.
2	To understand the various tools of IMC and the importance of co-ordinating them for an effective marketing communication program.

Sr. No.	Modules / Units
1	Introduction to Integrated Marketing Communication
	 Meaning, Features of IMC, Evolution of IMC, Reasons for Growth of IMC. Promotional Tools for IMC, IMC planning process, Role of IMC in Marketing Communication process, Traditional and alternative Response Hierarchy Models Establishing objectives and Budgeting: Determining Promotional Objectives, Sales vs Communication Objectives, DAGMAR, Problems in setting objectives, setting objectives for the IMC Program.
2	Elements of IMC – I
	 Advertising – Features, Role of Advertising in IMC, Advantages and Disadvantages, Types of Advertising, Types of Media used for advertising. Sales promotion – Scope, role of Sales Promotion as IMC tool, Reasons for the growth, Advantages and Disadvantages, Types of Sales Promotion, objectives of consumer and trade promotion, strategies of consumer promotion and trade promotion, sales promotion campaign, evaluation of Sales Promotion campaign.
3	Elements of IMC – II
	 Direct Marketing - Role of direct marketing in IMC, Objectives of Direct Marketing, Components for Direct Marketing, Tools of Direct Marketing – direct mail, catalogues, direct response media, internet, telemarketing, alternative media evaluation of effectiveness of direct marketing Public Relations and Publicity – Introduction, Role of PR in IMC, Advantages and Disadvantages, Types of PR, Tools of PR ,Managing PR – Planning, implementation, evaluation and Research, Publicity, Sponsorship – definition, Essentials of good sponsorship, event sponsorship, cause sponsorship Personal Selling – Features, Role of Personal Selling in IMC, advantages and disadvantages of Personal Selling, Selling process, Importance of Personal Selling
4	Evaluation & Ethics in Marketing Communication
	 Evaluating an Integrated Marketing program – Evaluation process of IMC – Message Evaluations, Advertising tracking research – copy testing – emotional reaction test, cognitive Neuro science – online evaluation, Behavioural Evaluation – sales and response rate, POPAI, Toll free numbers, QR codes and facebook likes, response cards, Internet responses, redemption rate Test Markets – competitive responses, scanner data, Purchase simulationtests Ethics and Marketing communication – stereotyping, targeting vulnerable customers, offensive brand messages – legal issues – Commercial free speech, misleading claims, puffery, fraud, questionable B2B practices Current Trends in IMC – Internet & IMC, Advertising on internet, PR through
	Internet Banner, Sales promotion on Internet, direct marketing on internet.

Elective Courses (EC) Group B. Marketing Electives

2. Rural Marketing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction	15
2	Rural Market	15
3	Rural Marketing Mix	15
4	Rural Marketing Strategies	15
	Total	60

SN	Objectives
1	The objective of this course is to explore the students to the Agriculture and Rural Marketing environment so that they can understand consumer's and marketing characteristics of the same for understanding and contributing to the emerging challenges in the upcoming global economic scenario.

Sr. No.	Modules / Units	
1	Introduction	
	 Introduction to Rural Market, Definition &Scope of Rural Marketing. Rural Market in India-Size & Scope, Rural development as a core area, Efforts put for Rural development by government (A brief Overview). Emerging Profile of Rural Markets in India, Problems of rural market. Constraints in Rural Marketing and Strategies to overcome constraints 	
2	Rural Market	
	 Rural Consumer Vs Urban Consumers- a comparison. Characteristics of Rural Consumers. Rural Market Environment: a)Demographics- Population, Occupation Pattern, Literacy Level; b)Economic Factors-Income Generation, Expenditure Pattern, Rural Demand and Consumption Pattern, Rural Market Index; Land Use Pattern, c)Rural Infrastructure -Rural Housing, Electrification, Roads Rural Consumer Behaviour: meaning, Factors affecting Rural Consumer Behaviour-Social factors, Cultural factors, Technological factors, Lifestyle, Personality. 	
3	Rural Marketing Mix	
	 Relevance of Marketing mix for Rural market/Consumers. Product Strategies, Rural Product Categories-FMCGs, Consumer Durables, Agriculture Goods &Services Importance of Branding, Packaging and Labelling. Nature of Competition in Rural Markets, the problem of Fake Brands Pricing Strategies & objectives Promotional Strategies. Segmentation, Targeting & Positioning for rural market. 	
4	Rural Marketing Strategies	
	 Distribution Strategies for Rural consumers. Channels of Distribution- HAATS, Mandis, Public Distribution System, Co- operative society, Distribution Models of FMCG, Companies HUL, ITC etc. Distribution networks, Ideal distribution model for rural markets (Case study based) Communication Strategy. Challenges in Rural Communication, Developing Effective Communication, Determining Communication Objectives, Designing the Message, Selecting the Communication Channels. Creating Advertisements for Rural Audiences. Rural Media- Mass media, Non-Conventional Media, Personalized media; 	

Elective Courses (EC) Group B. Marketing Electives

3. Event Marketing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Events	15
2	Segmenting, Targeting and Positioning of Events and Concept of Product in Events	15
3	Concept of Pricing and Promotion in Events	15
4	Trends and Challenges in Event Marketing	15
	Total	60

SN	Objectives
1	To understand basic concepts of Event Marketing.
2	To impart knowledge to learners about categories of Events.
3	To understand segmenting, targeting and positioning in the context of Event Marketing.
4	To familiarize learners with trends and challenges in Event Marketing.

Sr. No.	Modules / Units	
1	Introduction to Events	
	 Definition and Meaning of Event Marketing ; The Evolution of Event Marketing, Advantages of Event Marketing, 5 C's of Events- Conceptualization, costing, canvassing, customization, carrying-out; Event Designing; Reach; Interaction- Interaction Points, Direct Interaction, Indirect Interaction, Interaction Catalysts or Enablers. Importance of Events as a Marketing Communication Tool; Events as a Marketing Tool: The Varied Marketing Needs Addressed by Events: Brand Building, Focus on Target Market, Implementation of Marketing Plan, Marketing Research, Relationship Building, Creating opportunities for better deals with different media, Events and their Economic implications. Concept of Event Creativity, Key Elements of Events: Event Infrastructure; Customer Groups; Clients; Event Organizers; Venue; Media 	
-	Segmenting, Targeting and Positioning of Events and Concept of Product in	
2	Events	
	 Concept of Market in Events; Segmentation and targeting of the Market for events; Positioning of events-Event Property. Concept of Product in Events: Benefit Levels-Core, generic, expected, augmented; Categories of Events: Competitive Events, Artistic Expression, Cultural Celebrations, Exhibition Events, Charitable Events ,Special Business Events, Retail Events. Event Variations- Time Frame Based, Concept Based, Artist Based, Client Industry Based 	
3	Concept of Pricing and Promotion in Events	
	 Risk Rating, Setting Pricing Objectives, Understanding local legislations and tax laws, Feedback about events from the market, skills required for negotiating the best price, validation against pricing objectives, pricing decisions, Event Charges: Percentage of the total Event Cost, Flat Fee, Package Price, Hourly Rate. Networking Components: Print Media, Radio, Television, Internet, Outdoor Media, Direct Marketing, Sales Promotion, Public Relations, Merchandising, In- venue Publicity. Event Sponsorship: Concept of Sponsorship, Sponsorship in a communication context, Synergy between sponsor and Event, Identifying Potential sponsors, Impact Measurement, Practical Sponsor Incentivization, In-Kind Sponsorship. 	
4	Trends and Challenges in Event Marketing	
	 e-event marketing, Virtual Events, Societal Event Marketing, Green Event, Cause-Related Event Marketing, Sports Event Marketing. Safety and Security of Event Event Crisis Management Growth of Event Industry in India Career in Event Marketing 	

Elective Courses (EC) Group B. Marketing Electives

4. Tourism Marketing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Tourism Marketing	15
2	Tourism Market Segmentation & Product Mix of Tourism Marketing	15
3	Concept of Pricing, Place, Promotion and Expanded marketing mix for tourism marketing	15
4	Global tourism, tourism organizations and Challenges for Indian Tourism Industry	15
	Total	60

SN	Objectives
1	To understand basic concepts and strategies of Tourism Marketing.
2	To impart knowledge to learners about types of tourism.
3	To understand segmentation and Marketing mix in the context of Tourism Marketing.
4	To familiarize learners with trends and challenges in Tourism Marketing.

Modules / Units	
Introduction to Tourism Marketing	
 Meaning of Tourism & Tourist, Features of Tourism, Purpose of Tourism, Adverse Effects of Tourism, Factors Influencing growth of Tourism, Classification of Tourism; Types of Tourism: Health, adventure, rural, cultural, religious, eco-Tourism, wedding Tourism, cruise Tourism. Tourism Marketing Meaning, Objectives of Tourism Marketing, Importance of Tourism Marketing, Problems of Tourism Marketing. Phases of Tourism: Economic Approach, Environmental Approach, Cost Benefit Approach. Tourism Planning: Process, Study of market, Levels of tourism planning, Organization 	
of a tour. Tour Operators and Travel Agents: functions, types, distribution network, Travel agency operations, Travel Organization-Individual and group, travel itinerary.	
Travel Formalities and Documentation.	
Tourism Market Segmentation & Product Mix of Tourism Marketing	
 Tourism Market Segmentation: Meaning, Need for Market Segmentation in Tourism Importance of Market Segmentation in Tourism Bases for Segmentation in Tourism Tourist Typology: Cohens Typology, Plog's Typology 4 'A's of Tourism Attraction: Meaning, Typology of Attraction, Natural, Artificial, Cultural, Social, Managed Attraction for Tourist, Peter's Inventory of Tourist Accommodation: Meaning, Typology of Accommodation Accessibility: Meaning, Transportation System for Tourism, Surface Transport, Railways and its contribution to tourism, Sea & Waterways, Airways Amenities: Meaning, Amenities & Facilities at the destination. Marketing Strategy: Hard v/s Soft Tourism Strategy. Product Mix of Tourism Marketing: Meaning, Tourism Destination Life Cycle, Factors for tourism destination selection, launching a new tourism product, Tourism Product and Package Tour, Itinerary meaning, Types of Itinerary, Drawing a Itinerary for Tourist, Reservation meaning, Sources of reservation, Modes of Reservation, Ticketing Procedure 	
Concept of Pricing, Place, Promotion and Expanded marketing mix for tourism	
marketing	
 Price: Meaning, Factors Influencing Tourism Pricing, Tourism Pricing Objectives, Tourism Pricing Policies Place: Meaning, Factors Influencing Tourism Distribution, Tourism Distribution System, Middlemen in Tourism Industry, Functions of Middlemen, Travel Guide Meaning, Essential of an ideal travel guide. Promotion: Tourism Advertising, Tourism Publicity, Tourism Public Relation, Tourism Sales promotion Technique, Personal Selling in Tourism, Skills required for Selling Tourism Product, Electronics Channel of Tourism People: Moment of Truth in Tourism, Employee as an element of people mix, Internal Marketing, Objectives of Internal Marketing, Internal marketing Process. Process: Meaning, Factors to be considered while designing the service process, Tourism Service Blueprinting: Meaning, Steps, Benefits of Blueprinting 	

Sr. No.	Modules / Units	
4	Global Tourism, Tourism Organizations and Challenges for Indian Tourism Industry	
	• Global Tourism Market: Overview of Tourism Market of America, Mauritius, Asia	
	Pacific, Thailand, Vietnam, China, Singapore, Middle East and Gulf, UK and other	
	European Countries.	
	Status of tourism in developing countries.	
	• India as a Tourist Destination: A conceptual framework, Destination Image, Building	
	Brand India; Incredible India Campaign	
	Challenges for Indian Tourism Industry	
	• Tourism Organizations: World Trade Organization (WTO), International Civil Aviation	
	Organization (ICAO), International Air Transport Association (IATA), Pacific Asia Travel	
	Association (PATA), Universal Federation of Travel Agents Association (UFTAA), Travel	
	Agents Association of India (TAAI), Indian Association of Tour Operators (IATO),	
	Ministry of Tourism, Government of India, India Tourism Development Corporation.	

Elective Courses (EC) Group C. Human Resource Electives

1. Human Resource Planning and Information System

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Overview of Human Resource Planning (HRP)	15
2	Job Analysis, Recruitment and Selection	15
3	HRP Practitioner, Aspects of HRP and Evaluation	15
4	Human Resource Information Systems	15
	Total	60

SN	Objectives
1	To Understand the Concept and Process of HRP
2	To Understand Ways of matching Job Requirements and Human Resource Availability
3	To Explore the concept of Strategic HRP
4	To Understand the applications of HRIS

Sr. No.	Modules / Units
1	Overview of Human Resource Planning (HRP)
	 a) Overview of Human Resource Planning (HRP): Human Resource Planning–Meaning, Features, Scope, Approaches, Levels of HRP, Types, Tools, Activities for HRP, Requirements for Effective HR Planning. Process of HRP- Steps in HRP, HR Demand Forecasting–Factors,
	Techniques – (Concepts Only) Managerial Judgement, Ratio Trend Analysis, Regression Analysis, Work Study Technique, Delphi Technique. HR Supply Forecasting– Factors, Techniques – (Concepts Only) Skills Inventories, Succession Plans, Replacement Charts, Staffing Tables.
	• Barriers in Effective Implementation of HRP and Ways to Overcome Them.
	 Strategic Human Resource Planning – Meaning and Objectives.
	 Link between Strategic Planning and HRP through Technology.
	• HR Policy – Meaning, Importance.
	HR Programme-Meaning and Contents.
2	Job Analysis, Recruitment and Selection
	a) Job Analysis, Recruitment and Selection:
	 Job Analysis-Meaning, Features, Advantages.
	Job Design: Concept, Issues.
	 Job Redesign – Meaning, Process, Benefits. Matching Human Resource Requirement and Availability through: Retention- Meaning, Strategies, Resourcing- Meaning, Types. Flexibility – Flexible work practices, Downsizing- Meaning, Reasons, Layoff – Meaning, Reasons.
	 Recruitment - Meaning and Factors affecting Recruitment, Ethical Issues in Recruitment and Selection.
	• Employee Selection Tests: Meaning, Advantages and Limitations.
	• Human Resource Audit: Meaning, Need, Objectives, Process, Areas.
3	HRP Practitioner, Aspects of HRP and Evaluation
	a) HRP Practitioner, Aspects of HRP and Evaluation:
	HRP Practitioner: Meaning, Role.
	HRP Management Process:
	 Establish HRP Department Goals and Objectives
	 Creating HRP Department Structure
	 Staffing the HRP Department
	 Issuing Orders
	 Resolving Conflicts
	 Communicating
	 Planning for Needed Resources
	 Dealing with Power and Politics -Meaning and Types of Power
	HRP as Tool to Enhance Organisational Productivity
	Impact of Globalisation on HRP.

	 Aspects of HRP : Performance Management, Career Management, Management Training and Development, Multi Skill Development Return on Investment in HRP- Meaning and Importance.
	 HRP Evaluation- Meaning, Need, Process, Issues to be considered during HRP Evaluation. Selected Strategic Options and HRP Implications: Restructuring and its Impact on HRP, Mergers and Acquisitions and its Impact on HRP,
	Outsourcing and its Impact on HRP.
4	Human Resource Information Systems
	Human Resource Information Systems:
	• Data Information Needs for HR Manager – Contents and Usage of Data.
	 HRIS-Meaning, Features, Evolution, Objectives, Essentials, Components, Functions, Steps in designing of HRIS, HRIS Subsystems, Mechanisms of HRIS, Benefits, Limitations, Barriers in Effective Implementation of HRIS. Security Issues in Human Resource Information Systems.

Elective Courses (EC) Group C. Human Resource Electives

2. Training & Development in HRM

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Overview of Training	15
2	Overview of development	15
3	Concept of Management development	15
4	Performance measurement, Talent management & Knowledge management	15
	Total	60

SN	Objectives
1	This paper is not pure academic oriented but practice based. It has been designed, keeping in view the needs of the organizations. Successful managerial performance depends on the individual's ability to observe, interpret the issues and modify his approach and behaviour. All organizations need to pay adequate attention to equip their employees. Rapid progress in technology has changed not only in the physical facilities but also in the abstract qualities required of the men who are using them. This paper will attempt to orient the students to tailor themselves to meet the specific needs of the organizations in training and development activities.

Sr. No.	Modules / Units	
1	Overview of Training	
	 Overview of training- concept, scope, importance, objectives, features, need and assessment of training. Process of Training-Steps in Training, identification of Job Competencies, criteria for identifying Training Needs (Person Analysis, Task Analysis, Organisation Analysis), Types-On the Job &Off the Job Method. Assessment of Training Needs, Methods & Process of Needs Assessment. Criteria &designing-Implementation- an effective training program. 	
2	Overview of Development	
	 Overview of development- concept, scope, importance & need and features, Human Performance Improvement Counselling techniques with reference to development employees, society and organization. Career development- Career development cycle, model for planned self development, succession planning. 	
3	Concept of Management Development	
	 Concept of Management Development. Process of MDP. Programs & methods, importance, evaluating a MDP. 	
4	Performance measurement, Talent management & Knowledge management	
	 Performance measurements– Appraisals, pitfalls & ethics of appraisal. Talent management –Introduction ,Measuring Talent Management, Integration & future of TM, Global TM &knowledge management— OVERVIEW -Introduction: History, Concepts, Knowledge Management: Definitions and the Antecedents of KM Information Management to Knowledge Management , Knowledge Management: What Is and What Is Not?, Three stages of KM, KM Life Cycle 	

Elective Courses (EC) Group C. Human Resource Electives

3. Change Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction	15
2	Impact of Change	15
3	Resistance to Change	15
4	Effective Implementation of Change	15
	Total	60

SN	Objectives
1	The objective of this paper is to prepare students as organizational change facilitators using the knowledge and techniques of behavioural science.

Sr. No.	Modules / Units	
1	Introduction	
	 Introduction &levels of change. Importance, imperatives of change, Forces of change. Causes-social, economic, technological and organizational. Organizational culture& change. Types & Models of change –Kurt Lewin's change model, Action research, Expanded Process Model., A.J. Leavitts model. 	
2	Impact of Change	
	 Change & its implementation.— individual change: concept, need, importance & risk of not having individual perspective. Team Change –concept, need, importance & limitation Change & its impact— Resistance to change & sources-sources of individual resistance, sources of organizational resistance 	
3	Resistance to Change	
	 Overcoming Resistance to change – Manifestations of resistance, Six box model Minimizing RTC. OD Interventions to overcome change-meaning and importance, Team intervention, Role analysis Technique, Coaching &mentoring, T-group, Job expectations technique, Behaviour modification, Managing role stress. 	
4	Effective implementation of change	
	 Effective implementation of change–change agents and effective change programs. Systematic approach to change, client & consultant relationship Classic skills for leaders Case study on smart change leaders, caselets on Action research. 	

Elective Courses (EC) Group C. Human Resource Electives

4. Conflict & Negotiation

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Overview of Conflict	15
2	Conflict Management	15
3	Overview of Negotiation	15
4	Managing Negotiations, Ethics in Negotiation and 3D Negotiation	15
	Total	60

SN	Objectives
1	To understand the nature of conflicts, their causes and outcomes
2	To study the aspects of conflict management and how to handle them effectively
3	To get insight into negotiations and negotiation process
4	To understand the role of third party negotiation and skills for effective negotiation

Sr. No.	Modules / Units	
1	Overview of Conflict	
	 Meaning of Conflict, Nature, Transitions in Conflict Thought – Traditional View, Human Relations View, Interactionist View. Functional and Dysfunctional Conflict, Levels of Conflicts, Process of Conflicts. Meaning of Industrial/ Organizational Conflict, Causes, Benefits and Limitations of Conflicts to the Organization. Conflict Outcomes - win-lose, lose-lose, compromise, win-win. Five belief domains of Conflicts – Superiority, Injustice, Vulnerability, Distrust, Helplessness 	
2	Conflict Management	
	 Meaning of Conflict management, Need and Importance of Conflict management, Conflict Resolution Strategies - Competing, Accommodating, Avoiding, Compromising, Collaborative. Strategies for resolving conflicts at – Intra-personal, Inter-personal, Intragroup and Inter group levels. Prevention of Industrial Conflicts – Labour welfare officer, Tripartite and Bipartite Bodies, Standing Orders, Grievance Procedure, Collective Bargaining. Settlement of Conflicts – Investigation, Mediator, Conciliation, Voluntary arbitration, compulsory arbitration, labour courts, industrial tribunals, patiencel tribunals. 	
-	national tribunals	
3	 Overview of Negotiation Negotiation - Meaning, Importance of Negotiation, Process, Factors/ Elements affecting negotiation, Challenges for an Effective Negotiation Role of Communication, Personality and Emotions in Negotiation. Distributive and Integrative Negotiation (concepts) Cross-Cultural Negotiation - Meaning, Factors influencing cross-cultural negotiations, Ways to resolve Cross Cultural negotiation. Types of Negotiations in Corporates/ Work Place - Day to Day, Employer - Employee, Negotiation between Colleagues, Commercial Negotiation, Legal Negotiations International Negotiations - Meaning, Factors affecting negotiation 	
4	Managing Negotiations, Ethics in Negotiation and 3D Negotiation	
	 Third Party Negotiation Mediation - Meaning, Role of Mediator Arbitration - Meaning, Role of Arbitrator Conciliation - Meaning, Role of Conciliator Consultation - Meaning, Role of Consultant Skills for Effective Negotiation Negotiation as an Approach to Manage Conflicts. Ethics in Negotiation - Meaning, Need, Ethically Ambiguous Negotiation Tactics. Culture and Negotiation - Meaning, Influence of culture on negotiations 	
	3D Negotiation – Meaning, The 3 Dimensions for successful negotiations	

2. Ability Enhancement Courses (AEC) 2A.Ability Enhancement Compulsory Course

3. Information Technology in Business Management-II

Sr. No.	Modules	No. of Lectures
1	Management Information system	15
2	ERP/E-SCM/E-CRM	15
3	Introduction to databases and data warehouse	15
4	Outsourcing	15
	Total	60

Modules at a Glance

SN	Objectives
1	To understand managerial decision-making and to develop perceptive of major functional area of MIS
2	To provide conceptual study of Enterprise Resource Planning, Supply Chain Management, Customer Relationship Management, Key issues in implementation. This module provides understanding about emerging MIS technologies like ERP, CRM, SCM and trends in enterprise applications.
3	To learn and understand relationship between database management and data warehouse approaches, the requirements and applications of data warehouse
4	To learn outsourcing concepts. BPO/KPO industries, their structures , Cloud computing

Sr. No.	Modules / Units	
1	Management Information System	
	 Overview of MIS Definition, Characteristics Subsystems of MIS (Activity and Functional subsystems) Structure of MIS Reasons for failure of MIS. Understanding Major Functional Systems Marketing & Sales Systems Finance & Accounting Systems Manufacturing & Production Systems Human Resource Systems Inventory Systems Sub systems, description and organizational levels Decision support system Definition Relationship with MIS 	
	• Evolution of DSS, Characteristics, classification, objectives, components, applications of DSS	
2	ERP/E-SCM/E-CRM	
	 Concepts of ERP Architecture of ERP Generic modules of ERP Applications of ERP Applications of ERP ERP Implementation concepts ERP Implementation concepts ERP lifecycle Concept of XRP (extended ERP) Features of commercial ERP software Study of SAP, Oracle Apps, MS Dynamics NAV, Peoplesoft Concept of e-CRM E-CRM Solutions and its advantages, How technology helps? CRM Capabilities and customer Life cycle Privacy Issues and CRM CRM and workflow Automation Concept of E-SCM Strategic advantages, benefits E-SCM Components and Chain Architecture Major Trends in e-SCM Case studies ERP/SCM/CRM 	

Sr. No.	Modules / Units	
3	Introduction to Data base and Data warehouse	
	 Introduction to DBMS Meaning of DBMS, Need for using DBMS. Concepts of tables, records, attributes, keys, integrity constraints, schema architecture, data independence. 	
	Data Warehousing and Data Mining	
	Concepts of Data warehousing,	
	Importance of data warehouse for an organization	
	Characteristics of Data warehouse	
	Functions of Data warehouse	
	Data warehouse architecture	
	Business use of data warehouse	
	Standard Reports and queriesData Mining	
	The scope and the techniques used	
	 Business Applications of Data warehousing and Data mining 	
4	Outsourcing	
	Introduction to Outsourcing	
	Meaning of Outsourcing, Need for outsourcing	
	Scope of Outsourcing.	
	Outsourcing : IT and Business Processes	
	Business Process Outsourcing (BPO)	
	Introduction	
	BPO Vendors	
	How does BPO Work?	
	BPO Service scope	
	Benefits of BPO BPO and IT Services	
	Project Management approach in BPO	
	BPO and IT-enabled services	
	BPO Business Model	
	Strategy for Business Process Outsourcing	
	Process of BPO	
	ITO Vs BPO	
	BPO to KPO	
	Meaning of KPO	
	KPO vs BPO	
	KPO : Opportunity and Scope	
	KPO challenges KPO Indian Scenario	
	Outsourcing in Cloud Environment	
	Cloud computing offerings	
	 Traditional Outsourcing Vs. Cloud Computing 	

2. Ability Enhancement Courses (AEC)2B. Skill Enhancement Courses (SEC)

4. Foundation Course –IV Ethics & Governance

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Ethics and Business Ethics	12
2	Ethics in Marketing, Finance and HRM	11
3	Corporate Governance	11
4	Corporate Social Responsibility (CSR)	11
	Total	45

SN	Objectives	
1	To understand significance of ethics and ethical practices in businesses which	
	are indispensible for progress of a country	
2	To learn the applicability of ethics in functional areas like marketing, finance	
	and human resource management	
3	To understand the emerging need and growing importance of good governance and CSR by organisations	
4	To study the ethical business practices, CSR and Corporate Governance practiced by various organisations	

Sr. No.	Modules / Units	
1	Introduction to Ethics and Business Ethics	
	Ethics:	
	Concept of Ethics, Evolution of Ethics, Nature of Ethics- Personal, Professional,	
	Managerial	
	Importance of Ethics, Objectives, Scope, Types – Transactional, Participatory	
	and Recognition	
	 Business Ethics: Meaning, Objectives, Purpose and Scope of Business Ethics 	
	Towards Society and Stakeholders, Role of Government in Ensuring Business	
	Ethics	
	Principles of Business Ethics, 3 Cs of Business Ethics – Compliance,	
	Contribution and Consequences	
	Myths about Business Ethics	
	Ethical Performance in Businesses in India	
2	Ethics in Marketing, Finance and HRM	
	• Ethics in Marketing: Ethical issues in Marketing Mix, Unethical Marketing	
	Practices in India, Ethical Dilemmas in Marketing, Ethics in Advertising and	
	Types of Unethical Advertisements	
	• Ethics In Finance: Scope of Ethics in Financial Services, Ethics of a Financial	
	Manager – Legal Issues, Balancing Act and Whistle Blower, Ethics in Taxation,	
	Corporate Crime - White Collar Crime and Organised Crime, Major Corporate	
	Scams in India, Role of SEBI in Ensuring Corporate Governance, Cadbury	
	Committee Report, 1992	
	• Ethics in Human Resource Management: Importance of Workplace Ethics,	
	Guidelines to Promote Workplace Ethics, Importance of Employee Code of	
	Conduct, Ethical Leadership	
3	Corporate Governance	
	• Concept, History of Corporate Governance in India, Need for Corporate	
	Governance	
	• Significance of Ethics in Corporate Governance, Principles of Corporate	
	Governance, Benefits of Good Governance, Issues in Corporate Governance	
	• Theories- Agency Theory, Shareholder Theory, Stakeholder Theory and	
	Stewardship Theory	
	 Corporate Governance in India, Emerging Trends in Corporate Governance, 	
	Models of Corporate Governance, Insider Trading	
4	Corporate Social Responsibility (CSR)	
•	 Meaning of CSR, Evolution of CSR, Types of Social Responsibility 	
	 Aspects of CSR- Responsibility, Accountability, Sustainability and Social Contract 	
	 Need for CSR 	
	 CSR Principles and Strategies 	
	 Issues in CSR 	
	Social Accounting	
	Tata Group's CSR Rating Framework	
1		
	 Sachar Committee Report on CSR 	
	 Sachar Committee Report on CSR Ethical Issues in International Business Practices 	
	·	
	Ethical Issues in International Business Practices	

2. Ability Enhancement Courses (AEC)2B. Skill Enhancement Courses (SEC)

Foundation Course- Contemporary Issues- IV

Sr. No.	Modules	No. of Lectures
1	Significant, Contemporary Rights of Citizens	12
2	Approaches to understanding Ecology	11
3	Science and Technology –II	11
4	Introduction to Competitive Exams	11
	Total	45

Modules at a Glance

Sr. No.	Modules / Units	
1	Significant, Contemporary Rights of Citizens	
	 A. Rights of Consumers-Violations of consumer rights and important provisions of the Consumer Protection Act, 2016; Other important laws to protect consumers; Consumer courts and consumer movements. (3 Lectures) 	
	 B. Right to Information- Genesis and relation with transparency and accountability; important provisions of the Right to Information Act, 2005 some success stories. (3 Lectures) 	
	 C. Protection of Citizens'/Public Interest-Public Interest Litigation, need and procedure to file a PIL; some landmark cases. (3 Lectures) 	
	D. Citizens' Charters, Public Service Guarantee Acts. (3 Lectures)	
2	Approaches to understanding Ecology	
	A. Understanding approaches to ecology- Anthropocentrism, Biocentrism and Eco centrism, Ecofeminism and Deep Ecology.(3 Lectures)	
	 B. Environmental Principles-1: the sustainability principle; the polluter pays principle; the precautionary principle. (4 Lectures) 	
	C. Environmental Principles-2: the equity principle; human rights principles the participation principle. (4 Lectures)	
3	Science and Technology –II	
	 Part A:Some Significant Modern Technologies, Features and Applications (7 Lectures) i. Laser Technology- Light Amplification by Stimulated Emission of Radiation use of laser in remote sensing, GIS/GPS mapping, medical use. 	
	ii. Satellite Technology- various uses in satellite navigation systems, GPS, and imprecise climate and weather analyses.	
	iii. Information and Communication Technology- convergence of various technologies like satellite, computer and digital in the information revolution of today's society.	
	iv. Biotechnology and Genetic engineering- applied biology and uses in medicine, pharmaceuticals and agriculture; genetically modified plant, anima and human life.	
	v. Nanotechnology - definition: the study, control and application of phenomena and materials at length scales below 100 nm; uses in medicine, military intelligence and consumer products.	

Sr. No.	Modules / Units	
4	Introduction to Competitive Exams	
	 Part A. Basic information on Competitive Examinations- the pattern, eligibility criteria and local centres: i. Examinations conducted for entry into professional courses - Graduate Record Examinations (GRE), Graduate Management Admission Test 	
	 GMAT), Common Admission Test (CAT) and Scholastic Aptitude Test (SAT). ii. Examinations conducted for entry into jobs by Union Public Service Commission, Staff Selection Commission (SSC), State Public Service Commissions, Banking and Insurance sectors, and the National and State Eligibility Tests (NET / SET) for entry into teaching profession. 	
	Part B. Soft skills required for competitive examinations- (7 Lectures)	
	 Information on areas tested: Quantitative Ability, Data Interpretation, Verbal Ability and Logical Reasoning, Creativity and Lateral Thinking 	
	ii. Motivation: Concept, Theories and Types of Motivation	
	iii. Goal-Setting: Types of Goals, SMART Goals, Stephen Covey's concept of human endowment	
	iv. Time Management: Effective Strategies for Time Management	
	v. Writing Skills: Paragraph Writing, Report Writing, Filing an application under the RTI Act, Consumer Grievance Letter.	

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Projects / Assignments (for Internal Assessment)

- i. Projects/Assignments should be drawn for the component on Internal Assessment from the topics in **Module 1 to Module 4**.
- ii. Students should be given a list of possible topics at least 3 from each Module at the beginning of the semester.
- iii. The Project/Assignment can take the form of Street-Plays / Power-Point Presentations / Poster Exhibitions and similar other modes of presentation appropriate to the topic.
- iv. Students can work in groups of not more than 8 per topic.
- v. Students must submit a hard / soft copy of the Project / Assignment before appearing for the semester end examination.

QUESTION PAPER PATTERN (Semester III)

The Question Paper Pattern for Semester End Examination shall be as follows:

TOTAL MARKS: 75

DURATION: 150 MINUTES

QUESTION NUMBER	DESCRIPTION	MARKS ASSIGNED
1	 i. Question 1 A will be asked on the meaning / definition of concepts / terms from all Modules. ii. Question 1 B will be asked on the topic of the Project / Assignment done by the student during the Semester iii. In all 8 Questions will be asked out of which 5 have to be attempted. 	 a) Total marks: 15 b) For 1 A, there will be 3 marks for each sub-question. c) For 1 B there will be 15 marks without any break-up.
2	Descriptive Question with internal option (A or B) on Module 1	15
3	Descriptive Question with internal option (A or B) on Module 2	15
4	Descriptive Question with internal option (A or B) on Module 3	15
5	Descriptive Question with internal option (A or B) on Module 4	15

2. Ability Enhancement Courses (AEC) 2B. Skill Enhancement Courses (SEC)

4. Foundation Course in NSS - IV

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Entrepreneurship Development	10
2	Rural Resource Mobilization	10
3	Ideal village & stake of GOS and NGO	13
4	Institutional Social Responsibility and modes of Awareness	12
	Total	45

Sr. No.	Modules / Units	
1	Entrepreneurship Development	
	 UNIT - I Entrepreneurship development Entrepreneurship development- its meaning and schemes Government and self-employment schemes for Entrepreneurship development UNIT - II - Cottage Industry Cottage Industry- its meaning, its role in development process Marketing of cottage products and outlets 	
2	Rural Resource Mobilization	
	UNIT - I - Rural resource mobilization- A case study of eco-village, eco-tourism, agro-tourism UNIT - II - Micro financing with special reference to self-help groups	
3	Ideal village & stake of GOS and NGO	
	UNIT - I - Ideal village Ideal village- the concept Gandhian Concept of Ideal village Case studies on Ideal village UNIT - II - Government Organisations(GOs) and Non-Government Organisations (NGOs) The concept and functioning	
4	Institutional Social Responsibility and modes of Awareness	
	 UNIT - I - Institutional Social Responsibilities Concept and functioning- case study of adapted village UNIT - II - Modes of awareness through fine Arts Skills Basics of performing Arts as tool for social awareness, street play, creative dance, patriotic song, folk songs and folk dance. Rangoli, posters, flip charts, placards, etc. 	

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2. Ability Enhancement Courses (AEC)2B. Skill Enhancement Courses (SEC)

4. Foundation Course in NCC - IV

Sr. No.	Modules	No. of Lectures
1	Disaster Management, Social Awareness and Community Development	10
2	Health and Hygiene	10
3	Drill with Arms	05
4	Weapon Training	10
5	Specialized Subject: Army Or Navy Or Air	10
	Total	45

Sr. No.	Modules / Units		
1	Disaster Management, Social Awareness and Community Development		
	 Disaster Management: Desired outcome: The student shall gain basic information about civil defence organisation / NDMA & shall provide assistance to civil administration in various types of emergencies during natural / manmade disasters Fire Services & Fire fighting Assistance during Natural / Other Calamities: Flood / Cyclone/ Earth Quake/ Accident etc. Social Awareness and Community Development: Desired outcome: The student shall have an understanding about social evils and shall inculcate sense of whistle blowing against such evils and ways to eradicate such evils. NGOs: Role & Contribution Drug Abuse & Trafficking Corruption Social Evil viz. Dowry/ Female Foeticide/Child Abuse & trafficking etc. Traffic Control Org. &Anti drunken Driving 		
2	Health and Hygiene		
	 Desired outcome: The student shall be fully aware about personal health and hygiene lead a healthy life style and foster habits of restraint and self awareness. Hygiene and Sanitation (Personal and Food Hygiene) Basics of Home Nursing & First-Aid in common medical emergencies Wound & Fractures 		
3	Drill with Arms		
	 Desired outcome: The students will demonstrate the sense of discipline, improve bearing, smartness, and turnout, and develop the quality of immediate and implicit obedience of orders, with good reflexes. Getting on Parade with Rifle and Dressing at the Order Dismissing and Falling Out General Salute, Salami Shastra Squad Drill Short/Long tail from the order and vice-versa Examine Arms 		
4	Weapon Training		
	 Desired outcome: The student shall have basic knowledge of weapons and their use and handling. The lying position, Holding and Aiming- I Trigger control and firing a shot Range procedure and safety precautions Theory of Group and Snap Shooting Short range firing, Aiming- II -Alteration of sight 		

Sr. No.	Modules / Units
5	Specialized Subject: Army Or Navy Or Air
	 Army Desired outcome: The training shall instill patriotism, commitment and passion to serve the nation motivating the youth to join the defence forces. It will also acquaint, expose & provide basic knowledge about armed, naval and air-force subjects A. Map reading Setting a Map, finding North and own position Map to ground, Ground to Map Point to Point March B. Field Craft and Battle Craft Observation, Camouflage and Concealment Field Signals Types of Knots and Lashing
	C. Introduction to advanced weapons and role of technology (To be covered by the guest lecturers)
	OR
	Navy A. Naval Communication • Semaphore Phonetic Alphabets Radio Telephony Procedure Wearing of National Flag, Ensign and Admiral's Flag.
	 Wearing of National Flag, Ensign and Admiral's Flag. B. Seamanship Anchor work Types of Anchor, Purpose and Holding ground Boat work Demonstrate Rigging a whaler and enterprise boat- Parts of Sail and Sailing Terms Instructions in Enterprise Class Board including theory of Sailing,
	 Instructions in Enterprise class board including theory of Sailing, Elementary Sailing Tools Types of Power Boats Used in the Navy and their uses, Knowledge of Anchoring, Securing and Towing a Boat Introduction to advanced weapons and role of technology (To be covered by the guest lecturers)

Sr. No.	Modules / Units
	OR
	Air
	A. Air frames
	Fuselage
	Main and Tail Plain
	B. Instruments
	Introduction to RADAR
	C. Aero modelling
	 Flying/ Building of Aero models
	D. Introduction to advanced weapons and role of technology (To be covered by the guest lecturers)

Revised Syllabus of Courses of Bachelor of Management Studies (BMS)Programme at Semester IV with Effect from the Academic Year 2017-2018

> 2. Ability Enhancement Courses (AEC) 2B. Skill Enhancement Courses (SEC)

4. Foundation Course in Physical Education - IV

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Modules at a Glance

No of

Sr. No.	iviodules	No. of Lectures
1	Stress Management	10
2	Awards, Scholarship & Government Schemes	10
3	Yoga Education	10
4	Exercise Scheduling/Prescription	15
	Total	45

Sr. No.	Modules / Units
1	Stress Management
	 Meaning & concept of Stress Causes of Stress Managing Stress Coping Strategies
2	Awards, Scholarship & Government Schemes
	 State & National level Sports Awards State Sports Policy & Scholarship Schemes National Sports Policy & Scholarship Schemes Prominent Sports Personalities
3	Yoga Education
	 Differences between Yogic Exercises & non- Yogic exercises Contribution of Yoga to Sports Principles of Asanas & Bandha Misconceptions about Yoga
4	Exercise Scheduling/Prescription
	 Daily Routine Prescription. Understanding Activity level & Calorie requirement. Adherence & Motivation for exercise. Impact of Lifestyle on Health

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3. Core Courses (CC)

5.Business Economics- II

Sr. No.	Modules	No. of Lectures
1	Introduction to Macroeconomic Data and Theory	15
2	Money, Inflation and Monetary Policy	15
3	Constituents of Fiscal Policy	15
4	Open Economy : Theory and Issues of International Trade	15
	Total	60

Sr. No.	Modules / Units	
1	Introduction to Macroeconomic Data and Theory	
	 Macroeconomics: Meaning, Scope and Importance. Circular flow of aggregate income and expenditure: closed and open econor models The Measurement of national product: Meaning and Importance - conventional and Green GNP and NNP concepts - Relationship between National Income and Econom Welfare. Short run economic fluctuations : Features and Phases of Trade Cycles The Keynesian Principle of Effective Demand: Aggregate Demand and Aggrega Supply - Consumption Function - Investment function - effects of Investme Multiplier on Changes in Income and Output 	
2	Money, Inflation and Monetary Policy	
	 Money Supply: Determinants of Money Supply - Factors influencing Velocity or Circulation of Money Demand for Money : Classical and Keynesian approaches and Keynes' liquidity preference theory of interest Money and prices : Quantity theory of money - Fisher's equation of exchange - Cambridge cash balance approach Inflation: Demand Pull Inflation and Cost Push Inflation - Effects of Inflation- Nature of inflation in a developing economy. Monetary policy :Meaning, objectives and instruments, inflation targeting 	
3	Constituents of Fiscal Policy	
	 Role of a Government to provide Public goods- Principles of Sound and Functiona Finance Fiscal Policy: Meaning, Objectives - Contra cyclical Fiscal Policy and Discretionary Fiscal Policy Instruments of Fiscal policy : Canons of taxation - Factors influencing incidence of taxation - Effects of taxation Significance of Public Expenditure - Social security contributions- Low Income Support and Social Insurance Programmes - Public Debt - Types, Public Debt and Fiscal Solvency, Burden of debt finance Union budget -Structure- Deficit concepts-Fiscal Responsibility and Budget Management Act. 	
4	Open Economy : Theory and Issues of International Trade	
	 The basis of international trade :Ricardo's Theory of comparative cost advantage - The Heckscher – Ohlin theory of factor endowments- terms of trade - meaning and types Factors determining terms of trade - Gains from trade - Free trade versus protection Foreign Investment : Foreign Portfolio investment- Benefits of Portfolio capital flows Foreign Direct Investment - Merits of Foreign Direct Investment - Role of Multinationa corporations Balance of Payments: Structure -Types of Disequilibrium - Measures to correct disequilibrium in BOP. Foreign Exchange and foreign exchange market : Spot and Forward rate of Exchange - Hedging, Speculation and Arbitrage -Fixed and Flexible exchange rates- Manageo flexibility 	

Revised Syllabus of Courses of Bachelor of Management Studies (BMS) Programme at Semester IV with Effect from the Academic Year 2017-2018

*3. Core Courses (CC)*6. Business Research Methods

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to business research methods	18
2	Data collection and Processing	14
3	Data analysis and Interpretation	16
4	Advanced techniques in Report Writing	12
	Total	60

Objectives

SN	Objectives
1	The course is designed to inculcate the analytical abilities and research skills among the students.
2	The course intends to give hands on experience and learning in Business Research.

Sr. No.	Modules / Units		
1	Introduction to business research methods		
	Meaning and objectives of research		
	• Types of research– a)Pure, Basic and Fundamental b) Applied,		
	c)Empirical d) Scientific & Social e)Historical f) Exploratory g) Descriptive		
	h)Causal		
	Concepts in Research: Variables, Qualitative and Quantitative Research		
	Stages in research process.		
	Characteristics of Good Research		
	 Hypothesis-Meaning, Nature, Significance, Types of Hypothesis, Sources. 		
	 Research design – Meaning, Definition, Need and Importance, Steps in 		
	research design, Essentials of a good research design, Areas / Scope of		
	research design and Types-Descriptive, Exploratory and causal.		
	Sampling		
	a) meaning of sample and sampling,		
	b) methods of sampling-i)Non Probability Sampling-		
	Convenient, Judgment, Quota, Snow ball		
2	ii) Probability– Simple Random, Stratified, Cluster, Multi Stage.		
2	Data collection and Processing		
	 Types of data and sources-Primary and Secondary data sources 		
	 Methods of collection of primary data a) Observation illustructured and unstructured iii) disguised and undisguised 		
	a) Observation- i)structured and unstructured, ii) disguised and undisguised,		
	iii)mechanical observations (use of gadgets) b) Experimental i)Field ii) Laboratory		
	c) Interview – i) Personal Interview ii)focused group, iii) in- depth interviews -		
	Method,		
	d) Survey– Telephonic survey, Mail, E-mail, Internet survey, Social media, and		
	Media listening.		
	e) Survey instrument– i) Questionnaire designing.		
	f) Types of questions- i) structured/ close ended and ii) unstructured/ open		
	ended, iii) Dicotomous, iv) Multiple Choice Questions.		
	f) Scaling techniques-i) Likert scale, ii) Semantic Differential scale		
3	Data analysis and Interpretation		
	 Processing of data— i) Editing- field and office editing, ii)coding— 		
	meaning and essentials, iii) tabulation – note		
	 Analysis of data-Meaning, Purpose, types. 		
	 Interpretation of data-Essentials, importance and Significance of processing 		
	data		
	Multivariate analysis- concept only		
	• Testing of hypothesis- concept and problems- i)chi square test, ii) Zandt-test (for		
	large and small sample)		
4	Advanced techniques in Report Writing		
	 Report writing – i) Meaning , importance, functions of reports, essential of a 		
	good report, content of report, steps in writing a report, types of reports,		
	Footnotes and Bibliography		
	Ethics and research Objectivity Confidentiality and an any mity in Descenth		
	 Objectivity, Confidentiality and anonymity in Research 		
	Plagiarism		

Revised Syllabus of Courses of Bachelor of Management Studies (BMS) Programme at Semester IV with Effect from the Academic Year 2017-2018

3. Core Courses (CC)

7. Production & Total Quality Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Production Management	14
2	Materials Management	16
3	Basics Of Productivity & TQM	16
4	Quality Improvement Strategies & Certifications	14
	Total	60

Objectives

SN	Objectives
1	To acquaint learners with the basic management decisions with respect to production and quality management
2	To make the learners understand the designing aspect of production systems
3	To enable the learners apply what they have learnt theoretically.

Sr. No.	Modules / Units
1	Production Management
	 Production Management Objectives, Components–Manufacturing systems: Intermittent and Continuous Production Systems. Product Development, Classification and Product Design. Plant location &Plant layout– Objectives, Principles of good product layout, types of layout. Importance of purchase management.
2	Materials Management
	 Materials Management: Concept, Objectives and importance of materials management Various types of Material Handling Systems. Inventory Management: Importance–Inventory Control Techniques ABC, VED, FSN, GOLF, XYZ, SOS, HML. EOQ: Assumptions limitations &advantages of Economic Order Quantity, Simple numerical on EOQ, Lead Time, Reorder Level, Safety Stock.
3	Basics Of Productivity &TQM
	 Basics Of Productivity &TQM: Concepts of Productivity, modes of calculating productivity. Importance Of Quality Management, factors affecting quality; TQM— concept and importance, Cost of Quality, Philosophies and Approaches To Quality: Edward Deming, J. Juran, Kaizen, P. Crosby's philosophy. Product & Service Quality Dimensions, SERVQUAL Characteristics of Quality, Quality Assurance, Quality Circle : Objectives Of Quality Circles, Ishikawa Fish Bone, Applications in Organizations. Simple numerical on productivity
4	Quality Improvement Strategies & Certifications
	Quality Improvement Strategies & Certifications: Lean Thinking, Kepner Tregor Methodology of problem solving, Sigma features, Enablers, Goals, DMAIC/DMADV.
	TAGUCHI'S QUALITYENGINEERING,ISO 9000,ISO 1400, QS9000. Malcolm Baldrige National Quality Award(MBNQA), Deming's Application Prize.

Revised Syllabus of Courses of Bachelor of Management Studies (BMS) Programme at Semester III with effect from the Academic Year 2017-2018

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- 2. Prasanna Kumar, Marketing of Hospitality and Tourism Services, Tata McGraw Hill, 2010
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- 5. M.V.Kulkarni, Tourism marketing, Everest Publishing House, First edition, 2005
- 6. Alan A. Lew, A companion to tourism, Blackwell Publishing
- 7. Krishnan K Kamra, Tourism: An Overview

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- 2. John Bramham, Human Resource Planning, University Press.
- 3. Michael Armstrong, A Handbook Of Human Resource Management Practice, Kogan Page.
- 4. William J.Rothwell & H.C. Kazanaas, Planning & Managing Human Resources, Jaico Publishing House .
- 5. Arun Sekhri, Human Resource Planning And Audit, Himalaya Publishing House.
- 6. Michael J. Kavanag, Human Resource Information Systems Basics, Applications and Future Directions, Sage Publication.

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- 1. Brinkerhoff, Robert, .Achieving Results from Training How to evaluate HRD to Strengthen programs and Increase impact. 1987, Jossey bass, San Francisco.
- 2. Craig, Robert L. Training and Development Handbook., 3rd ed. 1987. McGraw Hill, New York
- 3. Employee Training And Development Raymond Noe
- 4. Every Trainers Handbook- Devendra Agochia
- 5. 360 Degree Feedback, Competency Mapping And Assessment Centre- Radha Sharma
- 6. Training And Development- S.K. Bhatia.

Change Management

- 1. Organisational Development by French and Bell
- 2. An experiential approach to O.D. by Harvey and Brown
- 3. Consultants and Consulting Styles by Dharani Sinha P.
- 4. Kavita Singh- Organization change
- 5. S.K. Bhatia- Organisational Change-
- 6. K.Ashwathapa- Management & OB, HRM.
- 7. Radha Sharma- Training & Development.

Conflict & Negotiation

- 1. Lewicki, Saunders & Barry Negotiation (Tata Mc Graw Hill, 5th Ed.)
- 2. B. D. Singh Negotiation Made Simple (Excel Books, 1st Ed.)

Information Technology in Business Management-II

- Information Technology for Management, 6TH ED (With CD) By Efraim Turban, Dorothy Leidner, Ephraim Mclean, James Wetherbe (Ch1, Ch2)
- 2. Microsoft Office Professional 2013 Step by Step By Beth Melton, Mark Dodge, Echo Swinford, Andrew Couch
- 3. Tata McGraw Hill Joseph, P.T. : E-commerce An Indian Perspective (Ch-13,Ch-14)
- 4. Computer Viruses and Related Threats: A Management Guide (Ch-2, Ch-3) By John P. Wack, Lisa J. Carnahan
- 5. (E-Book : https://play.google.com/books/reader?id=tsP15h9gr8MC&printsec=frontcover&output=reader& hl=en&pg=GBS.PR7.w.2.1.0)
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- 1. Laura P. Hartman, Joe DesJardins, Business Ethics, Mcgraw Hill, 2nd Edition
- 2. C. Fernando, Business Ethics An Indian Perspective, Pearson, 2010
- 3. Joseph DesJardins, An Introduction to Business Ethics, Tata McGraw Hill, 2nd Edition
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- 5. Dr.A.K. Gavai, Business Ethics, Himalaya Publishing House, 2008
- 6. S.K. Mandal, Ethics is Business and Corporate Governance, McGraw Hill, 2010
- 7. Laura Pincus Hartman, Perspectives in Business Ethics, McGraw Hill International Editions, 1998

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- 1. Research for Marketing Decisions Paul E. Green, Donald S. Tull
- 2. Marketing Research- Text and Cases Harper W. Boyd Jr., Ralph Westfall.
- 3. Research methodology in Social sciences, O.R.Krishnaswamy, Himalaya Publication
- 4. Business Research Methods, Donald R Cooper, Pamela Schindler, Tata McGraw Hill
- 5. Marketing research and applied orientation, Naresh K Malhotra, Pearson
- 6. Statistics for management, Levin and Reuben, Prentice Hall.
- 7. Research Methods for Management: S Shajahan, Jaico Publishing

Production & Total Quality Management

- 1. Production and Operations Management: R. Paneerselvam
- 2. Production (Operations) Management: L.C. Jhamb
- 3. K. Ashwathappa and K .Shridhar Bhatt ; Production and Operations management
- 4. Productivity Management: Concepts and Techniques, Sawhney S.C., Tata McGraw Hill
- 5. Srinivas Gondhalekar and Uday Salunkhe, "Productivity Techniques", Himalaya Publishing House
- 6. Gerard Leone and Richard D. Rahn, "Productivity Techniques", Jaico Book House
- 7. John S. Oakland, "TQM: Text with Cases", Butterworth-Heinemann
- 8. David J. Sumanth, "Total Productivity Management (TPmgt): A systematic and quantitative approach to compete in quality, price and time", St. Lucie Press

Revised Syllabus of Courses of Bachelor of Management Studies (BMS) Programme at Semester III and IV with effect from the Academic Year 2017-2018

Scheme of Evaluation

The performance of the learners will be evaluated in two Components. One component will be the Internal Assessment component carrying 25% marks and the second component will be the Semester-wise End Examination component carrying 75% marks. The allocation of marks for the Internal Assessment and Semester End Examinations will be as shown below:-

A) Internal Assessment: 25 %

Question Paper Pattern (Internal Assessment- Courses without Practical Courses)

Sr. No.	Particular	Marks
1	One class test (20 Marks)	
	Match the Column/ Fill in the Blanks/ Multiple Choice Questions	05 Marks
	(½ Mark each)	
	Answer in One or Two Lines (Concept based Questions)	05 Marks
	(01 Mark each)	
	Answer in Brief (Attempt Any Two of the Three)	10 Marks
	(05 Marks each)	
2	Active participation in routine class instructional deliveries and	05 Marks
	overall conduct as a responsible learner, mannerism and	
	articulation and exhibit of leadership qualities in organizing	
	related academic activities	

Question Paper Pattern

(Internal Assessment- Courses with Practical Courses)

Sr. No.	Particular	Marks
1	Semester End Practical Examination (20 Marks)	
	Journal	05 Marks
	Viva	05 Marks
	Laboratory Work	10 Marks
2	Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities articulation and exhibit of leadership qualities in organizing related academic activities	05 Marks

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B) Semester End Examination: 75 %

- i) Duration: The examination shall be of 2 ½ Hours duration
- ii) Theory question paper pattern
 - There shall be five questions each of 15 marks.
 - All questions shall be compulsory with internal choice within the questions.
 - Question may be subdivided into sub-questions a, b, c... and the allocation of marks depends on the weightage of the topic.
 (Detail question paper pattern has been given separately)

Passing Standard

The learners to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Internal Assessment and Semester End Examination. The learners shall obtain minimum of 40% marks (i.e. 10 out of 25) in the Internal Assessment and 40% marks in Semester End Examination (i.e. 30 Out of 75) separately, to pass the course and minimum of Grade E to pass a particular semester A learner will be said to have passed the course if the learner passes the Internal Assessment and Semester End Examination together.

Question Paper Pattern (Practical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
Q-1	Objective Questions A) Sub Questions to be asked 10 and to be answered any 08 B) Sub Questions to be asked 10 and to be answered any 07 (*Multiple choice / True or False / Match the columns/Fill in the blanks)	15 Marks
Q-2	Full Length Practical Question OR	15 Marks
Q-2	Full Length Practical Question	15 Marks
Q-3	Full Length Practical Question OR	15 Marks
Q-3	Full Length Practical Question	15 Marks
Q-4	Full Length Practical Question OR	15 Marks
Q-4	Full Length Practical Question	15 Marks
Q-5	A) Theory questionsB) Theory questionsOR	08 Marks 07 Marks
Q-5	Short Notes To be asked 05 To be answered 03	15 Marks

Note:

Practical question of 15 marks may be divided into two sub questions of 7/8 and 10/5 Marks. If the topic demands, instead of practical questions, appropriate theory question may be asked.

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Question Paper Pattern (Theoretical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 ½ Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
INO		
Q-1	Objective Questions	15 Marks
	A) Sub Questions to be asked 10 and to be answered any 08	
	B) Sub Questions to be asked 10 and to be answered any 07	
	(*Multiple choice / True or False / Match the columns/Fill in the blanks)	
Q-2	Full Length Question	15 Marks
	OR	
Q-2	Full Length Question	15 Marks
Q-3	Full Length Question	15 Marks
	OR	
Q-3	Full Length Question	15 Marks
Q-4	Full Length Question	15 Marks
	OR	
Q-4	Full Length Question	15 Marks
Q-5	A) Theory questions	08 Marks
	B) Theory questions	07 Marks
	OR	
Q-5	Short Notes	15 Marks
	To be asked 05	
	To be answered 03	

Note:

Theory question of 15 marks may be divided into two sub questions of 7/8 and 10/5 Marks.

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UNIVERSITY OF MUMBAI

No. UG/91 of 2018-19

CIRCULAR:-

Attention of the Principals of the affiliated Colleges and Directors of the recognized Institutions in Commerce & Management Faculty is invited to this office Circular No. UG/28 of 2015, dated 22nd July, 2015 relating to syllabus of Bachelor of Commerce (Accounting and Finance) degree programme.

Their attention is also invited to University Circular No. UG/106 of 2016-17 dated 25th October, 2016 for F.Y.B.Com. (Accounting & Finance) Sem. I & II and University Circular No. UG/166 of 2017-18 dated 8th August, 2017 for S.Y.B.Com. (Accounting & Finance) Sem. III & IV respectively.

They are hereby informed that the recommendations made by the Board of Studies in Accountancy at its meeting held on 28th February, 2018 have been accepted by the Academic Council at its meeting held on 5th May, 2018 <u>vide</u> item No. 4.42 and that in accordance therewith, the revised syllabus as per the (CBCS) for the T.Y.B.Com. in Accountancy (Accounting and Finance) (Sem. V & VI), has been brought into force with effect from the academic year 2018-19, accordingly. (The same is available on the University's website www.mu.ac.in).

MUMBAI - 400 032

(Dr. Dinesh Kamble) I/c REGISTRAR

To

The Principals of the affiliated Colleges and Directors of the recognized Institutions in Commerce & Management Faculty. (Circular'No. UG/334 of 2017-18 dated 9th January, 2018.)

A.C./4.42/05/05/2018

No. UG/ 91 -A of 2018

MUMBAI-400 032

27"July, 2018

Copy forwarded with Compliments for information to:-

- 1) The I/c Dean, Faculty of Commerce & Management,
- 2) The Director, Board of Examinations and Evaluation,
- 3) The Director, Board of Students Development,
- 4) The Professor-cum-Director, Institute of Distance and Open Learning (IDOL),
- 5) The Co-Ordinator, University Computerization Centre,

Hellicule

(Dr. Dinesh Kamble) I/c REGISTRAR

Aniversity of Mumbai



Revised Syllabus and Question Paper Pattern of Courses of B.Com. (Accounting and Finance) Programme at Third Year Semester V and VI

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year 2018-2019) Board of Studies-in-Accountancy

Board of Studies-in-Accountancy, University of Mumbai 1 | P a g e

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System

T.Y.B.Com. (Accounting and Finance)

(To be implemented from Academic Year 2018-2019)

No. of Courses	Semester V	Credits	No. of Courses	Semester VI	Credits
1	Elective Courses (EC)		1	Elective Courses (EC)	
1,2,3 &4	*Any four courses from the following list of the courses	12	1,2,3 &4	**Any four courses from the following list of the courses	12
2	2 Core Courses (CC)		2	Core Courses (CC)	
5	Financial Accounting - V	04	5	Financial Accounting - VII	04
6	Financial Accounting - VI	04	6	Project Work-II	04
	Total Credits			Total Credits	20

✓ Note: Project work is considered as a special course involving application of knowledge in solving/analyzing/exploring a real life situation/ difficult problem. Project work would be of 04 credits each. A project work may be undertaken in any area of Elective Courses/ Study Area

	*List of Elective Courses for Semester V (Any Four)		**List of Elective Courses for Semester VI (Any Four)
01	Cost Accounting - III	01	Cost Accounting - IV
02	Financial Management - II	02	Financial Management - III
03	Taxation - IV (Indirect Taxes - II)	03	Taxation - V (Indirect Taxes- III)
04	International Finance	04	Security Analysis and Portfolio Management
05 Financial Analysis and Business Valuation		05	Management Control Systems
06 Management - II 06 Economics Paper – III		Economics Paper – III	
	(Management Applications) (Indian Economy)		
Note	Note: Course selected in Semester V will continue in Semester VI		

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2018-2019)

Semester V

No. of Courses	Semester V	Credits
1	Elective Courses (EC)	
1,2,3 & 4	*Any four courses from the following list of the courses	12
2	Core Courses (CC)	
5	Financial Accounting - V	04
6	Financial Accounting - VI	04
	Total Credits	

	*List of Elective Courses for Semester V (Any Four)	
01	Cost Accounting - III	
02	Financial Management - II	
03	Taxation - IV (Indirect Taxes - II)	
04	International Finance	
05	Financial Analysis and Business Valuation Management	
06	Management -II (Management Applications)I	

1. Elective Courses (EC)

1. Cost Accounting – III

Sr. No.	Modules	No. of Lectures
01	Uniform Costing and Inter-Firm Comparison	05
02	Integrated System and Non Integrated System of Accounts	15
03	Operating Costing	10
04	Process Costing- Equivalent Units of Production and Inter- process Profit	15
05	Activity Based Costing System	15
	Total	60

Sr. No.	Modules / Units
1	Uniform Costing and Inter –Firm Comparison
	Uniform costing
	Meaning of and need for Uniform costing
	Essentials for success of Uniform costing
	Advantages and limitations of Uniform costing
	Areas of Uniformity, Uniform cost manual
	Inter Firm Comparison
	Pre-requisites of inter firm comparison; Advantages and limitations
	Practical problems
2	Integrated System and Non- integrated System of Accounts
	Integrated System
	Meaning; Features, Advantages and Disadvantages
	Journal Entries and Preparing Integrated Ledgers.
	Practical problems
	Non-Integrated system
	Meaning; Features, Advantages and disadvantages
	Journal entries and Preparing Cost Control Accounts
	Practical problems
3	Operating Costing
	Meaning of operating costing; Determination of per unit cost ; Pricing of services
	Collection of costing data
	Note-Practical problems based on costing of hospitals, hotels, goods and
	passengers transport service
4	Process Costing – Equivalent units of Production and Inter Process Profit
	Valuation of Work in progress and Equivalent production (FIFO Method and
	Weighted Average Method))
	Inter Process transfer at Profit
	Practical problems
5	Activity Based Costing System
	Activity Based Costing – Introduction, Advantages, Limitations, Identification of
	cost drivers, Practical Problems on Traditional V/s Activity Based Costing System.

1. Elective Courses (EC)

2. Financial Management -II

Sr. No.	Modules	No. of Lectures
01	Strategic Financial Management	05
02	Capital Budgeting – Project Planning & Risk Analysis	15
03	Capital Structure Theories and Dividend Decisions	15
04	Mutual Fund and Bond Valuation	15
05	Credit Management	10
	Total	60

Sr. No.	Modules / Units		
1	Strategic Financial Management		
	Strategic Financial Management – Need and Importance Corporate, Business and Functional Strategy Financial Planning - Need and Importance Profit Maximization Wealth Maximization Interface of Financial Policy and Strategic Management Relationship of Finance to Economics and Accounting Role of Financial Manager		
2 Capital Budgeting – Project Planning & Risk Analysis			
	 Introduction - Capital Budgeting Process, Project Classification and Investment Criteria. Techniques of Capital Budgeting - NPV, Benefit Cost Ratio, Internal Rate of Return, Modified Internal Rate of Return, Payback period, Discounted Payback Period and ARR. (Inclusive of Estimation of Project Cash Flows) Capital Rationing – Meaning, Need and Dealing with Capital Rationing Problems Risk Analysis in Capital Budgeting – Sources and Perspectives of Risk, Sensitivity Analysis, Scenario Analysis, Simulation Model, Decision Tree Analysis and Break - Even Analysis. 		
3	Capital Structure Theories and Dividend Decisions		
	 Capital Structure Theories – Background, Assumptions, Definitions and Taxation and Capital Structure Types – Net Operating Income, Net Operating Income Approach, Traditional Position, Modigliani and Miller Approach, Trade off Theory and Signalling Theory. Dividend Decisions- Need, Importance, Formulation, Legal and Procedural Aspects. Dividend Decision Models - Walter, Gordon, Graham & Dodd Model and M-M Model 		
4	Mutual Fund and Bond Valuation		
	Introduction to Mutual Fund- History & Origin, Definition, Meaning, Characteristics, Advantages, Disadvantages, Limitations of Mutual Funds, Ethics in Mutual Fund. Entities involved – Sponsor, Trust, Trustee, Asset Management Company, Registrar and Transfer Agent (RTA) and Fund Houses in India. Classification of Mutual Fund - Functional/Operational – Open ended, close ended, Interval, Portfolio – Income, Growth, Balanced, MMMF, Geographical/ Location – Domestic and Offshore, Tax Saving Funds, Exchange Traded Funds , Balance Funds , Fixed Term Plan Debt Funds and SIP.		
	Calculations of NAV, Entry Load and Exit Load. Bond Valuation - Meaning, Measuring Bond Returns – Yield to Maturity, Yield to call and Bond Pricing. Bond Pricing Theorems, Bond Risks and Bond Duration. (Practical Problems on YTM and Bond Duration.)		
5	Credit Management		
	Credit Management – Terms of Payment, Credit Policy Variables, Credit Evaluation, Credit Granting Decision, Control of Accounts Receivables ie Receivables Management, Ageing Schedule and Credit Management in India		

1. Elective Courses (EC)

3. Taxation – IV (Indirect Taxes – II)

Sr. No.	Modules	No. of Lectures
01	Introduction to Indirect Taxation and GST	10
02	Levy and Collection of GST	08
03	Concept of Supply	08
04	Documentation	08
05	Input Tax Credit and Computation of GST	20
06	Registration	06
	Total	60

Sr. No.	Modules / Units		
1	Introduction to Indirect Taxation and GST		
	Basics for Taxation - Direct Taxes and Indirect Taxes – Features of Indirect taxes, Difference, Advantages and Disadvantages, Sources and Authority of Taxes in India (Art 246 of the Indian Constitution) Introduction to GST – Genesis of GST in India, Power to tax GST (Constitutional Provisions), Extent and Commencement, Meaning and Definition of GST, Benefits of GST, Conceptual Framework – CGST, IGST,SGST,UTGST, Imports of goods or services or both, Export of goods or services or both, Taxes subsumed and not subsumed under GST. GST Council and GST Network Definitions under CGST Act		
2	Levy and Collection of GST		
	Charge of GST, Levy and Collection GST, Composite and Mixed Supplies under GST, Power to Grant Exemption, Negative list of GST, GST Rate Schedule for Goods and Services		
3	Concept of Supply		
	Taxable Event Supply Place of Supply Time of Supply Value of Supply		
4	Documentation		
	Tax Invoices, Credit and Debit notes		
5	Input Tax Credit and Computation of GST		
	Eligibility and conditions for taking Input Tax Credit Apportionment of credit & Blocked credits Credit in special circumstances Computation of GST under Inter State supplies and Intra State Supplies		
6	Registration		
	Registration – Persons liable for Registration, Persons not liable for Registration, Procedure for Registration, Deemed Registration,, Amendment, Cancellation and Revocation of Registration.		

1. Elective Courses (EC)

4. International Finance

Sr. No.	Modules	No. of Lectures
01	Derivatives – Futures	15
02	Derivatives – Options	15
03	Foreign Exchange Markets and Dealings	15
04	Foreign Exchange Exposure and Risk Management	15
	Total	60

Sr. No.	Modules / Units		
1	Derivatives – Futures		
	Derivatives – Need and Importance, Major Players in Derivative Markets, Features of Forward Contracts, Features of Future Contract, Forward V/s Future, Theoretical Future Price, Pricing Index Futures, Initial Margin and Maintenance Margin, Marking to Market and Variation Margin.		
2	Derivatives – Options		
	Options- Long Call, Short Call, Long Put, Short Put, Options V/s Futures, Writer of an Option, At the Money, In the Money and Out of The Money Options. Intrinsic and Time Value, Option Spreads and Strategies, Put Call Parity Theorem.		
3	Foreign Exchange Markets and Dealings		
	Introduction – Participants of Foreign Exchange Markets, Characteristics of		
	Foreign Exchange Market, Major Foreign Currencies that Trade Worldwide,		
	Foreign Currency Accounts – Nostro, Vostro and Loro (Cash Position and Currency		
	position)		
	Terms in Forex Market – Direct Quote and Indirect Quote, Bid, Ask and Spread,		
	American terms, European terms, Spot, Tom, Cash and Forward Rates,		
	Appreciation and Depreciation of currency, Premium and Discount, Swap Points,		
	and Cross Rates.		
4	Foreign Exchange Exposure and Risk Management		
	Exchange Rate Determination Theories – The theory of Purchasing Power Parity,		
	The Fischer effect, The International Fischer Effect and The Theory of Interest		
	Rate Parity.		
	Calculation of Forward Rate and Future Spot Rate.		
	Arbitrage in Foreign Exchange Market – Covered and Uncovered Interest		
	Arbitrage.		
	Foreign Exchange Risk - Introduction, Types of Exposures and Strategies for		
	Exposure Management.		
	Hedging Transaction Exposure, Hedging Techniques, Money Market Hedge,		
	Forward Hedge and Hedging of Futures & Options		

1. Elective Courses (EC)

5. Financial Analysis and Business Valuation

Sr. No.	Modules	No. of Lectures
01	Financial Modeling for Project Appraisal	05
02	Financial Analysis	15
03	Growth Analysis and Sustainable Earning	10
04	Basics of Valuation	06
05	Valuation Models	12
06	Valuation of Assets and Liabilities	12
	Total	60

Sr. No.	Modules / Units
1	Financial Modeling for Project Appraisal
	Financial Modeling – concepts and application
	Financial statements module area
	Use of functions -NPV and IRR
	Forecasting Techniques
2	Financial Analysis
	Financial Analysis, Financial Statement Analysis,
	Analysis of Balance Sheet
	Analysis of Income Statement
	Analysis of Statement of Shareholder Equity
	Analysis of Cash flow Statement
	Analysis of Profitability
3	Growth Analysis and Sustainable Earning
	Concept of Growth Analysis
	Analysis of changes in profitability and sustainable earnings
	Evaluation of P/B ratios and P/E ratios
4	Basics of Valuation
	Introduction to valuation
	Value, Distinction between Price and Value
	Foundation of Business Valuation
	Purpose of business valuation
	Valuation Bias
	Uncertainties in Business Valuation
	Role of valuation in business acquisition, legal and tax purposes, efficient market
	hypothesis
5	Valuation Models
	Introduction to valuation models: asset based approach, Income based approach,
	market based approach
	Discounted cash flow valuation
	Relative valuation
	Free Cash Flow valuation
6	Valuation of Assets and Liabilities
	Valuation of Fixed Assets, Valuation of Inventories and Valuation of Investment
	Valuation of Shares
	Valuation of Goodwill, Patents, Copyrights, Brands, Real Estate
	Valuation of Liabilities

1. Elective Courses (EC)

6. Management- II (Management Applications)

Sr. No.	Modules	No. of Lectures
01	Marketing Management	15
02	Production Management	15
03	Human Resource Management	15
04	Financial Management	15
	Total	60

Sr. No.	Modules / Units	
1	Marketing Management	
	Meaning and Definition of Marketing – 4 Ps of Marketing, Importance	
	 Product Management – Meaning & Definition – Product Development Strategies Product life cycle, Branding- Meaning, Factors influencing branding Price Management – Meaning and Definition – Factors affecting pricing decisions Pricing Strategies Place (Distribution) Management – Meaning and Definition – Factors Governin 	
	Distribution Decisions – Types of Distribution Channels Promotion Management – Meaning – Promotion Strategies, Integrated marketing communication	
	Case studies based on the above topics	
2	Production Management	
	Meaning and Definition of Production Management – Scope of Production Management, Steps in Production Planning and Control Meaning of Productivity - Measurement of Productivity – Measure to increas Productivity – Productivity Movement in India Meaning and Definition of Quality Management – TQM – Quality Circles – IS 9000/14000 Inventory Management – Meaning and Methods	
	Case studies based on the above topics	
3	Human Resource Management	
	Human Resource Management – Meaning, Nature, Functions of Human Resource Management Human Resource Planning- Meaning, Process of Human Resource Planning Human Resource Development- Methods of Developing Human Resource Performance Appraisal – Meaning and Definition – Traditional and Modern Methods of Appraisal Employee retention Leadership- Traits, Styles Motivation- Factors of Motivation, Theories of Motivation- Maslow's Theory, Douglas MacGregor's Theory X and Theory Y Case studies based on the above topics	
4	Financial Management	
	Meaning and Definition of Financial Management – Functions of Financial Management Capital Budgeting- Introduction, Importance and Process Capital Structure- Meaning, Factors affecting Capital Structure Capital Market – Meaning and Constituents – Functions Fundamental Analysis – Technical Analysis - Venture Capital – DEMAT Account - Futures and Options Case studies based on the above topics	

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2. Core Courses (CC)

1. Financial Accounting - V

Sr. No.	Modules	No. of Lectures
01	Underwriting of shares & debentures	08
02	Buy-Back of shares	10
03	AS – 14 - Amalgamation, Absorption & External Reconstruction (excluding inter – company holding)	15
04	Internal Reconstruction	15
05	Liquidation of Companies	10
	Total	60

Sr. No.	Modules / Units
1	Underwriting of shares & debentures
	Introduction, Underwriting, Underwriting Commission Provision of Companies Act with respect to Payment of underwriting commission Underwriters, Sub-Underwriters, Brokers and Manager to issues Types of underwriting, Abatement Clause Marked, Unmarked and Firm-underwriting applications, Liability of the underwriters in respect of underwriting contract Practical problems
2	Buy Back of Shares
	Company Law / Legal provisions (including related restrictions, power, transfer to capital redemption reserve account and prohibitions). Compliance of conditions including sources, maximum limits and debt equity ratio. Cancellation of Shares Bought back(Excluding Buy Back of minority shareholding) Practical problems
3	AS – 14 - Amalgamation, Absorption & External Reconstruction (excluding inter-
	company holdings)
	In the nature of merger and purchase with corresponding accounting treatments of pooling of interests and purchase method respectively. Meaning and Computation of purchase consideration. Problems based on purchase method only. Practical problems
4	Internal Reconstruction
	Need for reconstruction and company law provisions. Distinction between internal and external reconstruction. Methods including alteration of share capital, variation of shareholder rights, sub division, consolidation, surrender and reissue / cancellation, reduction of share capital with relevant legal provisions and accounting treatment for same. Practical problems
5	Liquidation of Companies
	Meaning of liquidation or winding up Preferential payments Overriding preferential payments Preparation of statement of affairs, deficit / surplus account Liquidator's final statement of account Practical problems

2. Core Courses (CC)

2. Financial Accounting – VI

Sr. No.	Modules	No. of Lectures
01	Final Accounts of Banking Company	15
02	Final Accounts of Insurance Company (Excl. Life Insurance)	15
03	Non – Banking Financial Companies	08
04	Valuation of Goodwill and Shares	12
05	Accounting for Limited Liability Partnership	10
	Total	60

Sr. No.	Modules / Units	
1	Final Accounts of Banking Company	
	Legal provision in Banking Regulation Act, 1949 relating to Accounts.	
	Statutory reserves including Cash Reserve and Statutory Liquidity Ratio.	
	Bill purchase and discounted, rebate of bill discounted. Final Accounts in prescribed form	
	Non – performing assets and Income from non – performing assets. Capital Adequacy	
	Classification of Advances, standard, sub – standard, doubtful and provisioning	
	requirement.	
2	Final Accounts of Insurance Company (Excl. Life Insurance)	
	General Insurance – Various types of insurance, like fire, marine, Miscellaneous,	
	Special terms like premium, claims, commission, Management expense	
	Reserve for unexpired risk, reinsurance	
	Final Accounts in a prescribed form. Revenue Statement – Form B – RA, Profit /	
	Loss Account – Form B – PL and Balance Sheet Form B – BS.	
3	Non – Banking Financial Companies	
	Introduction, Definition, Registration and Regulation, Classification, Income	
	Recognition, Accounting of Investment, Applicability of Prudential Norms,	
	Assets classification, Non- performing Assets, Capital Adequacy, Preparation of	
	Financial statement	
4	Valuation of Goodwill and Shares	
	Valuation of Goodwill	
	Maintainable Profit method, Super Profit Method	
	Capitalization method, Annuity Method Valuation of Shares	
	Intrinsic Value Method, Yield method and Fair Value Method	
5	Accounting for Limited Liability Partnership	
	Statutory provisions	
	Conversion of partnership business into Limited Liability Partnership	
	Final accounts	

Reference Books

Reference Books

Elective Courses (EC)

Cost Accounting- III

- Lectures on Costing by Swaminathan: S. Chand and Company (P) Ltd., New Delhi
- Cost Accounting by C.S. Rayudu, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting by Jawahar Lal and Seema Srivastava, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting by Ravi M. Kishore, Taxmann Ltd., New Delhi
- Principles and Practices of Cost Accounting by N.K. Prasad, Book Syndicate Pvt. Ltd., Calcutta
- Cost Accounting Theory and Practice by B.K. Bhar, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting Principles and Practice by M.N. Arora, Vikas Publishing House Pvt. Ltd., New Delhi
- Advanced Cost and Management Accounting: Problems and Solutions by V.K. Saxena and C.D. Vashist, S. Chand and Company (P) Ltd., New Delhi
- Cost Accounting by S.P. Jain and K.L. Narang, Kalyani Publishers, Ludhiana
- Modern Cost and Management Accounting by M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi

Financial Management - II

- Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
- Fundamentals of Financial Management by J.C. Van Horne, Prentice Hall of India, New Delhi
- Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
- Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi
- Financial Management by I.M. Pandey, Vikas Publishing House, New Delhi
- Financial Management byC. Paramasivan& T. Subramanian
- Financial Management by IM Pandey
- Financial Management by Ravi Kishor
- Financial Management by Khan & Jain

Taxation - Indirect Taxes - Paper IV

- Indirect Taxes: Law and Practice by V.S. Datey, Taxmann
- Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
- GST Law & practice with Customs & FTP by V.S. Datey, Taxmann
- GST by V.S. Datey, Taxmann
- GST & customs Law by K.M. Bansal, University Edition
- GST Law & practice with Customs & FTP by Vineet Sodhani, Snow White Publications
- GST Law & practice with Customs & FTP by Sanjiv Agarwal, Snow White Publications
- Indirect taxes(Containing GST, Customs & FTP) by MOhd. Rafi, Bharat Publications

International Finance

- P G Apte, International Financial Management, 5th Edition, The McGraw Hill
- Cheol . S. Eun & Bruce G. Resnick, International Finance Management
- Maurice D. Levi, International Finance Special Indian Edition
- Prakash G. Apte, International Finance A Business Perspective
- V A. Aadhani, International Finance

Board of Studies-in-Accountancy, University of Mumbai 2

Reference Books

Financial Analysis and Business Valuation

- Valuation: Measuring and Managing the value of Companies: Thomas Copeland- Wiley
- The Handbook of Advance Business Valuation: Rovert F Reilly and Robert Swhweish: Mc Graw hill
- Business Valuation: Pitabas Mohanty- Taxmann
- Valuation- Measuring and Managing the value of Companies : Tim Koller- Mc Kinsey & Co

Management II (Management Applications)

- Kotlar, Philip, Marketing Management, Prentice Hall, New Delhi.
- Stanton, Etzel, Walker, Fundamentals of Marketing, Tata-McGraw Hill, New Delhi.
- Saxena, Rajan, Marketing Management, Tata-McGraw Hill, New Delhi.
- McCarthy, E.J., Basic Marketing: A managerial approach, Irwin, New York.
- Pillai R S, Bagavathi, Modern Marketing
- Principles of Management , Ramasamy , Himalya Publication , Mumbai
- Principles of Management , Tripathi Reddy , Tata Mc Grew Hill
- Management Text & Cases , VSP Rao , Excel Books, Delhi
- Management Concepts and OB , P S Rao & N V Shah , AjabPustakalaya
- Essentials of Management , Koontz II & W , Mc. Grew Hill , New York

Principles of Management-Text and Cases – Dr..M.SakthivelMurugan, New Age Publications

Core Courses (CC)

Financial Accounting - V and VI

- Introduction to Accountancy by T.S. Grewal, S. Chand and Company (P) Ltd., New Delhi
- Advance Accounts by Shukla and Grewal, S. Chand and Company (P) Ltd., New Delhi
- Advanced Accountancy by R.L Gupta and M. Radhaswamy, S. Chand and Company (P) Ltd., New Delhi
- Modern Accountancy by Mukherjee and Hanif, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Financial Accounting by Lesile Chandwichk, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi
- Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd., Mumbai
- Financial Accounting by P.C. Tulsian, Pearson Publications, New Delhi
- Accounting Principles by R.N. Anthony and J.S. Reece, Richard Irwin, Inc
- Financial Accounting by Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Mayur Paper Back, Noida
- Compendium of Statement and Standard of Accounting, ICAI
- Indian Accounting Standards, Ashish Bhattacharya, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Company Accounting Standards by Shrinivasan Anand, Taxman, New Delhi
- Financial Accounting by V. Rajasekaran, Pearson Publications, New Delhi
- Introduction to Financial Accounting by Horngren, Pearson Publications, New Delhi
- Financial Accounting by M. Mukherjee and M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi
- Financial Accounting a Managerial Perspective, Varadraj B. Bapat, Mehul Raithatha, Tata McGraw Hill Education Pvt. Ltd., New Delhi

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2018-2019)

Semester VI

No. of Courses	Semester VI	Credits
1	Elective Courses (EC)	
1,2,3 & 4	**Any four courses from the following list of the courses	12
2	Core Course (CC)	
5	Financial Accounting - VII	04
6	Project Work -II	04
	Total Credits	20

	**List of Elective Courses for Semester VI (Any Four)		
01	Cost Accounting - IV		
02	Financial Management - III		
03	Taxation - V (Indirect Taxes- III)		
04	Management Control Systems		
05	Security Analysis and Portfolio Management		
06	Economics Paper – III Indian Economy)		

1. Elective Courses (EC)

1. Cost Accounting - IV

Sr. No.	Modules	No. of Lectures
01	Budgeting and Budgetary Control	15
02	Absorption Costing and Marginal Costing Cost Volume and Profit Analysis	15
03	Managerial Decision Making	15
04	Standard Costing and Variance Analysis	15
	Total	60

Sr. No.	Modules / Units
1	Budgeting and Budgetary Control
	Meaning & objectives, Advantages and limitations of budgets
	Functional budgets, fixed and flexible budgets
	Zero based budgeting, performance budgeting
	Practical problems of preparing flexible budgets and functional budgets
2	Absorption Costing and Marginal Costing, Cost Volume and Profit Analysis
	Absorption Costing and Marginal Costing
	Meaning of absorption costing,
	Introduction to marginal costing
	Distinction between absorption costing and marginal costing
	Advantages and limitations of marginal costing
	Cost Volume and Profit Analysis
	Break even analysis meaning and graphic presentation
	Margin of safety
	Key factor
	Practical problems based on using the marginal costing formulae and key factor
3	Managerial Decision Making
	Make or buy
	Sales mix decisions
	Exploring new markets
	Plant shut down decision
	Practical problems
4	Standard Costing and Variance Analysis
	Preliminaries in installing of a standard cost system
	Material Cost variance
	Labour cost variance
	Variable overhead variances
	Fixed Overhead variances
	Sales variances
	Profit variances
	Practical problems

1. Elective Courses (EC)

2. Financial Management - III

Sr. No.	Modules	No. of Lectures
01	Business Valuation	05
02	Mergers and Acquisitions	15
03	Corporate Restructuring and Takeovers	15
04	Lease and Hire Purchase Financing	15
05	Working Capital financing	10
	Total	60

Sr. No.	Modules / Units
1	Business Valuation
	Conceptual Framework of Valuation – Book Value, Market Value, Economic Value, Liquidation Value, Replacement Value, Salvage Value, Value of Goodwill and Fair Value Approaches of Valuation – Assets Based Approach to Valuation, Earnings Based Approach to Valuation, Earnings Measure on Cash Flow Basis, Market Value Added Approach and Economic Value Added.
2	Mergers and Acquisitions
	Introduction- Basic modes of acquiring another firm, Synergy effects, Difference between Merger and Takeover, Advantages of Mergers and Acquisitions, Benefits of Merger for Acquiring firm, Reasons of companies to offer themselves for sale, Reasons for failure of Mergers and Reverse Merger. Commonly Used Bases for determining the Exchange Ratio – EPS, MPS, Book value and Combination of Measures and Evaluation of Mergers (Practical Problems)
3	Corporate Restructuring and Takeovers
	Introduction – Meaning, Need and Importance, Forms of Restructuring, Advantages and Disadvantages Takeovers – Meaning, SEBI Guidelines, Anti-takeover defences and Asset and Liability Restructuring. (Practical Problems)
4	Lease and Hire Purchase Financing
	 Introduction – Meaning and Types of Leases, Rationale, Mechanics, Operating Leases, Leasing as Financing Decisions, Calculation of Cash flows of a finance lease. Hire Purchase – Meaning, Need and Importance, Calculation of Hire Purchase instalments. Choice between Leasing and Hire Purchase
5	Working Capital financing
	Introduction – Key features and Characteristics of Trade Credit, Bank Credit, Commercial Papers, Certificate of Deposits and Factoring. Practical Problems based on Factoring and calculations of yield of CP's and CD's

1. Elective Courses (EC)

3. Taxation - Paper V (Indirect Taxes – III)

Sr. No.	Modules	No. of Lectures
01	Payment of Tax and Refunds	08
02	Returns	08
03	Accounts, Audit, Assessment and Records	08
04	Custom Act - I	12
05	Custom Act - II	12
06	Foreign Trade Policy	12
	Total	60

Sr. No.	Modules / Units
1	Payment of Tax and Refunds
	Payment of Tax, Interest and other Amounts, Interest on delayed Payment, TDS, TCS Refund of tax, Refund in certain cases, Interest on delayed refunds
2	Returns
	Types of Returns and Provisions relating to filing of Returns
3	Accounts, Audit, Assessment and Records
	Accounts and other records, Period of retention of accounts, Electronic Way Bill Self-Assessment, Provisional Assessment, Scrutiny of Returns, Assessment of non- filers of Returns, Assessment of Unregistered person, summary assessment in certain special cases, Audit by tax authorities, Special Audit.
4	Custom Act - I
	Introduction to customs law including Constitutional aspects Levy of and exemptions from customs duties – All provisions including application of customs law, taxable event, charge of customs duty, exceptions to levy of customs duty, exemption from custom duty Types of customs duties Classification and valuation of imported and export goods
5	Custom Act - II
	Import and Export Procedures – All import and export procedures including special procedures relating to baggage, goods imported or exported by post, stores Provisions relating to coastal goods and vessels carrying coastal goods Warehousing and Drawback
6	Foreign Trade Policy
	Introduction to FTP – legislation governing FTP, salient features of an FTP, Foreign Trade Policy 2015- 20, administration of FTP, contents of FTP, scope of FTP. Provision related to import and export of goods Basic concepts relating to export promotion schemes provided under FTP – Duty Exemption & remission Schemes, Duty Free Import Authorization Scheme, Reward scheme, Export Promotion Capital Goods Scheme, EOU, STP, BTP AND EHTP scheme.

1. Elective Courses (EC)

4. Security Analysis and Portfolio Management

Sr. No.	Modules	No. of Lectures
01	Portfolio Management – An Introduction & Process	12
02	Portfolio Management – Valuation	12
03	Fundamental Analysis	12
04	Technical Analysis	12
05	Efficient Market Theory & CAPM	12
	Total	60

Sr. No.	Modules / Units
1	Portfolio Management – An Introduction & Process
	 Investment - Meaning, Characteristics, Objectives, Investment V/s Speculation, Investment V/s Gambling and Types of Investors Portfolio Management – Meaning, Evolution, Phases, Role of Portfolio Managers, Advantages of Portfolio Management. Investment Environment in India and factors conducive for investment in India. Portfolio Analysis – Meaning and its Components, Calculation of Expected Return and Risk, Calculation of Covariance, Risk – Return Trade off. Portfolio Selection – Meaning, Feasible Set of Portfolios, Efficient Set of Portfolios, Selection of Optimal Portfolio, Markowitz Model, Limitations of Markowitz Model, Measuring Security Return and Portfolio Return and Risk under Single Index Model and Multi Index Model.
2	Portfolio Management – Valuation
	Portfolio Revision – Meaning, Need, Constraints and Strategies. Portfolio Evaluation – Meaning, Need, Measuring Returns (Sharpe, Treynor and Jensen Ratios) and Decomposition of Performance.
3	Fundamental Analysis
	Economy Analysis – Meaning, Framework, Economic Analysis, Forecasting, Barometric or Indicator Approach, Econometric Model Building and Opportunistic Model Building. Industry Analysis – Concept of Analysis, Industry Life Cycle, Industry Characteristics Company Analysis – Financial Statements, Analysis of Financial Statements, (Practical questions on Debt equity ratios, total debt ratio, proprietary ratios, interest coverage ratio, Profitability ratios related to sales, investment and equity shares Efficiency or Activity Ratios) and Assessment of risk (Leverages)
4	Technical Analysis
	Dow Theory Meaning and Principles of Technical Analysis, Price Chart, Line Chart, Bar Chart, Japanese Candlestick Chart, Trends and Trend Reversals, Chart Patterns, Support and Resistance, Reversal Patterns, Continuation Patterns and Elliot Wave Theory Mathematical Indicators – Calculation of Moving Averages (Simple and Exponential Moving Average), Oscillators and Relative Strength Index Market Indicators Fundamental Analysis V/s Technical Analysis

Sr. No.	Modules / Units	
5	Efficient Market Theory & CAPM	
	Random Walk Theory	
	The Efficient Market Hypothesis	
	Forms of Market Efficiency	
	Competitive Market Hypothesis	
	CAPM – Fundamental Notions of Portfolio Theory, Assumption of CAPM, Efficient	
	Frontier with Riskless Lending and Borrowing, Capital Market Line, Security	
	Market Line and Pricing of Securities with CAPM.	
	Arbitrage Pricing Theory (APT) – The Return Generating Model, Factors Affecting	
	Stock Return, Expected Return on Stock, APT V/s CAPM.	

1. Elective Courses (EC)

5. Management Control Systems

Sr.	Modules	No. of
No.		Lectures
01	Developments in Management Accounting and Control Systems	08
02	Financial Goal Setting	12
03	Responsibility Centres	15
04	Transfer Pricing	15
05	Inflation Accounting	10
	Total	60

Sr. No.	Modules / Units
1	Developments in Management Accounting and Control Systems
	 –Introduction- The Modern economic environment, Traditional production processes, The background to change, The new manufacturing computer-aided design, Computer-aided manufacturing, Computer-integrated manufacturing, Flexible manufacturing systems, Value chain, Production operations systems and Management strategies, Material requirements planning, Manufacturing Resources Planning, Optimised Production Technology (OPT), ERP, CRM and SCM Just-in-time concept, Total Quality Management (TQM) and Synchronous Manufacturing. Control in special sectors: Scrap Control, Control of R & D – Project Control, Administrative Cost Control and the emphasis on continuous improvement.
2	Financial Goal Setting
	Analysis of Incremental ROI, Sensitivity Analysis, Developing Financial Goals along Organizational Hierarchy. Concept and Technique of Responsibility Budgeting - Analytical framework for Developing Responsibility Budgets - Integrating Responsibility Budgets Integrating Responsibility Budgeting with MBO System.
3	Responsibility Centres
	Introduction to Cost, Revenue, Profit and Investment Centres, Reporting of Responsibility Centre. Performance Measures -Investment Centres/Strategic Business Units, Return on Investment, The problems with ROI and Residual income (RI)
4	Transfer Pricing
	Introduction - Aims and Features, General rules, Cost-based prices, Market-based prices, Marginal cost, Dual pricing, Profit-maximising transfer prices, Negotiated transfer prices and other behavioural considerations
5	Inflation Accounting
	Introduction - Need, Brief History, Methods of Inflation Accounting (Current Purchasing Power and Current Cost Accounting), Inflation Accounting and Corporate Taxation. Financial Reporting to Management under conditions of change in price level.

1. Elective Courses (EC)

6. Economics Paper – III (Indian Economy)

Sr. No.	Modules	No. of Lectures
01	Introduction Agricultural Sector	15
02	Industrial Sector	15
03	Service Sector and External Sector	15
04	Money and Banking	15
	Total	60

Sr. No.	Modules / Units
1	Introduction Agricultural Sector
	Introduction
	Demographic features- Poverty, Income inequality and Unemployment
	Urbanization and its effects
	Agricultural Sector
	Institutional Structure- Land reforms in India
	Technological changes in agriculture
	Agricultural pricing and agricultural finance
	Agricultural marketing
	National agricultural policy
2	Industrial Sector
	Growth and pattern of industrialization
	Industrial Policy of 1991. Public sector enterprises and disinvestment policy
	Small scale sector- problems and prospects
3	Service Sector and External Sector
	Service Sector
	Nature and scope of service industry
	Recent trends in Banking industry, Insurance Industry, Healthcare Industry and
	Tourism Industry
	External Sector
	Structure and directions of Foreign trade
	India's Balance of payments since 1991
	FDI, foreign capital and transnational companies in India. Role and impact of
	SAARC, ASEAN and WTO
4	Money and Banking
	Money market and its features
	Monetary policy of RBI
	Progress of commercial banking in India
	Development of capital markets
	SEBI and its functions

2. Core Courses (EC)

1. Financial Accounting – VII

Sr. No.	Modules	No. of Lectures		
01	Final Account for Electricity Company	15		
02	Final Accounts for Co-Operative Society: (Co-Operative Housing Society and Consumer Co-Operative Society)	15		
03	Investment Accounting (w.r.t. Accounting Standard - 13)	10		
04	Mutual Fund	08		
05	Introduction to IFRS and Indian Accounting Standards	12		
	Total	60		

Sr. No.	Modules / Units
1	Final Account for Electricity Company
2	 Final Accounts as per Double Account System Final Accounts as per Electricity Rules Receipt & Expenditure on Capital Account General Balance Sheet Contingency Reserve Disposal of Surplus (As per Electricity Rules): Norms regarding Disposal of Surplus Replacement of Assets Simple practical problems Final Accounts for Co-Operative Society (Co-Operative Housing Society and Consumer Co-Operative Society) Provisions of Maharashtra State Co-Operative Societies Act and rules. Accounting provisions including appropriation to various funds Format of Final Accounts – Form N Simple practical problems on preparation of final accounts of a Co-Operative
	housing society & Consumer Co-Operative Society
3	Investment Accounting (w.r.t. Accounting Standard- 13)
	For shares (variable income bearing securities) For debentures/Preference. shares (fixed income bearing securities) Accounting for transactions of purchase and sale of investments with ex and cum interest prices and finding cost of investment sold and carrying cost as per weighted average method (Excl. brokerage). Columnar format for investment account.
4	Mutual Fund
	Introduction, Historical Background SEBI Guidelines, Organisation, NAC Scheme, Types of Mutual Fund Schemes, , FOF Scheme, Load or No-Load Scheme, Investment Valuation norms, Pricing of units, Contents of Balance sheet and revenue Account, Evaluation of mutual funds, Disposal of Investments, Recognition of Income, Accounting policies and entries.
5	Introduction to IFRS
	 Accounting standards: Role/objectives of accounting standards, Development of accounting standards in India - Requirements of international accounting standards - International organizations engaged in accounting harmonization - IASB - FASB - Role of IASB in developing IFRS, Applicability, Interpretation, Scope and compliance of Accounting Standards Indian Accounting standards (Ind AS) : Introduction, Road map, First time adaptation of Indian Accounting Standard,
	Conceptual framework Comparison of Ind AS, IFRS and AS IFRS : Introduction, scope Purpose & Objective of financial statement-its Frame work-its assumption, characteristics, element, recognition & measurement., first time adoption of IFRS Convergence of Ind-As and IFRS

Reference Books

	Reference Books
Ele	ctive Courses (EC)
Cos	st Accounting- IV
• [Lectures on Costing by Swaminathan: S. Chand and Company (P) Ltd., New Delhi
• (Cost Accounting by C.S. Rayudu, Tata Mc. Grow Hill and Co. Ltd., Mumbai
• (Cost Accounting by Jawahar Lal and Seema Srivastava, Tata Mc. Grow Hill and Co. Ltd., Mumbai
	Cost Accounting by Ravi M. Kishore, Taxmann Ltd., New Delhi
	Principles and Practices of Cost Accounting by N.K. Prasad, Book Syndicate Pvt. Ltd., Calcutta
	Cost Accounting Theory and Practice by B.K. Bhar, Tata Mc. Grow Hill and Co. Ltd., Mumbai
	Cost Accounting Principles and Practice by M.N. Arora, Vikas Publishing House Pvt. Ltd., New Delhi
	Advanced Cost and Management Accounting: Problems and Solutions by V.K. Saxena and C.D. Vashist,
	S. Chand and Company (P) Ltd., New Delhi
	Cost Accounting by S.P. Jain and K.L. Narang, Kalyani Publishers, Ludhiana
	Modern Cost and Management Accounting by M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New
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	Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
	Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
	Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
	Fundamentals of Financial Management by J.C. Van Horne, Prentice Hall of India, New Delhi
	Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
	Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi
	Financial Management by I.M. Pandey, Vikas Publishing House, New Delhi
	Financial Management by C. Paramasivan& T. Subramanian
	inancial Management by IM Pandey
	inancial Management by Ravi Kishor
	Financial Management by Khan & Jain Ration - Indirect Taxes - III
	Indirect Taxes: Law and Practice by V.S. Datey, Taxmann
	Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
	GST Law & practice with Customs & FTP by V.S. Datey, Taxmann
	GST by V.S. Datey, Taxmann
	GST & customs Law by K.M. Bansal, University Edition
	GST Law & practice with Customs & FTP by Vineet Sodhani, Snow White Publications
	GST Law & practice with Customs & FTP by Sanjiv Agarwal, Snow White Publications
	Indirect taxes(Containing GST, Customs & FTP) by MOhd. Rafi, Bharat Publications
	curity Analysis And Portfolio Management
	Blake, David 1992, Financial Market Analysis , McGraw Hill London
•	Francis J.C Investments, Analysis and Management McGraw Hill New York.
•	Pistolese Clifford Using Technical Analysis Vision Books
• R	eilly Frank K and Keith Brown Investment Analysis and Portfolio Management.

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Reference Books
Management Control Systems
 Anthony & Govindrajan - Management Control Systems (TATA McGraw Hill), 12th Edition, 2006. Bob Scarlett – Management Accounting and Performance Evaluation, Oxford Press, 2006 Edition Maciarirllo& Kirby – Management Control Systems (Prentice Hall India), 2th Edition
Economics
 Indian Economic Survey Reports (Annual), Ministry of Finance, Government of India Indian Economy by Misra and Puri, Himalaya Publishing House - Delhi Gaurav Dutt & Ashwini Mahajan, (2016) Indian Economy, S.Chand& company PVT LTD New Delhi A.N.Agarwal – Indian Economy problems of Development and Planning New Age International Publisher BuddarDatt K D.M.Sundharam, Indian Economy S. Chand S. co. LTD, Delhi
RuddarDatt K.P.M Sundharam – Indian Economy S. Chand E-co LTD. Delhi
Core Courses (CC)
Financial Accounting - VII
 Introduction to Accountancy by T.S. Grewal, S. Chand and Company (P) Ltd., New Delhi Advance Accounts by Shukla and Grewal, S. Chand and Company (P) Ltd., New Delhi Advanced Accountancy by R.L Gupta and M. Radhaswamy, S. Chand and Company (P) Ltd., New Delhi Modern Accountancy by Mukherjee and Hanif, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Lesile Chandwichk, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd., Mumbai Financial Accounting by P.C. Tulsian, Pearson Publications, New Delhi Accounting Principles by R.N. Anthony and J.S. Reece, Richard Irwin, Inc Financial Accounting by Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Mayur Paper Back, Noida Compendium of Statement and Standard of Accounting, ICAI Indian Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by N. Rajasekaran, Pearson Publications, New Delhi Financial Accounting by V. Rajasekaran, Pearson Publications, New Delhi Financial Accounting by M. Mukherjee and M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi Financial Accounting by M. Mukherjee and M. Hanif, Tata McGraw Hill Raithatha, Tata McGraw Hill Education Pvt. Ltd., New Delhi

Aniversity of Mumbai



B.Com. (Accounting and Finance) Programme Guidelines for Project Work at Third Year Semester VI

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year 2018-2019)

Board of Studies-in-Accountancy

Introduction

Inclusion of project work in the course curriculum of the B.Com. (Accounting & Finance) programme is one of the ambitious aspects in the programme structure. The main objective of inclusion of project work is to inculcate the element of research analyse and scientific temperament challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret particular aspect of the study. It is expected that the guiding teacher should undertake the counselling sessions and make the awareness among the learners about the methodology of formulation, preparation and evaluation pattern of the project work.

- There are two modes of preparation of project work
 - 1. Project work based on research methodology in the study area
 - 2. Project work based on internship in the study area

Guidelines for preparation of Project Work

1. General guidelines for preparation of project work based on Research Methodology

- The project topic may be undertaken in any area of Elective Courses.
- Each of the learner has to undertake a Project individually under the supervision of a teacher-guide.
- The learner shall decide the topic and title which should be specific, clear and with definite scope in consultation with the teacher-guide concerned.
- University/college shall allot a guiding teacher for guidance to the students based on her / his specialization.
- The project report shall be prepared as per the broad guidelines given below:
 - Font type: Times New Roman
 - Font size: 12-For content, 14-for Title
 - Line Space : 1.5-for content and 1-for in table work
 - Paper Size: A4
 - Margin : in Left-1.5, Up-Down-Right-1
 - The Project Report shall be bounded.
 - The project report should be 80 to 100 pages

Format

1st page (Main Page)

Title of the problem of the Project

A Project Submitted to

University of Mumbai for partial completion of the degree of

Bachelor in Commerce (Accounting and Finance)

Under the Faculty of Commerce

By

Name of the Learner

Under the Guidance of

Name of the Guiding Teacher

Name and address of the College

Month and Year

 2^{nd} Page This page to be repeated on 2^{nd} page (i.e. inside after main page) On separate page

Index

Chapter No. 1	Title of the Chapter	Page No.
(sub point 1.1, 1.1.1, And so on)		
Chapter No. 2	Title of the Chapter	
Chapter No. 3	Title of the Chapter	
Chapter No. 4	Title of the Chapter	
Chapter No. 5	Title of the Chapter	

List of tables, if any, with page numbers. List of Graphs, if any, with page numbers. List of Appendix, if any, with page numbers. Abbreviations used:

Structure to be followed to maintain the uniformity in formulation and presentation of Project Work

(Model Structure of the Project Work)

• Chapter No. 1: Introduction

In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner.

• Chapter No. 2: Research Methodology

This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc can be incorporated by the learner.

• Chapter No. 3: Literature Review

This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue.

• Chapter No. 4: Data Analysis, Interpretation and Presentation

This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner.

• Chapter No. 5: Conclusions and Suggestions

In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.

Note: If required more chapters of data analysis can be added.

- Bibliography
- Appendix

On separate page

Name and address of the college

Certificate

This is to cert	tify	that Ms/M	r								_has	s wor	ked
and duly con	nple	eted her/his	s Projec	et W	ork for th	ne de	egr	ee of Ba	chel	or in	n Co	omme	erce
(Accounting	&	Finance)	under	the	Faculty	of	Co	ommerce	in	the	su	bject	of
						_ ar	nd	her/his	proj	ect	is	entit	led,
	<u> </u>			Titl	<u>e of the P</u>	roje	<u>ct</u>					_" un	der

my supervision.

I further certify that the entire work has been done by the learner under my guidance and that no part of it has been submitted previously for any Degree or Diploma of any University.

It is her/ his own work and facts reported by her/his personal findings and investigations.

Seal of the College

Name and Signature of Guiding Teacher

Date of submission:

On separate page

Declaration by learner

I the undersigned Miss / Mr					Name of the learner						here by,
declare	that	the	work	embodied	in	this	project	work	titled	۰۰	
Title of the Project											,

forms my own contribution to the research work carried out under the guidance of <u>Name of the guiding teacher</u> is a result of my own research work and has not been previously submitted to any other University for any other Degree/ Diploma to this or any other University.

Wherever reference has been made to previous works of others, it has been clearly indicated as such and included in the bibliography.

I, here by further declare that all information of this document has been obtained and presented in accordance with academic rules and ethical conduct.

Name and Signature of the learner

Certified by

Name and signature of the Guiding Teacher

On separate page

Acknowledgment

(Model structure of the acknowledgement)

To list who all have helped me is difficult because they are so numerous and the depth is so enormous.

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my **Principal**, ______for providing the necessary facilities required for completion of this project.

I take this opportunity to thank our **Coordinator**, for her moral support and guidance.

I would also like to express my sincere gratitude towards my project guide _________ whose guidance and care made the project successful.

I would like to thank my **College Library**, for having provided various reference books and magazines related to my project.

Lastly, I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **my Parents and Peers** who supported me throughout my project.

2. Guidelines for Internship based project work

- Minimum 20 days/ 100 hours of Internship with an Organisation/ NGO/ Charitable Organisation/ Private firm.
- The theme of the internship should be based on any study area of the elective courses
- Experience Certificate is Mandatory
- A project report has to be brief in content and must include the following aspects:

Executive Summary:

A bird's eye view of your entire presentation has to be precisely offered under this category.

Introduction on the Company:

A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis.

Statement and Objectives:

The mission and vision of the organization need to be stated enshrining its broad strategies.

• Your Role in the Organisation during the internship:

The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head.

Challenges:

The challenges confronted while churning out theoretical knowledge into practical world.

• Conclusion:

A brief overview of your experience and suggestions to bridge the gap between theory and practice.

- The project report based on internship shall be prepared as per the broad guidelines given below:
 - Font type: Times New Roman
 - Font size: 12-For content, 14-for Title
 - Line Space : 1.5-for content and 1-for in table work
 - Paper Size: A4
 - Margin : in Left-1.5, Up-Down-Right-1
 - The Project Report shall be bounded.
 - The project report should be of minimum 50 pages

Evaluation pattern of the project work

The Project Report shall be evaluated in two stages viz.		
Evaluation of Project Report (Bound Copy)	60 Marks	
 Introduction and other areas covered 	20 Marks	
 Research Methodology, Presentation, Analysis and interpretation of data 	30 Marks	
 Conclusion & Recommendations 	10 Marks	
Conduct of Viva-voce	40 Marks	
 In the course of Viva-voce, the questions may be asked such as importance / relevance of the study, objective of the study, methodology of the study/ mode of Enquiry (question responses) 	10 Marks	
 Ability to explain the analysis, findings, concluding observations, recommendation, limitations of the Study 	20 Marks	
Overall Impression (including Communication Skill)	10 Marks	

Note:

• The guiding teacher along with the external evaluator appointed by the University/ College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern

Passing Standard

- Minimum of Grade E in the project component
- In case of failing in the project work, the same project can be revised for ATKT examination.
- Absence of student for viva voce: If any student fails to appear for the viva voce on the date and time fixed by the department such student shall appear for the viva voce on the date and time fixed by the Department, such student shall appear for the viva voce only along with students of the next batch.

Revised Syllabus of Courses of B.Com. (Accounting and Finance) Programme at Semester V and VI with effect from the Academic Year 2018-2019 Scheme of Evaluation

The performance of the learners will be evaluated in two Components. One component will be the Internal Assessment component carrying 25% marks and the second component will be the Semester-wise End Examination component carrying 75% marks. The allocation of marks for the Internal Assessment and Semester End Examinations will be as shown below:-

A) Internal Assessment: 25 %

Question Paper Pattern (Internal Assessment- Courses without Practical Courses)

Sr. No.	Particular	Marks
1	One class test (20 Marks)	
	Match the Column/ Fill in the Blanks/ Multiple Choice Questions	05 Marks
	(½ Mark each)	
	Answer in One or Two Lines (Concept based Questions)	05 Marks
	(01 Mark each)	
	Answer in Brief (Attempt Any Two of the Three)	10 Marks
	(05 Marks each)	
2	Active participation in routine class instructional deliveries and	05 Marks
	overall conduct as a responsible learner, mannerism and	
	articulation and exhibit of leadership qualities in organizing	
	related academic activities	

B) Semester End Examination: 75 %

- i) Duration: The examination shall be of 2 ½ Hours duration
- ii) Theory question paper pattern
 - There shall be five questions each of 15 marks.
 - All questions shall be compulsory with internal choice within the questions.
 - Question may be subdivided into sub-questions a, b, c... and the allocation of marks depends on the weightage of the topic.

(Detail question paper pattern has been given separately)

Passing Standard

The learners to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Internal Assessment and Semester End Examination. The learners shall obtain minimum of 40% marks (i.e. 10 out of 25) in the Internal Assessment and 40% marks in Semester End Examination (i.e. 30 Out of 75) separately, to pass the course and minimum of Grade E to pass a particular semester A learner will be said to have passed the course if the learner passes the Internal Assessment and Semester End Examination together.

Question Paper Pattern (Practical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
Q-1	Objective Questions A. Sub Questions to be asked 10 and to be answered any 08 B. Sub Questions to be asked 10 and to be answered any 07 (*Multiple choice / True or False / Match the columns/Fill in the blanks)	15 Marks
Q-2	Full Length Practical Question OR	15 Marks
Q-2	Full Length Practical Question	15 Marks
Q-3	Full Length Practical Question OR	15 Marks
Q-3	Full Length Practical Question	15 Marks
Q-4	Full Length Practical Question OR	15 Marks
Q-4	Full Length Practical Question	15 Marks
Q-5	A) Theory questionsB) Theory questionsOR	08 Marks 07 Marks
Q-5	Short Notes To be asked 05 To be answered 03	15 Marks

Note:

Practical question of 15 marks may be divided into two sub questions of 7/8 and 10/5Marks. If the topic demands, instead of practical questions, appropriate theory question may be asked.

Question Paper Pattern (Theoretical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
NO		
Q-1	Objective Questions	15 Marks
	A) Sub Questions to be asked 10 and to be answered any 08	
	B) Sub Questions to be asked 10 and to be answered any 07	
	(*Multiple choice / True or False / Match the columns/Fill in the blanks)	
Q-2	Full Length Question	15 Marks
	OR	
Q-2	Full Length Question	15 Marks
Q-3	Full Length Question	15 Marks
	OR	
Q-3	Full Length Question	15 Marks
Q-4	Full Length Question	15 Marks
	OR	
Q-4	Full Length Question	15 Marks
Q-5	A) Theory questions	08 Marks
	B) Theory questions	07 Marks
	OR	
Q-5	Short Notes	15 Marks
	To be asked 05	
	To be answered 03	

Note:

Theory question of 15 marks may be divided into two sub questions of 7/8 and 10/5Marks.

UNIVERSITY OF MUMBAI

No. UG/91 of 2018-19

CIRCULAR:-

Attention of the Principals of the affiliated Colleges and Directors of the recognized Institutions in Commerce & Management Faculty is invited to this office Circular No. UG/28 of 2015, dated 22nd July, 2015 relating to syllabus of Bachelor of Commerce (Accounting and Finance) degree programme.

Their attention is also invited to University Circular No. UG/106 of 2016-17 dated 25th October, 2016 for F.Y.B.Com. (Accounting & Finance) Sem. I & II and University Circular No. UG/166 of 2017-18 dated 8th August, 2017 for S.Y.B.Com. (Accounting & Finance) Sem. III & IV respectively.

They are hereby informed that the recommendations made by the Board of Studies in Accountancy at its meeting held on 28th February, 2018 have been accepted by the Academic Council at its meeting held on 5th May, 2018 <u>vide</u> item No. 4.42 and that in accordance therewith, the revised syllabus as per the (CBCS) for the T.Y.B.Com. in Accountancy (Accounting and Finance) (Sem. V & VI), has been brought into force with effect from the academic year 2018-19, accordingly. (The same is available on the University's website www.mu.ac.in).

MUMBAI - 400 032

(Dr. Dinesh Kamble) I/c REGISTRAR

To

The Principals of the affiliated Colleges and Directors of the recognized Institutions in Commerce & Management Faculty. (Circular'No. UG/334 of 2017-18 dated 9th January, 2018.)

A.C./4.42/05/05/2018

No. UG/ 91 -A of 2018

MUMBAI-400 032

27"July, 2018

Copy forwarded with Compliments for information to:-

- 1) The I/c Dean, Faculty of Commerce & Management,
- 2) The Director, Board of Examinations and Evaluation,
- 3) The Director, Board of Students Development,
- 4) The Professor-cum-Director, Institute of Distance and Open Learning (IDOL),
- 5) The Co-Ordinator, University Computerization Centre,

Hellicule

(Dr. Dinesh Kamble) I/c REGISTRAR

Aniversity of Mumbai



Revised Syllabus and Question Paper Pattern of Courses of B.Com. (Accounting and Finance) Programme at Third Year Semester V and VI

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year 2018-2019) Board of Studies-in-Accountancy

Board of Studies-in-Accountancy, University of Mumbai 1 | P a g e

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System

T.Y.B.Com. (Accounting and Finance)

(To be implemented from Academic Year 2018-2019)

No. of Courses	Semester V	Credits	No. of Courses	Semester VI	Credits
1	Elective Courses (EC)		1	Elective Courses (EC)	
1,2,3 &4	*Any four courses from the following list of the courses	12	1,2,3 &4	**Any four courses from the following list of the courses	12
2	Core Courses (CC)		2	Core Courses (CC)	
5	Financial Accounting - V	04	5	Financial Accounting - VII	04
6	Financial Accounting - VI	04	6	Project Work-II	04
	Total Credits	20		Total Credits	20

✓ Note: Project work is considered as a special course involving application of knowledge in solving/analyzing/exploring a real life situation/ difficult problem. Project work would be of 04 credits each. A project work may be undertaken in any area of Elective Courses/ Study Area

	*List of Elective Courses for Semester V (Any Four)		**List of Elective Courses for Semester VI (Any Four)
01	Cost Accounting - III	01	Cost Accounting - IV
02	Financial Management - II	02	Financial Management - III
03	Taxation - IV (Indirect Taxes - II)	03	Taxation - V (Indirect Taxes- III)
04	International Finance	04	Security Analysis and Portfolio Management
05	Financial Analysis and Business Valuation	05	Management Control Systems
06	Management -II	06	Economics Paper – III
	(Management Applications)		(Indian Economy)
Note	Note: Course selected in Semester V will continue in Semester VI		

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2018-2019)

Semester V

No. of Courses	Semester V	Credits
1	Elective Courses (EC)	
1,2,3 & 4	*Any four courses from the following list of the courses	12
2	Core Courses (CC)	
5	Financial Accounting - V	04
6	Financial Accounting - VI	04
	Total Credits	20

	*List of Elective Courses for Semester V (Any Four)
01	Cost Accounting - III
02	Financial Management - II
03	Taxation - IV (Indirect Taxes - II)
04	International Finance
05	Financial Analysis and Business Valuation Management
06	Management -II (Management Applications)I

1. Elective Courses (EC)

1. Cost Accounting – III

Sr. No.	Modules	No. of Lectures
01	Uniform Costing and Inter-Firm Comparison	05
02	Integrated System and Non Integrated System of Accounts	15
03	Operating Costing	10
04	Process Costing- Equivalent Units of Production and Inter- process Profit	15
05	Activity Based Costing System	15
	Total	60

Sr. No.	Modules / Units
1	Uniform Costing and Inter –Firm Comparison
	Uniform costing
	Meaning of and need for Uniform costing
	Essentials for success of Uniform costing
	Advantages and limitations of Uniform costing
	Areas of Uniformity, Uniform cost manual
	Inter Firm Comparison
	Pre-requisites of inter firm comparison; Advantages and limitations
	Practical problems
2	Integrated System and Non- integrated System of Accounts
	Integrated System
	Meaning; Features, Advantages and Disadvantages
	Journal Entries and Preparing Integrated Ledgers.
	Practical problems
	Non-Integrated system
	Meaning; Features, Advantages and disadvantages
	Journal entries and Preparing Cost Control Accounts
	Practical problems
3	Operating Costing
	Meaning of operating costing; Determination of per unit cost ; Pricing of services
	Collection of costing data
	Note-Practical problems based on costing of hospitals, hotels, goods and
	passengers transport service
4	Process Costing – Equivalent units of Production and Inter Process Profit
	Valuation of Work in progress and Equivalent production (FIFO Method and
	Weighted Average Method))
	Inter Process transfer at Profit
	Practical problems
5	Activity Based Costing System
	Activity Based Costing – Introduction, Advantages, Limitations, Identification of
	cost drivers, Practical Problems on Traditional V/s Activity Based Costing System.

1. Elective Courses (EC)

2. Financial Management -II

Sr. No.	Modules	No. of Lectures
01	Strategic Financial Management	05
02	Capital Budgeting – Project Planning & Risk Analysis	15
03	Capital Structure Theories and Dividend Decisions	15
04	Mutual Fund and Bond Valuation	15
05	Credit Management	10
	Total	60

Sr. No.	Modules / Units
1	Strategic Financial Management
	Strategic Financial Management – Need and Importance Corporate, Business and Functional Strategy Financial Planning - Need and Importance Profit Maximization Wealth Maximization Interface of Financial Policy and Strategic Management Relationship of Finance to Economics and Accounting Role of Financial Manager
2	Capital Budgeting – Project Planning & Risk Analysis
	 Introduction - Capital Budgeting Process, Project Classification and Investment Criteria. Techniques of Capital Budgeting - NPV, Benefit Cost Ratio, Internal Rate of Return, Modified Internal Rate of Return, Payback period, Discounted Payback Period and ARR. (Inclusive of Estimation of Project Cash Flows) Capital Rationing – Meaning, Need and Dealing with Capital Rationing Problems Risk Analysis in Capital Budgeting – Sources and Perspectives of Risk, Sensitivity Analysis, Scenario Analysis, Simulation Model, Decision Tree Analysis and Break - Even Analysis.
3	Capital Structure Theories and Dividend Decisions
	 Capital Structure Theories – Background, Assumptions, Definitions and Taxation and Capital Structure Types – Net Operating Income, Net Operating Income Approach, Traditional Position, Modigliani and Miller Approach, Trade off Theory and Signalling Theory. Dividend Decisions- Need, Importance, Formulation, Legal and Procedural Aspects. Dividend Decision Models - Walter, Gordon, Graham & Dodd Model and M-M Model
4	Mutual Fund and Bond Valuation
	Introduction to Mutual Fund- History & Origin, Definition, Meaning, Characteristics, Advantages, Disadvantages, Limitations of Mutual Funds, Ethics in Mutual Fund. Entities involved – Sponsor, Trust, Trustee, Asset Management Company, Registrar and Transfer Agent (RTA) and Fund Houses in India. Classification of Mutual Fund - Functional/Operational – Open ended, close ended, Interval, Portfolio – Income, Growth, Balanced, MMMF, Geographical/ Location – Domestic and Offshore, Tax Saving Funds, Exchange Traded Funds , Balance Funds , Fixed Term Plan Debt Funds and SIP.
	Calculations of NAV, Entry Load and Exit Load. Bond Valuation - Meaning, Measuring Bond Returns – Yield to Maturity, Yield to call and Bond Pricing. Bond Pricing Theorems, Bond Risks and Bond Duration. (Practical Problems on YTM and Bond Duration.)
5	Credit Management
	Credit Management – Terms of Payment, Credit Policy Variables, Credit Evaluation, Credit Granting Decision, Control of Accounts Receivables ie Receivables Management, Ageing Schedule and Credit Management in India

1. Elective Courses (EC)

3. Taxation – IV (Indirect Taxes – II)

Sr. No.	Modules	No. of Lectures
01	Introduction to Indirect Taxation and GST	10
02	Levy and Collection of GST	08
03	Concept of Supply	08
04	Documentation	08
05	Input Tax Credit and Computation of GST	20
06	Registration	06
	Total	60

Sr. No.	Modules / Units	
1	Introduction to Indirect Taxation and GST	
	 Basics for Taxation - Direct Taxes and Indirect Taxes – Features of Indirect taxes, Difference, Advantages and Disadvantages, Sources and Authority of Taxes in India (Art 246 of the Indian Constitution) Introduction to GST – Genesis of GST in India, Power to tax GST (Constitutional Provisions), Extent and Commencement, Meaning and Definition of GST, Benefits of GST, Conceptual Framework – CGST, IGST,SGST,UTGST, Imports of goods or services or both, Export of goods or services or both, Taxes subsumed and not subsumed under GST. GST Council and GST Network Definitions under CGST Act 	
2	Levy and Collection of GST	
	Charge of GST, Levy and Collection GST, Composite and Mixed Supplies under GST, Power to Grant Exemption, Negative list of GST, GST Rate Schedule for Goods and Services	
3	Concept of Supply	
	Taxable Event Supply Place of Supply Time of Supply Value of Supply	
4	Documentation	
	Tax Invoices, Credit and Debit notes	
5	Input Tax Credit and Computation of GST	
	Eligibility and conditions for taking Input Tax Credit Apportionment of credit & Blocked credits Credit in special circumstances Computation of GST under Inter State supplies and Intra State Supplies	
6	Registration	
	Registration – Persons liable for Registration, Persons not liable for Registration, Procedure for Registration, Deemed Registration,, Amendment, Cancellation and Revocation of Registration.	

1. Elective Courses (EC)

4. International Finance

Sr. No.	Modules	No. of Lectures
01	Derivatives – Futures	15
02	Derivatives – Options	15
03	Foreign Exchange Markets and Dealings	15
04	Foreign Exchange Exposure and Risk Management	15
	Total	60

Sr. No.	Modules / Units
1	Derivatives – Futures
	Derivatives – Need and Importance, Major Players in Derivative Markets, Features of Forward Contracts, Features of Future Contract, Forward V/s Future, Theoretical Future Price, Pricing Index Futures, Initial Margin and Maintenance Margin, Marking to Market and Variation Margin.
2	Derivatives – Options
	Options- Long Call, Short Call, Long Put, Short Put, Options V/s Futures, Writer of an Option, At the Money, In the Money and Out of The Money Options. Intrinsic and Time Value, Option Spreads and Strategies, Put Call Parity Theorem.
3	Foreign Exchange Markets and Dealings
	Introduction – Participants of Foreign Exchange Markets, Characteristics of
	Foreign Exchange Market, Major Foreign Currencies that Trade Worldwide,
	Foreign Currency Accounts – Nostro, Vostro and Loro (Cash Position and Currency
	position)
	Terms in Forex Market – Direct Quote and Indirect Quote, Bid, Ask and Spread,
	American terms, European terms, Spot, Tom, Cash and Forward Rates,
	Appreciation and Depreciation of currency, Premium and Discount, Swap Points,
	and Cross Rates.
4	Foreign Exchange Exposure and Risk Management
	Exchange Rate Determination Theories – The theory of Purchasing Power Parity,
	The Fischer effect, The International Fischer Effect and The Theory of Interest
	Rate Parity.
	Calculation of Forward Rate and Future Spot Rate.
	Arbitrage in Foreign Exchange Market – Covered and Uncovered Interest
	Arbitrage.
	Foreign Exchange Risk - Introduction, Types of Exposures and Strategies for
	Exposure Management.
	Hedging Transaction Exposure, Hedging Techniques, Money Market Hedge,
	Forward Hedge and Hedging of Futures & Options

1. Elective Courses (EC)

5. Financial Analysis and Business Valuation

Sr. No.	Modules	No. of Lectures
01	Financial Modeling for Project Appraisal	05
02	Financial Analysis	15
03	Growth Analysis and Sustainable Earning	10
04	Basics of Valuation	06
05	Valuation Models	12
06	Valuation of Assets and Liabilities	12
	Total	60

Sr. No.	Modules / Units
1	Financial Modeling for Project Appraisal
	Financial Modeling – concepts and application
	Financial statements module area
	Use of functions -NPV and IRR
	Forecasting Techniques
2	Financial Analysis
	Financial Analysis, Financial Statement Analysis,
	Analysis of Balance Sheet
	Analysis of Income Statement
	Analysis of Statement of Shareholder Equity
	Analysis of Cash flow Statement
	Analysis of Profitability
3	Growth Analysis and Sustainable Earning
	Concept of Growth Analysis
	Analysis of changes in profitability and sustainable earnings
	Evaluation of P/B ratios and P/E ratios
4	Basics of Valuation
	Introduction to valuation
	Value, Distinction between Price and Value
	Foundation of Business Valuation
	Purpose of business valuation
	Valuation Bias
	Uncertainties in Business Valuation
	Role of valuation in business acquisition, legal and tax purposes, efficient market
	hypothesis
5	Valuation Models
	Introduction to valuation models: asset based approach, Income based approach,
	market based approach
	Discounted cash flow valuation
	Relative valuation
	Free Cash Flow valuation
6	Valuation of Assets and Liabilities
	Valuation of Fixed Assets, Valuation of Inventories and Valuation of Investment
	Valuation of Shares
	Valuation of Goodwill, Patents, Copyrights, Brands, Real Estate
	Valuation of Liabilities

1. Elective Courses (EC)

6. Management- II (Management Applications)

Sr. No.	Modules	No. of Lectures
01	Marketing Management	15
02	Production Management	15
03	Human Resource Management	15
04	Financial Management	15
	Total	60

Sr. No.	Modules / Units
1	Marketing Management
	Meaning and Definition of Marketing – 4 Ps of Marketing, Importance
	 Product Management – Meaning & Definition – Product Development Strategies, Product life cycle, Branding- Meaning, Factors influencing branding Price Management – Meaning and Definition – Factors affecting pricing decisions, Pricing Strategies Place (Distribution) Management – Meaning and Definition – Factors Governing
	Distribution Decisions – Types of Distribution Channels Promotion Management – Meaning – Promotion Strategies, Integrated marketing communication
	Case studies based on the above topics
2	Production Management
	Meaning and Definition of Production Management – Scope of Production Management, Steps in Production Planning and Control Meaning of Productivity - Measurement of Productivity – Measure to increase Productivity – Productivity Movement in India Meaning and Definition of Quality Management – TQM – Quality Circles – ISO 9000/14000 Inventory Management – Meaning and Methods
	Case studies based on the above topics
3	Human Resource Management
	Human Resource Management – Meaning, Nature, Functions of Human Resource Management Human Resource Planning- Meaning, Process of Human Resource Planning Human Resource Development- Methods of Developing Human Resource Performance Appraisal – Meaning and Definition – Traditional and Modern Methods of Appraisal Employee retention Leadership- Traits, Styles Motivation- Factors of Motivation, Theories of Motivation- Maslow's Theory, Douglas MacGregor's Theory X and Theory Y Case studies based on the above topics
4	Financial Management
	Meaning and Definition of Financial Management – Functions of Financial Management Capital Budgeting- Introduction, Importance and Process Capital Structure- Meaning, Factors affecting Capital Structure Capital Market – Meaning and Constituents – Functions Fundamental Analysis – Technical Analysis - Venture Capital – DEMAT Account - Futures and Options Case studies based on the above topics

Board of Studies-in-Accountancy, University of Mumbai 15 | P a g e

2. Core Courses (CC)

1. Financial Accounting - V

Sr. No.	Modules	No. of Lectures
01	Underwriting of shares & debentures	08
02	Buy-Back of shares	10
03	AS – 14 - Amalgamation, Absorption & External Reconstruction (excluding inter – company holding)	15
04	Internal Reconstruction	15
05	Liquidation of Companies	10
	Total	60

Sr. No.	Modules / Units
1	Underwriting of shares & debentures
	Introduction, Underwriting, Underwriting Commission Provision of Companies Act with respect to Payment of underwriting commission Underwriters, Sub-Underwriters, Brokers and Manager to issues Types of underwriting, Abatement Clause Marked, Unmarked and Firm-underwriting applications, Liability of the underwriters in respect of underwriting contract Practical problems
2	Buy Back of Shares
	Company Law / Legal provisions (including related restrictions, power, transfer to capital redemption reserve account and prohibitions). Compliance of conditions including sources, maximum limits and debt equity ratio. Cancellation of Shares Bought back(Excluding Buy Back of minority shareholding) Practical problems
3	AS – 14 - Amalgamation, Absorption & External Reconstruction (excluding inter-
	company holdings)
	In the nature of merger and purchase with corresponding accounting treatments of pooling of interests and purchase method respectively. Meaning and Computation of purchase consideration. Problems based on purchase method only. Practical problems
4	Internal Reconstruction
	Need for reconstruction and company law provisions. Distinction between internal and external reconstruction. Methods including alteration of share capital, variation of shareholder rights, sub division, consolidation, surrender and reissue / cancellation, reduction of share capital with relevant legal provisions and accounting treatment for same. Practical problems
5	Liquidation of Companies
	Meaning of liquidation or winding up Preferential payments Overriding preferential payments Preparation of statement of affairs, deficit / surplus account Liquidator's final statement of account Practical problems

2. Core Courses (CC)

2. Financial Accounting – VI

Sr. No.	Modules	No. of Lectures
01	Final Accounts of Banking Company	15
02	Final Accounts of Insurance Company (Excl. Life Insurance)	15
03	Non – Banking Financial Companies	08
04	Valuation of Goodwill and Shares	12
05	Accounting for Limited Liability Partnership	10
	Total	60

Sr. No.	Modules / Units
1	Final Accounts of Banking Company
	Legal provision in Banking Regulation Act, 1949 relating to Accounts.
	Statutory reserves including Cash Reserve and Statutory Liquidity Ratio.
	Bill purchase and discounted, rebate of bill discounted.
	Final Accounts in prescribed form
	Non – performing assets and Income from non – performing assets. Capital Adequacy
	Classification of Advances, standard, sub – standard, doubtful and provisioning
	requirement.
2	Final Accounts of Insurance Company (Excl. Life Insurance)
	General Insurance – Various types of insurance, like fire, marine, Miscellaneous,
	Special terms like premium, claims, commission, Management expenses,
	Reserve for unexpired risk, reinsurance
	Final Accounts in a prescribed form. Revenue Statement – Form B – RA, Profit /
	Loss Account – Form B – PL and Balance Sheet Form B – BS.
3	Non – Banking Financial Companies
	Introduction, Definition, Registration and Regulation, Classification, Income
	Recognition, Accounting of Investment, Applicability of Prudential Norms,
	Assets classification, Non- performing Assets, Capital Adequacy, Preparation of
	Financial statement
4	Valuation of Goodwill and Shares
	Valuation of Goodwill
	Maintainable Profit method, Super Profit Method
	Capitalization method, Annuity Method Valuation of Shares
	Intrinsic Value Method, Yield method and Fair Value Method
5	Accounting for Limited Liability Partnership
	Statutory provisions
	Conversion of partnership business into Limited Liability Partnership
	Final accounts

Reference Books

Reference Books

Elective Courses (EC)

Cost Accounting- III

- Lectures on Costing by Swaminathan: S. Chand and Company (P) Ltd., New Delhi
- Cost Accounting by C.S. Rayudu, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting by Jawahar Lal and Seema Srivastava, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting by Ravi M. Kishore, Taxmann Ltd., New Delhi
- Principles and Practices of Cost Accounting by N.K. Prasad, Book Syndicate Pvt. Ltd., Calcutta
- Cost Accounting Theory and Practice by B.K. Bhar, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Cost Accounting Principles and Practice by M.N. Arora, Vikas Publishing House Pvt. Ltd., New Delhi
- Advanced Cost and Management Accounting: Problems and Solutions by V.K. Saxena and C.D. Vashist, S. Chand and Company (P) Ltd., New Delhi
- Cost Accounting by S.P. Jain and K.L. Narang, Kalyani Publishers, Ludhiana
- Modern Cost and Management Accounting by M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi

Financial Management - II

- Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
- Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
- Fundamentals of Financial Management by J.C. Van Horne, Prentice Hall of India, New Delhi
- Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
- Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi
- Financial Management by I.M. Pandey, Vikas Publishing House, New Delhi
- Financial Management byC. Paramasivan& T. Subramanian
- Financial Management by IM Pandey
- Financial Management by Ravi Kishor
- Financial Management by Khan & Jain

Taxation - Indirect Taxes - Paper IV

- Indirect Taxes: Law and Practice by V.S. Datey, Taxmann
- Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
- GST Law & practice with Customs & FTP by V.S. Datey, Taxmann
- GST by V.S. Datey, Taxmann
- GST & customs Law by K.M. Bansal, University Edition
- GST Law & practice with Customs & FTP by Vineet Sodhani, Snow White Publications
- GST Law & practice with Customs & FTP by Sanjiv Agarwal, Snow White Publications
- Indirect taxes(Containing GST, Customs & FTP) by MOhd. Rafi, Bharat Publications

International Finance

- P G Apte, International Financial Management, 5th Edition, The McGraw Hill
- Cheol . S. Eun & Bruce G. Resnick, International Finance Management
- Maurice D. Levi, International Finance Special Indian Edition
- Prakash G. Apte, International Finance A Business Perspective
- V A. Aadhani, International Finance

Board of Studies-in-Accountancy, University of Mumbai 2

Reference Books

Financial Analysis and Business Valuation

- Valuation: Measuring and Managing the value of Companies: Thomas Copeland- Wiley
- The Handbook of Advance Business Valuation: Rovert F Reilly and Robert Swhweish: Mc Graw hill
- Business Valuation: Pitabas Mohanty- Taxmann
- Valuation- Measuring and Managing the value of Companies : Tim Koller- Mc Kinsey & Co

Management II (Management Applications)

- Kotlar, Philip, Marketing Management, Prentice Hall, New Delhi.
- Stanton, Etzel, Walker, Fundamentals of Marketing, Tata-McGraw Hill, New Delhi.
- Saxena, Rajan, Marketing Management, Tata-McGraw Hill, New Delhi.
- McCarthy, E.J., Basic Marketing: A managerial approach, Irwin, New York.
- Pillai R S, Bagavathi, Modern Marketing
- Principles of Management , Ramasamy , Himalya Publication , Mumbai
- Principles of Management , Tripathi Reddy , Tata Mc Grew Hill
- Management Text & Cases , VSP Rao , Excel Books, Delhi
- Management Concepts and OB , P S Rao & N V Shah , AjabPustakalaya
- Essentials of Management , Koontz II & W , Mc. Grew Hill , New York

Principles of Management-Text and Cases – Dr..M.SakthivelMurugan, New Age Publications

Core Courses (CC)

Financial Accounting - V and VI

- Introduction to Accountancy by T.S. Grewal, S. Chand and Company (P) Ltd., New Delhi
- Advance Accounts by Shukla and Grewal, S. Chand and Company (P) Ltd., New Delhi
- Advanced Accountancy by R.L Gupta and M. Radhaswamy, S. Chand and Company (P) Ltd., New Delhi
- Modern Accountancy by Mukherjee and Hanif, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Financial Accounting by Lesile Chandwichk, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi
- Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd., Mumbai
- Financial Accounting by P.C. Tulsian, Pearson Publications, New Delhi
- Accounting Principles by R.N. Anthony and J.S. Reece, Richard Irwin, Inc
- Financial Accounting by Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Mayur Paper Back, Noida
- Compendium of Statement and Standard of Accounting, ICAI
- Indian Accounting Standards, Ashish Bhattacharya, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai
- Company Accounting Standards by Shrinivasan Anand, Taxman, New Delhi
- Financial Accounting by V. Rajasekaran, Pearson Publications, New Delhi
- Introduction to Financial Accounting by Horngren, Pearson Publications, New Delhi
- Financial Accounting by M. Mukherjee and M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi
- Financial Accounting a Managerial Perspective, Varadraj B. Bapat, Mehul Raithatha, Tata McGraw Hill Education Pvt. Ltd., New Delhi

B.Com. (Accounting and Finance) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2018-2019)

Semester VI

No. of Courses	Semester VI	Credits
1	Elective Courses (EC)	
1,2,3 & 4	**Any four courses from the following list of the courses	12
2	Core Course (CC)	
5	Financial Accounting - VII	04
6	Project Work -II	04
Total Credits		20

**List of Elective Courses for Semester VI (Any Four)		
01	Cost Accounting - IV	
02	Financial Management - III	
03	Taxation - V (Indirect Taxes- III)	
04	Management Control Systems	
05	Security Analysis and Portfolio Management	
06	Economics Paper – III Indian Economy)	

1. Elective Courses (EC)

1. Cost Accounting - IV

Sr. No.	Modules	No. of Lectures
01	Budgeting and Budgetary Control	15
02	Absorption Costing and Marginal Costing Cost Volume and Profit Analysis	15
03	Managerial Decision Making	15
04	Standard Costing and Variance Analysis	15
Total		60

Sr. No.	Modules / Units	
1	Budgeting and Budgetary Control	
	Meaning & objectives, Advantages and limitations of budgets	
	Functional budgets, fixed and flexible budgets	
	Zero based budgeting, performance budgeting	
	Practical problems of preparing flexible budgets and functional budgets	
2	Absorption Costing and Marginal Costing, Cost Volume and Profit Analysis	
	Absorption Costing and Marginal Costing	
	Meaning of absorption costing,	
	Introduction to marginal costing	
	Distinction between absorption costing and marginal costing	
	Advantages and limitations of marginal costing	
	Cost Volume and Profit Analysis	
	Break even analysis meaning and graphic presentation	
	Margin of safety	
	Key factor	
	Practical problems based on using the marginal costing formulae and key factor	
3	Managerial Decision Making	
	Make or buy	
	Sales mix decisions	
	Exploring new markets	
	Plant shut down decision	
	Practical problems	
4	Standard Costing and Variance Analysis	
	Preliminaries in installing of a standard cost system	
	Material Cost variance	
	Labour cost variance	
	Variable overhead variances	
	Fixed Overhead variances	
	Sales variances	
	Profit variances	
	Practical problems	

1. Elective Courses (EC)

2. Financial Management - III

Sr. No.	Modules	No. of Lectures
01	Business Valuation	05
02	Mergers and Acquisitions	15
03	Corporate Restructuring and Takeovers	15
04	Lease and Hire Purchase Financing	15
05	Working Capital financing	10
	Total	60

Sr. No.	Modules / Units	
1	Business Valuation	
	Conceptual Framework of Valuation – Book Value, Market Value, Economic Value, Liquidation Value, Replacement Value, Salvage Value, Value of Goodwill and Fair Value Approaches of Valuation – Assets Based Approach to Valuation, Earnings Based Approach to Valuation, Earnings Measure on Cash Flow Basis, Market Value Added Approach and Economic Value Added.	
2	Mergers and Acquisitions	
	Introduction- Basic modes of acquiring another firm, Synergy effects, Difference between Merger and Takeover, Advantages of Mergers and Acquisitions, Benefits of Merger for Acquiring firm, Reasons of companies to offer themselves for sale, Reasons for failure of Mergers and Reverse Merger. Commonly Used Bases for determining the Exchange Ratio – EPS, MPS, Book value and Combination of Measures and Evaluation of Mergers (Practical Problems)	
3	Corporate Restructuring and Takeovers	
	Introduction – Meaning, Need and Importance, Forms of Restructuring, Advantages and Disadvantages Takeovers – Meaning, SEBI Guidelines, Anti-takeover defences and Asset and Liability Restructuring. (Practical Problems)	
4	Lease and Hire Purchase Financing	
	 Introduction – Meaning and Types of Leases, Rationale, Mechanics, Operating Leases, Leasing as Financing Decisions, Calculation of Cash flows of a finance lease. Hire Purchase – Meaning, Need and Importance, Calculation of Hire Purchase instalments. Choice between Leasing and Hire Purchase 	
5	Working Capital financing	
	Introduction – Key features and Characteristics of Trade Credit, Bank Credit, Commercial Papers, Certificate of Deposits and Factoring. Practical Problems based on Factoring and calculations of yield of CP's and CD's	

1. Elective Courses (EC)

3. Taxation - Paper V (Indirect Taxes – III)

Sr. No.	Modules	No. of Lectures
01	Payment of Tax and Refunds	08
02	Returns	08
03	Accounts, Audit, Assessment and Records	08
04	Custom Act - I	12
05	Custom Act - II	12
06	Foreign Trade Policy	12
Total		60

Sr. No.	Modules / Units	
1	Payment of Tax and Refunds	
	Payment of Tax, Interest and other Amounts, Interest on delayed Payment, TDS, TCS Refund of tax, Refund in certain cases, Interest on delayed refunds	
2	Returns	
	Types of Returns and Provisions relating to filing of Returns	
3	Accounts, Audit, Assessment and Records	
	Accounts and other records, Period of retention of accounts, Electronic Way Bill Self-Assessment, Provisional Assessment, Scrutiny of Returns, Assessment of non- filers of Returns, Assessment of Unregistered person, summary assessment in certain special cases, Audit by tax authorities, Special Audit.	
4	Custom Act - I	
	Introduction to customs law including Constitutional aspects Levy of and exemptions from customs duties – All provisions including application of customs law, taxable event, charge of customs duty, exceptions to levy of customs duty, exemption from custom duty Types of customs duties Classification and valuation of imported and export goods	
5	Custom Act - II	
	Import and Export Procedures – All import and export procedures including special procedures relating to baggage, goods imported or exported by post, stores Provisions relating to coastal goods and vessels carrying coastal goods Warehousing and Drawback	
6	Foreign Trade Policy	
	Introduction to FTP – legislation governing FTP, salient features of an FTP, Foreign Trade Policy 2015- 20, administration of FTP, contents of FTP, scope of FTP. Provision related to import and export of goods Basic concepts relating to export promotion schemes provided under FTP – Duty Exemption & remission Schemes, Duty Free Import Authorization Scheme, Reward scheme, Export Promotion Capital Goods Scheme, EOU, STP, BTP AND EHTP scheme.	

1. Elective Courses (EC)

4. Security Analysis and Portfolio Management

Sr. No.	Modules	No. of Lectures
01	Portfolio Management – An Introduction & Process	12
02	Portfolio Management – Valuation	12
03	Fundamental Analysis	12
04	Technical Analysis	12
05	Efficient Market Theory & CAPM	12
	Total	60

Sr. No.	Modules / Units
1	Portfolio Management – An Introduction & Process
	 Investment - Meaning, Characteristics, Objectives, Investment V/s Speculation, Investment V/s Gambling and Types of Investors Portfolio Management – Meaning, Evolution, Phases, Role of Portfolio Managers, Advantages of Portfolio Management. Investment Environment in India and factors conducive for investment in India. Portfolio Analysis – Meaning and its Components, Calculation of Expected Return and Risk, Calculation of Covariance, Risk – Return Trade off. Portfolio Selection – Meaning, Feasible Set of Portfolios, Efficient Set of Portfolios, Selection of Optimal Portfolio, Markowitz Model, Limitations of Markowitz Model, Measuring Security Return and Portfolio Return and Risk under Single Index Model and Multi Index Model.
2	Portfolio Management – Valuation
	Portfolio Revision – Meaning, Need, Constraints and Strategies. Portfolio Evaluation – Meaning, Need, Measuring Returns (Sharpe, Treynor and Jensen Ratios) and Decomposition of Performance.
3	Fundamental Analysis
	Economy Analysis – Meaning, Framework, Economic Analysis, Forecasting, Barometric or Indicator Approach, Econometric Model Building and Opportunistic Model Building. Industry Analysis – Concept of Analysis, Industry Life Cycle, Industry Characteristics Company Analysis – Financial Statements, Analysis of Financial Statements, (Practical questions on Debt equity ratios, total debt ratio, proprietary ratios, interest coverage ratio, Profitability ratios related to sales, investment and equity shares Efficiency or Activity Ratios) and Assessment of risk (Leverages)
4	Technical Analysis
	Dow Theory Meaning and Principles of Technical Analysis, Price Chart, Line Chart, Bar Chart, Japanese Candlestick Chart, Trends and Trend Reversals, Chart Patterns, Support and Resistance, Reversal Patterns, Continuation Patterns and Elliot Wave Theory Mathematical Indicators – Calculation of Moving Averages (Simple and Exponential Moving Average), Oscillators and Relative Strength Index Market Indicators Fundamental Analysis V/s Technical Analysis

Sr. No.	Modules / Units							
5	Efficient Market Theory & CAPM							
	Random Walk Theory							
	The Efficient Market Hypothesis							
	Forms of Market Efficiency							
	Competitive Market Hypothesis							
	CAPM – Fundamental Notions of Portfolio Theory, Assumption of CAPM, Efficient							
	Frontier with Riskless Lending and Borrowing, Capital Market Line, Security							
	Market Line and Pricing of Securities with CAPM.							
	Arbitrage Pricing Theory (APT) – The Return Generating Model, Factors Affecting							
	Stock Return, Expected Return on Stock, APT V/s CAPM.							

Revised Syllabus of Courses of B.Com. (Accounting and Finance) Programme at Semester VI with effect from the Academic Year 2018-2019

1. Elective Courses (EC)

5. Management Control Systems

Sr.	Modules	No. of	
No.		Lectures	
01	Developments in Management Accounting and Control Systems	08	
02	Financial Goal Setting	12	
03	Responsibility Centres	15	
04	Transfer Pricing	15	
05	Inflation Accounting	10	
	Total	60	

Sr. No.	Modules / Units							
1	Developments in Management Accounting and Control Systems							
	 –Introduction- The Modern economic environment, Traditional production processes, The background to change, The new manufacturing computer-aided design, Computer-aided manufacturing, Computer-integrated manufacturing, Flexible manufacturing systems, Value chain, Production operations systems and Management strategies, Material requirements planning, Manufacturing Resources Planning, Optimised Production Technology (OPT), ERP, CRM and SCM Just-in-time concept, Total Quality Management (TQM) and Synchronous Manufacturing. Control in special sectors: Scrap Control, Control of R & D – Project Control, Administrative Cost Control and the emphasis on continuous improvement. 							
2	Financial Goal Setting							
	Analysis of Incremental ROI, Sensitivity Analysis, Developing Financial Goals along Organizational Hierarchy. Concept and Technique of Responsibility Budgeting - Analytical framework for Developing Responsibility Budgets - Integrating Responsibility Budgets Integrating Responsibility Budgeting with MBO System.							
3	Responsibility Centres							
	Introduction to Cost, Revenue, Profit and Investment Centres, Reporting of Responsibility Centre. Performance Measures -Investment Centres/Strategic Business Units, Return on Investment, The problems with ROI and Residual income (RI)							
4	Transfer Pricing							
	Introduction - Aims and Features, General rules, Cost-based prices, Market-based prices, Marginal cost, Dual pricing, Profit-maximising transfer prices, Negotiated transfer prices and other behavioural considerations							
5	Inflation Accounting							
	Introduction - Need, Brief History, Methods of Inflation Accounting (Current Purchasing Power and Current Cost Accounting), Inflation Accounting and Corporate Taxation. Financial Reporting to Management under conditions of change in price level.							

Revised Syllabus of Courses of B.Com. (Accounting and Finance) Programme at Semester VI with effect from the Academic Year 2018-2019

1. Elective Courses (EC)

6. Economics Paper – III (Indian Economy)

Sr. No.	Modules	No. of Lectures
01	Introduction Agricultural Sector	15
02	Industrial Sector	15
03	Service Sector and External Sector	15
04	Money and Banking	15
	Total	60

Sr. No.	Modules / Units							
1	Introduction Agricultural Sector							
	Introduction							
	Demographic features- Poverty, Income inequality and Unemployment							
	Urbanization and its effects							
	Agricultural Sector							
	Institutional Structure- Land reforms in India							
	Technological changes in agriculture							
	Agricultural pricing and agricultural finance							
	Agricultural marketing							
	National agricultural policy							
2	Industrial Sector							
	Growth and pattern of industrialization							
	Industrial Policy of 1991. Public sector enterprises and disinvestment policy							
	Small scale sector- problems and prospects							
3	Service Sector and External Sector							
	Service Sector							
	Nature and scope of service industry							
	Recent trends in Banking industry, Insurance Industry, Healthcare Industry and							
	Tourism Industry							
	External Sector							
	Structure and directions of Foreign trade							
	India's Balance of payments since 1991							
	FDI, foreign capital and transnational companies in India. Role and impact of							
	SAARC, ASEAN and WTO							
4	Money and Banking							
	Money market and its features							
	Monetary policy of RBI							
	Progress of commercial banking in India							
	Development of capital markets							
	SEBI and its functions							

Revised Syllabus of Courses of B.Com. (Accounting and Finance) Programme at Semester VI with effect from the Academic Year 2018-2019

2. Core Courses (EC)

1. Financial Accounting – VII

Sr. No.	Modules	No. of Lectures		
01	Final Account for Electricity Company	15		
02	Final Accounts for Co-Operative Society: (Co-Operative Housing Society and Consumer Co-Operative Society)	15		
03	Investment Accounting (w.r.t. Accounting Standard - 13)	10		
04	Mutual Fund	08		
05	Introduction to IFRS and Indian Accounting Standards	12		
	Total	60		

Sr. No.	Modules / Units
1	Final Account for Electricity Company
2	 Final Accounts as per Double Account System Final Accounts as per Electricity Rules Receipt & Expenditure on Capital Account General Balance Sheet Contingency Reserve Disposal of Surplus (As per Electricity Rules): Norms regarding Disposal of Surplus Replacement of Assets Simple practical problems Final Accounts for Co-Operative Society (Co-Operative Housing Society and Consumer Co-Operative Society) Provisions of Maharashtra State Co-Operative Societies Act and rules. Accounting provisions including appropriation to various funds Format of Final Accounts – Form N Simple practical problems on preparation of final accounts of a Co-Operative
	housing society & Consumer Co-Operative Society
3	Investment Accounting (w.r.t. Accounting Standard- 13)
	For shares (variable income bearing securities) For debentures/Preference. shares (fixed income bearing securities) Accounting for transactions of purchase and sale of investments with ex and cum interest prices and finding cost of investment sold and carrying cost as per weighted average method (Excl. brokerage). Columnar format for investment account.
4	Mutual Fund
	Introduction, Historical Background SEBI Guidelines, Organisation, NAC Scheme, Types of Mutual Fund Schemes, , FOF Scheme, Load or No-Load Scheme, Investment Valuation norms, Pricing of units, Contents of Balance sheet and revenue Account, Evaluation of mutual funds, Disposal of Investments, Recognition of Income, Accounting policies and entries.
5	Introduction to IFRS
	 Accounting standards: Role/objectives of accounting standards, Development of accounting standards in India - Requirements of international accounting standards - International organizations engaged in accounting harmonization - IASB - FASB - Role of IASB in developing IFRS, Applicability, Interpretation, Scope and compliance of Accounting Standards Indian Accounting standards (Ind AS) : Introduction, Road map, First time adaptation of Indian Accounting Standard,
	Conceptual framework Comparison of Ind AS, IFRS and AS IFRS : Introduction, scope Purpose & Objective of financial statement-its Frame work-its assumption, characteristics, element, recognition & measurement., first time adoption of IFRS Convergence of Ind-As and IFRS

Revised Syllabus of Courses of B.Com.(Accounting and Finance) Programme at Semester VI with effect from the Academic Year 2018-2019

Reference Books

	Reference Books
Ele	ctive Courses (EC)
Cos	st Accounting- IV
• [Lectures on Costing by Swaminathan: S. Chand and Company (P) Ltd., New Delhi
• (Cost Accounting by C.S. Rayudu, Tata Mc. Grow Hill and Co. Ltd., Mumbai
• (Cost Accounting by Jawahar Lal and Seema Srivastava, Tata Mc. Grow Hill and Co. Ltd., Mumbai
	Cost Accounting by Ravi M. Kishore, Taxmann Ltd., New Delhi
	Principles and Practices of Cost Accounting by N.K. Prasad, Book Syndicate Pvt. Ltd., Calcutta
	Cost Accounting Theory and Practice by B.K. Bhar, Tata Mc. Grow Hill and Co. Ltd., Mumbai
	Cost Accounting Principles and Practice by M.N. Arora, Vikas Publishing House Pvt. Ltd., New Delhi
	Advanced Cost and Management Accounting: Problems and Solutions by V.K. Saxena and C.D. Vashist,
	S. Chand and Company (P) Ltd., New Delhi
	Cost Accounting by S.P. Jain and K.L. Narang, Kalyani Publishers, Ludhiana
	Modern Cost and Management Accounting by M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New
	Delhi
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	Fundamentals of Financial Management by D. Chandra Bose, PHI Learning Pvt. Ltd., New Delhi
	Fundamentals of Financial Management by Bhabotosh Banerjee, PHI Learning Pvt. Ltd., New Delhi
	Fundamentals of Financial Management by Vyuptakesh Sharma, Pearson Education, New Delhi
	Fundamentals of Financial Management by J.C. Van Horne, Prentice Hall of India, New Delhi
	Financial Management: Text and Problems by M.Y. Khan and P.K. Jain, Tata McGraw Hill, New Delhi
	Financial Management: Theory and Practice by Prasanna Chandra, Tata McGraw Hill, New Delhi
	Financial Management by I.M. Pandey, Vikas Publishing House, New Delhi
	Financial Management by C. Paramasivan& T. Subramanian
	inancial Management by IM Pandey
	inancial Management by Ravi Kishor
	Financial Management by Khan & Jain Ration - Indirect Taxes - III
	Indirect Taxes: Law and Practice by V.S. Datey, Taxmann
	Indirect Taxes by V.S. Balchandra, Sultan Chand and Sons, New Delhi
	GST Law & practice with Customs & FTP by V.S. Datey, Taxmann
	GST by V.S. Datey, Taxmann
	GST & customs Law by K.M. Bansal, University Edition
	GST Law & practice with Customs & FTP by Vineet Sodhani, Snow White Publications
	GST Law & practice with Customs & FTP by Sanjiv Agarwal, Snow White Publications
	Indirect taxes(Containing GST, Customs & FTP) by MOhd. Rafi, Bharat Publications
	curity Analysis And Portfolio Management
	Blake, David 1992, Financial Market Analysis , McGraw Hill London
• /	Francis J.C Investments, Analysis and Management McGraw Hill New York.
• /	Pistolese Clifford Using Technical Analysis Vision Books
• R	eilly Frank K and Keith Brown Investment Analysis and Portfolio Management.

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Reference Books
Management Control Systems
 Anthony & Govindrajan - Management Control Systems (TATA McGraw Hill), 12th Edition, 2006. Bob Scarlett – Management Accounting and Performance Evaluation, Oxford Press, 2006 Edition Maciarirllo& Kirby – Management Control Systems (Prentice Hall India), 2th Edition
Economics
 Indian Economic Survey Reports (Annual), Ministry of Finance, Government of India Indian Economy by Misra and Puri, Himalaya Publishing House - Delhi Gaurav Dutt & Ashwini Mahajan, (2016) Indian Economy, S.Chand& company PVT LTD New Delhi A.N.Agarwal – Indian Economy problems of Development and Planning New Age International Publisher BuddarDatt K D.M.Sundharam, Indian Economy S. Chand S. co. LTD, Delhi
RuddarDatt K.P.M Sundharam – Indian Economy S. Chand E-co LTD. Delhi
Core Courses (CC)
Financial Accounting - VII
 Introduction to Accountancy by T.S. Grewal, S. Chand and Company (P) Ltd., New Delhi Advance Accounts by Shukla and Grewal, S. Chand and Company (P) Ltd., New Delhi Advanced Accountancy by R.L Gupta and M. Radhaswamy, S. Chand and Company (P) Ltd., New Delhi Modern Accountancy by Mukherjee and Hanif, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Lesile Chandwichk, Pentice Hall of India Adin Bakley (P) Ltd., New Delhi Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd., Mumbai Financial Accounting by P.C. Tulsian, Pearson Publications, New Delhi Accounting Principles by R.N. Anthony and J.S. Reece, Richard Irwin, Inc Financial Accounting by Monga, J.R. Ahuja, Girish Ahuja and Ashok Shehgal, Mayur Paper Back, Noida Compendium of Statement and Standard of Accounting, ICAI Indian Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by Williams, Tata Mc. Grow Hill and Co. Ltd., Mumbai Financial Accounting by N. Rajasekaran, Pearson Publications, New Delhi Financial Accounting by V. Rajasekaran, Pearson Publications, New Delhi Financial Accounting by M. Mukherjee and M. Hanif, Tata McGraw Hill Education Pvt. Ltd., New Delhi Financial Accounting by M. Mukherjee and M. Hanif, Tata McGraw Hill Raithatha, Tata McGraw Hill Education Pvt. Ltd., New Delhi

Aniversity of Mumbai



B.Com. (Accounting and Finance) Programme Guidelines for Project Work at Third Year Semester VI

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year 2018-2019)

Board of Studies-in-Accountancy

Introduction

Inclusion of project work in the course curriculum of the B.Com. (Accounting & Finance) programme is one of the ambitious aspects in the programme structure. The main objective of inclusion of project work is to inculcate the element of research analyse and scientific temperament challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret particular aspect of the study. It is expected that the guiding teacher should undertake the counselling sessions and make the awareness among the learners about the methodology of formulation, preparation and evaluation pattern of the project work.

- There are two modes of preparation of project work
 - 1. Project work based on research methodology in the study area
 - 2. Project work based on internship in the study area

Guidelines for preparation of Project Work

1. General guidelines for preparation of project work based on Research Methodology

- The project topic may be undertaken in any area of Elective Courses.
- Each of the learner has to undertake a Project individually under the supervision of a teacher-guide.
- The learner shall decide the topic and title which should be specific, clear and with definite scope in consultation with the teacher-guide concerned.
- University/college shall allot a guiding teacher for guidance to the students based on her / his specialization.
- The project report shall be prepared as per the broad guidelines given below:
 - Font type: Times New Roman
 - Font size: 12-For content, 14-for Title
 - Line Space : 1.5-for content and 1-for in table work
 - Paper Size: A4
 - Margin : in Left-1.5, Up-Down-Right-1
 - The Project Report shall be bounded.
 - The project report should be 80 to 100 pages

Format

1st page (Main Page)

Title of the problem of the Project

A Project Submitted to

University of Mumbai for partial completion of the degree of

Bachelor in Commerce (Accounting and Finance)

Under the Faculty of Commerce

By

Name of the Learner

Under the Guidance of

Name of the Guiding Teacher

Name and address of the College

Month and Year

 2^{nd} Page This page to be repeated on 2^{nd} page (i.e. inside after main page)

Index

Chapter No. 1	Title of the Chapter	Page No.
(sub point 1.1, 1.1.1, And so on)		
Chapter No. 2	Title of the Chapter	
Chapter No. 3	Title of the Chapter	
Chapter No. 4	Title of the Chapter	
Chapter No. 5	Title of the Chapter	

List of tables, if any, with page numbers. List of Graphs, if any, with page numbers. List of Appendix, if any, with page numbers. Abbreviations used:

Structure to be followed to maintain the uniformity in formulation and presentation of Project Work

(Model Structure of the Project Work)

• Chapter No. 1: Introduction

In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner.

• Chapter No. 2: Research Methodology

This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc can be incorporated by the learner.

• Chapter No. 3: Literature Review

This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue.

• Chapter No. 4: Data Analysis, Interpretation and Presentation

This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner.

• Chapter No. 5: Conclusions and Suggestions

In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.

Note: If required more chapters of data analysis can be added.

- Bibliography
- Appendix

Name and address of the college

Certificate

This is to cert	ify	that Ms/M	r								_has	s wor	ked
and duly con	nple	ted her/his	s Projec	et W	ork for th	ne de	egre	ee of Ba	chel	or in	Co	omme	erce
(Accounting	&	Finance)	under	the	Faculty	of	Co	ommerce	in	the	sul	bject	of
						_ ar	nd	her/his	proj	ect	is	entit	led,
				Titl	e of the P	roje	<u>ct</u>					" un	der

my supervision.

I further certify that the entire work has been done by the learner under my guidance and that no part of it has been submitted previously for any Degree or Diploma of any University.

It is her/ his own work and facts reported by her/his personal findings and investigations.

Seal of the College

Name and Signature of Guiding Teacher

Date of submission:

Declaration by learner

I the undersigned Miss / Mr				Name of the learner					here by,		
declare	that	the	work	embodied	in	this	project	work	titled	۰۰	
				Title	of th	ne Proj	ject				,

forms my own contribution to the research work carried out under the guidance of <u>Name of the guiding teacher</u> is a result of my own research work and has not been previously submitted to any other University for any other Degree/ Diploma to this or any other University.

Wherever reference has been made to previous works of others, it has been clearly indicated as such and included in the bibliography.

I, here by further declare that all information of this document has been obtained and presented in accordance with academic rules and ethical conduct.

Name and Signature of the learner

Certified by

Name and signature of the Guiding Teacher

Acknowledgment

(Model structure of the acknowledgement)

To list who all have helped me is difficult because they are so numerous and the depth is so enormous.

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my **Principal**, ______for providing the necessary facilities required for completion of this project.

I take this opportunity to thank our **Coordinator**, for her moral support and guidance.

I would also like to express my sincere gratitude towards my project guide _________ whose guidance and care made the project successful.

I would like to thank my **College Library**, for having provided various reference books and magazines related to my project.

Lastly, I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **my Parents and Peers** who supported me throughout my project.

2. Guidelines for Internship based project work

- Minimum 20 days/ 100 hours of Internship with an Organisation/ NGO/ Charitable Organisation/ Private firm.
- The theme of the internship should be based on any study area of the elective courses
- Experience Certificate is Mandatory
- A project report has to be brief in content and must include the following aspects:

Executive Summary:

A bird's eye view of your entire presentation has to be precisely offered under this category.

Introduction on the Company:

A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis.

Statement and Objectives:

The mission and vision of the organization need to be stated enshrining its broad strategies.

• Your Role in the Organisation during the internship:

The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head.

Challenges:

The challenges confronted while churning out theoretical knowledge into practical world.

• Conclusion:

A brief overview of your experience and suggestions to bridge the gap between theory and practice.

- The project report based on internship shall be prepared as per the broad guidelines given below:
 - Font type: Times New Roman
 - Font size: 12-For content, 14-for Title
 - Line Space : 1.5-for content and 1-for in table work
 - Paper Size: A4
 - Margin : in Left-1.5, Up-Down-Right-1
 - The Project Report shall be bounded.
 - The project report should be of minimum 50 pages

Evaluation pattern of the project work

The Project Report shall be evaluated in two stages viz.		
Evaluation of Project Report (Bound Copy)	60 Marks	
 Introduction and other areas covered 	20 Marks	
 Research Methodology, Presentation, Analysis and interpretation of data 	30 Marks	
 Conclusion & Recommendations 	10 Marks	
Conduct of Viva-voce	40 Marks	
 In the course of Viva-voce, the questions may be asked such as importance / relevance of the study, objective of the study, methodology of the study/ mode of Enquiry (question responses) 	10 Marks	
 Ability to explain the analysis, findings, concluding observations, recommendation, limitations of the Study 	20 Marks	
Overall Impression (including Communication Skill)	10 Marks	

Note:

• The guiding teacher along with the external evaluator appointed by the University/ College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern

Passing Standard

- Minimum of Grade E in the project component
- In case of failing in the project work, the same project can be revised for ATKT examination.
- Absence of student for viva voce: If any student fails to appear for the viva voce on the date and time fixed by the department such student shall appear for the viva voce on the date and time fixed by the Department, such student shall appear for the viva voce only along with students of the next batch.

Revised Syllabus of Courses of B.Com. (Accounting and Finance) Programme at Semester V and VI with effect from the Academic Year 2018-2019 Scheme of Evaluation

The performance of the learners will be evaluated in two Components. One component will be the Internal Assessment component carrying 25% marks and the second component will be the Semester-wise End Examination component carrying 75% marks. The allocation of marks for the Internal Assessment and Semester End Examinations will be as shown below:-

A) Internal Assessment: 25 %

Question Paper Pattern (Internal Assessment- Courses without Practical Courses)

Sr. No.	Particular	Marks
1	One class test (20 Marks)	
	Match the Column/ Fill in the Blanks/ Multiple Choice Questions	05 Marks
	(½ Mark each)	
	Answer in One or Two Lines (Concept based Questions)	05 Marks
	(01 Mark each)	
	Answer in Brief (Attempt Any Two of the Three)	10 Marks
	(05 Marks each)	
2	Active participation in routine class instructional deliveries and	05 Marks
	overall conduct as a responsible learner, mannerism and	
	articulation and exhibit of leadership qualities in organizing	
	related academic activities	

B) Semester End Examination: 75 %

- i) Duration: The examination shall be of 2 ½ Hours duration
- ii) Theory question paper pattern
 - There shall be five questions each of 15 marks.
 - All questions shall be compulsory with internal choice within the questions.
 - Question may be subdivided into sub-questions a, b, c... and the allocation of marks depends on the weightage of the topic.

(Detail question paper pattern has been given separately)

Passing Standard

The learners to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Internal Assessment and Semester End Examination. The learners shall obtain minimum of 40% marks (i.e. 10 out of 25) in the Internal Assessment and 40% marks in Semester End Examination (i.e. 30 Out of 75) separately, to pass the course and minimum of Grade E to pass a particular semester A learner will be said to have passed the course if the learner passes the Internal Assessment and Semester End Examination together.

Question Paper Pattern (Practical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
Q-1	Objective Questions A. Sub Questions to be asked 10 and to be answered any 08 B. Sub Questions to be asked 10 and to be answered any 07 (*Multiple choice / True or False / Match the columns/Fill in the blanks)	15 Marks
Q-2	Full Length Practical Question OR	15 Marks
Q-2	Full Length Practical Question	15 Marks
Q-3	Full Length Practical Question OR	15 Marks
Q-3	Full Length Practical Question	15 Marks
Q-4	Full Length Practical Question OR	15 Marks
Q-4	Full Length Practical Question	15 Marks
Q-5	A) Theory questionsB) Theory questionsOR	08 Marks 07 Marks
Q-5	Short Notes To be asked 05 To be answered 03	15 Marks

Note:

Practical question of 15 marks may be divided into two sub questions of 7/8 and 10/5Marks. If the topic demands, instead of practical questions, appropriate theory question may be asked.

Question Paper Pattern (Theoretical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
NO		
Q-1	Objective Questions	15 Marks
	A) Sub Questions to be asked 10 and to be answered any 08	
	B) Sub Questions to be asked 10 and to be answered any 07	
	(*Multiple choice / True or False / Match the columns/Fill in the blanks)	
Q-2	Full Length Question	15 Marks
	OR	
Q-2	Full Length Question	15 Marks
Q-3	Full Length Question	15 Marks
	OR	
Q-3	Full Length Question	15 Marks
Q-4	Full Length Question	15 Marks
	OR	
Q-4	Full Length Question	15 Marks
Q-5	A) Theory questions	08 Marks
	B) Theory questions	07 Marks
	OR	
Q-5	Short Notes	15 Marks
	To be asked 05	
	To be answered 03	

Note:

Theory question of 15 marks may be divided into two sub questions of 7/8 and 10/5Marks.

SYDENHAM COLLEGE OF COMMERCE & ECONOMICS

B ROAD, CHURCHGATE

MUMBAI-400020

(A Constituent of Dr Homi Bhabha State University)

Bachelor of Management Studies

(BMS) Programme

Course Structure

FYBMS Syllabus

Semester-I&II

Under Choice Based Credit System

To be implemented from Academic Year- 2019-20

Dr Homi Bhabha State University

Bachelor of Management Studies (BMS) Programme Under Choice Based Credit, Grading and Semester System Course Structure

FYBMS

(To be implemented from Academic Year- 2019-2020)

No. of Courses	Semester I	Credits	No. of Courses	Semester II	Credits
1	Ability Enhancement Course	(AEC)	I	Ability Enhancement Course (/	AEC)
1.	Environmental Science	02	1.	Communication Skills for Effective management	02
11	Core Courses (CC)			Core Courses (CC)	
1.	Financial Accounting for Management	03	1.	Marketing Management	03
2.	Elements of Business Law	03	2.	Elements of Industrial Law	03
3.	Business Statistics: Tools and Techniques	03	3.	Mathematical Techniques	03
4.	Understanding Organizational Behaviour	03	4.	Overview of Business Environment	03
5.	Micro Economics	03	5.	Essentials of Management	03
6.	Contemporary Issues in Indian Society I	03	6.	Contemporary Issues in Indian Society II	
	Total Credits	20		Total Credits	20

SEMESTER -I

Ability Enhancement Course (AEC)

1. Environmental Science

Sr.	Modules	No. of
No.		Lectures
1	Environment and Ecosystem	13
2	Natural Resources and Sustainable Development	13
3	Populations and Emerging Issues of Development	13
4	Urbanisation and Environment	13
5	Reading of Thematic Maps and Map Filling	08
	Total	60

Sr. No.	Modules / Units
1	Environment and Ecosystem
	Environment: Meaning, definition, scope and its components; concept of an
	ecosystem : definition, Characteristics, components and types, functioning and
	structure; Food Chain and Food Web- Ecological Pyramids - Man and environment
	relationship; Importance and scope of Environmental Studies.
2	Natural Resources and Sustainable Development
	Meaning and definitions ; Classification and types of resources, factors influencing
	resource; Resource conservation- meaning and methods- I and non-conventional
	resources, problems associated with and management of water, forest and energy
	resources- resource utilization and sustainable development
3	Populations and Emerging Issues of Development
	Population explosion in the world and in India and arising concerns- Demographic
	Transition Theory - pattern of population growth in the world and in India and
	associated problems - Measures taken to control population growth in India;
	Human population and environement- Environment and Human Health – Human
	Development Index – The World Happiness Index
4	Urbanisation and Environment
	Concept of Urbanisation- Problems of migration and urban environment-

	Changing landuse, crowding and stress on urban resources, degradation of air and
	water, loss of soil cover impact on biodiversity, Urban heat islands – Emerging
	Smart Cities and safe cities in India - Sustainable Cities
5	Reading of Thematic Maps and Map Filling
	Reading of Thematic Maps(4 Lectures)
	Located bars, Circles, Pie charts, Isopleths, Choroplethand Flow map, Pictograms -
	Only reading and interpretation.
	Map Filling: (4 Lectures)
	Map filling of World (Environmentally significant features) using point, line and
	polygon segment.
	Concept and Calculation of Ecological Footprint

Core Courses (CC)

1. Financial Accounting for Management

Sr.	Modules	No. of
No.		Lectures
1	Introduction	15
2	Accounting Transactions	15
3	Depreciation Accounting & Trial Balance	15
4	Final Accounts	15
	Total	60

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Sr. No.	Modules / Units					
1	Introduction					
	Meaning and Scope of Accounting: Need and development, definition: Book-					
	Keeping and accounting, Persons interested in accounting, Branches of					
	accounting, Objectives of accounting					
	Accounting principles: Introductions to Concepts and conventions.					
	 Introduction to Accounting Standards: Meaning and Scope) 					
	AS 1: Disclosure to Accounting Policies					
	 AS 6: Depreciation Accounting. 					
	 AS 9: Revenue Recognition. 					
	 AS 10: Accounting For Fixed Assets. 					
	International Financial Reporting Standards (IFRS): Introduction to IFRS					
	 IAS-1:Presenttion of Financial Statements (Introductory Knowledge) 					
	 IAS-2:Inventories (Introductory Knowledge) 					
	• Accounting in Computerized Environment: Introduction, Features and					
	application in various areas of Accounting					
2	Accounting Transactions					
	Accounting transactions: Accounting cycle, Journal, Journal proper, Opening					
	and closing entries, Relationship between journal & ledger: Rules regarding					
	posting: Trial balance: Subsidiary books (Purchase, Purchase Returns, Sales,					
	Sales Returns & cash book – Triple Column), Bank Reconciliation Statement.					
	• Expenditure: Classification of Expenditure- Capital, revenue and Deferred					
	Revenue expenditureUnusual expenses: Effects of error: Criteria test.					

	 Receipts: Capital receipt, Revenue receipt, distinction between capital receipts and revenue receipts. Profit or Loss: Revenue profit or loss, capital profit or loss
3	Depreciation Accounting & Trial Balance
	 Depreciation accounting: Practical problem based on depreciation using SLM and RBM methods. (Where Provision for depreciation Account not maintained). Preparation of Trial Balance: Introduction and Preparation of Trial Balance
4	Final Accounts
	 Introduction to Final Accounts of a Sole proprietor. Rectification of errors. Manufacturing Account, Trading Account, Profit and Loss Account and Balance Sheet. Preparation and presentation of Final Accounts in horizontal format Introduction to Schedule 6 of Companies Act ,1956

Core Courses (CC)

2. Elements of Business Law

Sr.	Modules	No. of
No.	iviouules	Lectures
1	Contract Act, 1872 & Sale of Goods Act, 1930	15
2	Negotiable Instrument Act, 1981 & Consumer Protection Act, 1986	15
3	Company Law	15
4	Intellectual Property Rights(IPR)	15
	Total	60

Core Courses (CC)

3. Business Statistics: Tools and Techniques

No. of Sr. Modules No. Lectures Introduction to Statistics 1 15 2 Measures of Dispersion, Co-Relation and Linear Regression 15 Time Series and Index Number 3 15 Probability and Decision Theory 4 15 Total 60

Sr. No.	Modules / Units	
1	Introduction to Statistics	
	Introduction: Functions/Scope, Importance, Limitations	
	 Data: Relevance of Data(Current Scenario), Type of data(Primary & Secondary), 	
	Primary(Census vs Samples, Method of Collection (In Brief), Secondary(Merits,	
	Limitations, Sources) (In Brief)	
	 Presentation Of Data: Classification – Frequency Distribution – Discrete & 	
	Continuous, Tabulation, Graph(Frequency, Bar Diagram, Pie Chart, Histogram,	
	Ogives)	
	 Measures Of Central Tendency: Mean(A.M, Weighted, Combined), 	
	Median(Calculation and graphical using Ogives), Mode(Calculation and	
	Graphical using Histogram), Comparative analysis of all measures of Central	
	Tendency	
2	Measures of Dispersion, Co-Relation and Linear Regression	
	 Measures Of Dispersion: Range with C.R(Co-Efficient Of Range), Quartiles & 	
	Quartile deviation with CQ (Co-Efficient Of Quartile), Mean Deviation from	
	mean with CMD (Co-Efficient Of Mean Deviation), Standard deviation with	
	CV(Co-Efficient Of Variance), Skewness& Kurtosis (Only concept)	
	Co-Relation: Karl Pearson, Rank Co-Relation	
	Linear Regression: Least Square Method	
3	Time Series and Index Number	

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	 Time Series: Least Square Method, Moving Average Method, Determination of Season Index Number: Simple(unweighted) Aggregate Method, Weighted Aggregate Method, Simple Average of Price Relatives, Weighted Average of Price Relatives, Chain Base Index Numbers, Base Shifting, Splicing and Deflating, Cost 	
	of Living Index Number	
4	Probability and Decision Theory	
	 Probability: Concept of Sample space, Concept of Event, Definition of Probability, Addition & Multiplication laws of Probability, Conditional Probability, Bayes' Theorem(Concept only), Expectation & Variance, Concept of Probability Distribution(Only Concept) Decision Theory: Acts, State of Nature Events, Pay offs, Opportunity loss, Decision Making under Certainty, Decision Making under Uncertainty, Non-Probability: Maximax, Maximin, Minimax, Regret, Laplace &Hurwicz) Probabilitistics (Decision Making under risk):EMV, EOL, EVPI Decision Tree 	

4. Understanding Organizational Behaviour

Modules at a Glance

Sr.	Modules	No. of
No.		Lectures
1	Understanding of Human Nature	15
2	Introduction to Group Behaviour	15
3	Organizational Culture and Motivation at	15
5	workplace	15
4	Organisational Change, Creativity and	15
	Development and Work Stress	
	Total	60

Sr. No.	Modules / Units		
1	Understanding of Human Nature		
	• IndividualBehaviour:Concept of a man, individual differences, factors		
	affecting individual differences, Influence of environment		
	• Personality and attitude: Determinants of personality, Personality traits		
	theory, Big five model, Personality traits important for organizational		
	behaviour like authoritarianism, locus of control, Machiavellianism,		
	introversion-extroversion achievement orientation , self – esteem, risk taking,		
	self-monitoring and type A and B personalities, Concept of understanding self		
	through JOHARI WINDOWS, Nature and components of attitude, Functions of		
	attitude, Ways of changing attitude, Reading emotions		
	• Thinking, learning and perceptions: Thinking skills, thinking styles and		
	thinking hat, Managerial skills and development, Learning characteristics,		
	theories of learning (classical conditioning, operant conditioning and social		
	learning approaches), Intelligence, type (IQ, EQ, SQ, at work place),		
	Perception features and factor influencing individual perception, Effects of		
	perceptual error in managerial decision making at work place. (Errors such as		
	Halo effect, stereotyping, prejudice attributional).		
2	Introduction to Group Behaviour		
	Introduction to Group Behaviour		
	 Group Dynamics: Nature, types, group behaviour model (roles, norms, 		
	status, process, structures)		
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1	Team effectiveness: nature, types of teams, ways of forming an effective	
	team.	
	 Setting goals. 	
	 Organizational processes and system. 	
	Power and politics: nature, bases of power, politics nature, types, causes	
	of organizational politics, political games.	
	 Organizational conflicts and resolution: Conflict features, types, causes 	
	leading to organizational conflicts, levels of conflicts, ways to resolve	
	conflicts through five conflicts resolution strategies with outcomes.	
3	Organizational Culture and Motivation at workplace	
	Organizational Culture:	
	 Characteristics of organizational culture. 	
	 Types, functions and barriers of organizational culture 	
	 Ways of creating and maintaining effective organization culture 	
	Motivation at workplace: Concept of motivation	
	Theories of motivation in an organisational set up.	
	 A.Maslow Need Heirachy 	
	 F.Hertzberg Dual Factor 	
	 Mc.Gregor theory X and theory Y. 	
	Waysofmotivating through carrot (positive reinforcement) and stick (negative	
	reinforcement) at workplace.	

5. Micro economics - I

Sr.	Modules	No. of
No.		Lectures
1	Introduction	10
2	Demand Analysis	10
3	Supply and Production Decisions and Cost of Production	15
4	Market structure: Perfect competition and Monopoly and Pricing and Output Decisions under Imperfect Competition	15
5	Pricing Practices	10
	Total	60

6. Contemporary Issues in Indian Society |

Sr.	Modules	No. of
No.		Lectures
1	Overview of Indian Society	05
2	Concept of Disparity- 1	10
3	Concept of Disparity-2	10
4	The Indian Constitution	10
5	Significant Aspects of Political Processes	10
	Total	45

Sr. No.	Modules / Units	
1	Overview of Indian Society	
	Understand the multi-cultural diversity of Indian society through its demographic	
	composition: population distribution according to religion, caste, and gender;	
	Appreciate the concept of linguistic diversity in relation to the Indian situation;	
	Understand regional variations according to rural, urban and tribal characteristics;	
	Understanding the concept of diversity as difference	
2	Concept of Disparity- 1	
	Understand the concept of disparity as arising out of stratification and inequality;	
	Explore the disparities arising out of gender with special reference to violence	
	against women, female foeticide (declining sex ratio), and portrayal of women in	
	media;Appreciate the inequalities faced by people with disabilities and	
	understand the issues of people with physical and mental disabilities	
3	Concept of Disparity-2	
	Examine inequalities manifested due to the caste system and inter-group conflicts	
	arising thereof; Understand inter-group conflicts arising out of communalism;	
	Examine the causes and effects of conflicts arising out of regionalism and linguistic	
	differences	
4	The Indian Constitution	
	Philosophy of the Constitution as set out in the Preamble; The structure of the	

	Constitution-the Preamble, Main Body and Schedules; Fundamental Duties of the Indian Citizen; tolerance, peace and communal harmony as crucial values in	
	strengthening the social fabric of Indian society; Basic features of the Constitution	
5	Significant Aspects of Political Processes	
	The party system in Indian politics; Local self-government in urban and rural areas; the 73rd and 74th Amendments and their implications for inclusive politics; Role and significance of women in politics	

SEMESTER -II

Ability Enhancement Course (AEC)

1. Communication Skills for Effective management

Sr.	Modules	No. of
No.		Lectures
1	Presentation Skills	15
2	Group Communication	15
3	Business Correspondence	15
4	Language and Writing Skills	15
	Total	60

Sr. No.	Modules / Units	
1	Presentation Skills	
	Presentations: (to be tested in tutorials only) 4 Principles of Effective	
	Presentation	
	Effective use of OHP	
	Effective use of Transparencies	
	How to make a Power-Point Presentation	
2	Group Communication	
	Interviews: Group Discussion Preparing for an Interview, Types of Interviews –	
	Selection, Appraisal, Grievance, Exit	
	Meetings: Need and Importance of Meetings, Conduct of Meeting and Group	
	Dynamics Role of the Chairperson, Role of the Participants, Drafting of Notice,	
	Agenda and Resolutions	
	Conference: Meaning and Importance of Conference Organizing a Conference	
	Modern Methods: Video and Tele – Conferencing	
	Public Relations: Meaning, Functions of PR Department, External and Internal	
	Measures of PR	
3	Business Correspondence	
	Trade Letters: Order, Credit and Status Enquiry, Collection (just a brief	
	introduction to be given)	
	Only following to be taught in detail:-	
	Letters of Inquiry, Letters of Complaints, Claims, Adjustments Sales Letters,	

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	promotional leaflets and fliers Consumer Grievance Letters, Letters under Right to Information (RTI) Act
	[Teachers must provide the students with theoretical constructs wherever
	necessary in order to create awareness. However students should not be tested
	on the theory.]
4	Language and Writing Skills
	Reports: Parts, Types, Feasibility Reports, Investigative Reports
	Summarisation: Identification of main and supporting/sub points Presenting
	these in a cohesive manner

1. Marketing Management

Sr.	Modules	No. of
No.		Lectures
1	Introduction to Marketing	15
2	Marketing Environment, Research and Consumer Behaviour	15
3	Marketing Mix	15
4	Segmentation, Targeting and Positioning and Trends In Marketing	15
	Total	60

Sr. No.	Modules / Units	
1	Introduction to Marketing	
	Introduction to Marketing: Definition, features, advantages and scope of	
	marketing. The 4P's and 4C's of marketing. Marketing v/s Selling. Marketing as	
	an activity and function	
	Concepts of Marketing: Needs, wants and demands, transactions, transfer	
	and exchanges.	
	Orientations of a firm: Production concept; Product concept; selling concept	
	and marketing concept, social relationship, Holistic marketing.	
2	Marketing Environment, Research and Consumer Behaviour	
	The micro environment of business: Management structure; Marketing	
	Channels; Markets in which a firm operates; competitors and stakeholders.	
	Macro environment: Political Factors; Economic Factors; Socio Cultural Factors	
	, Technological Factors (PEST Analysis)	
	• Marketing research: Meaning, features, Importance of marketing research.	
	Types of marketing research: Product research; Sales research;	
	consumer/customer research; production research	
	 MIS:Meaning, features and Importance 	
	• Consumer Behaviour: Meaning, feature, importance, factors affecting	
	Consumer Behaviour	
3	Marketing Mix	
	Marketing mix: Meaning –elements of Marketing Mix.	

	 Product-product mix-product line lifecycle-product planning – New product
	development- failure of new product-levels of product.
	 Branding –Packing and packaging – role and importance
	 Pricing – objectives- factors influencing pricing policy and Pricing strategy.
	 Physical distribution – meaning – factor affecting channel selection-types of
	marketing channels
	 Promotion – meaning and significance of promotion. Promotion
	• tools (brief)
4	Segmentation, Targeting and Positioning and Trends In Marketing
	 Segmentation – meaning , importance , basis
	 Targeting – meaning , types
	 Positioning – meaning – strategies
	 New trends in marketing – E-marketing , Internet marketing and marketing
	using Social network
	 Social marketing/ Relationship marketing

2. Elements of Industrial Law

Sr.	Modules	No. of
No.		Lectures
1	Laws Related to Industrial Relations and Industrial	15
	Disputes	
		15
2	Laws Related to Health, Safety and Welfare	
		15
3	Social Legislation	
		15
4	Laws Related to Compensation Management	
	Total	60

Sr. No.	Modules / Units		
1	Laws Related to Industrial Relations and Industrial Disputes		
	 Industrial Disputes Act, 1947: Definition, Authorities, Awards, Settlements, 		
	Strikes Lockouts, Lay Offs, Retrenchment and Closure		
	 The Trade Union Act, 1926 		
2	Laws Related to Health, Safety and Welfare		
	 The Factory Act 1948: (Provisions related to Health, Safety and Welfare) 		
	 The Workmen's Compensation Act, 1923 Provisions: 		
	 Introduction: The doctrine of assumed risk, The doctrine of Common 		
	Employment, The doctrine of Contributory Negligence		
	 Definitions 		
	 Employers liability for compensation (S-3 to 13) 		
	 Rules as to Compensation (Sec 4 to Sec 9) (14 A & 17) 		
3	Social Legislation		
	Employee State Insurance Act 1948: Definition and Employees Provident Fund		
	 Miscellaneous Provision Act 1948: Schemes, Administration and 		
	determination of dues		
4	Laws Related To Compensation Management		
	 The payment of Wages Act 1948: Objectives, Definition, Authorised 		
	Deductions		

	 Payment of Bonus Act, 1965
	The Payment Of Gratuity Act, 1972

3. Mathematical Techniques

Sr.	Modules	No. of
No.		Lectures
1	Elementary Financial Mathematics	15
2	Matrices and Determinants	15
3	Derivatives and Applications of Derivatives	15
4	Numerical Analysis [Interpolation]	15
	Total	60

Sr. No.	Modules / Units		
1	Elementary Financial Mathematics		
	Simple and Compound Interest: Interest compounded once a year, more than		
	once a year, continuous, nominal and effective rate of interest		
	 Annuity-Present and future value-sinking funds 		
	• Depreciation of Assets: Equated Monthly Installments (EMI)- using flat		
	interest rate and reducing balance method.		
	• Functions: Algebraic functions and the functions used in business and		
	economics, Break Even and Equilibrium point.		
	Permutation and Combination: (Simple problems to be solved with the		
	calculator only)		
2	Matrices and Determinants		
-			
	Matrices: Some important definitions and some important results. Matrix		
	operation (Addition, scalar multiplication, matrix multiplication, transpose of		
	a matrix)		
	• Determinants of a matrix of order two or three: properties and results of		
	Determinants		
	 Solving a system of linear equations using Cramer's rule 		
	Inverse of a Matrix (up to order three) using ad-joint of a matrix and matrix		
	inversion method		
	Case study: Input Output Analysis		
3	Derivatives and Applications of Derivatives		

	• Introduction and Concept: Derivatives of constant function, logarithmic
	functions, polynomial and exponential function
	 Rules of derivatives: addition, multiplication, quotient
	Second order derivatives
	• Application of Derivatives: Maxima, Minima, Average Cost and Marginal Cost.
	Total revenue, Marginal revenue, Average revenue. Average and Marginal
	profit. Price elasticity of demand
	Numerical Analysis [Internalation]
4	Numerical Analysis [Interpolation]
	• Introduction and concept: Finite differences – forward difference operator –
	Newton's forward difference formula with simple examples
	Backward Difference Operator. Newton's backward interpolation formula with
	simple examples

4. Overview of Business Environment

Sr.	Modules	No. of
No.		Lectures
1	Introduction to Business Environment	15
2	Political and Legal environment	15
3	Social and Cultural Environment, Technological environment and Competitive Environment	15
4	International Environment	15
	Total	60

Sr. No.	Modules / Units	
1	Introduction to Business Environment	
	Business: Meaning, Definition, Nature & Scope, Types of Business	
	Organizations	
	Business Environment: Meaning, Characteristics, Scope and Significance,	
	Components of Business Environment	
	• Micro and Macro Environment: Definition, Differentiation, Analysis of Business	
	Environment, SWOT Analysis.	
	Introduction to Micro-Environment:	
	Internal Environment: Value system, Mission, Objectives, Organizational	
	Structure, Organizational Resources, Company Image, Brand Equity	
	 External Environment: Firm, customers, suppliers, distributors, 	
	Competitors, Society	
	Introduction to Macro Components: Demographic, Natural, Political, Social,	
	Cultural, Economic, Technological, International and Legal)	
2	Political and Legal environment	
2	Political and Legal environment	
	Political Institutions: Legislature, Executive, Judiciary, Role of government in	
	Business, Legal framework in India.	
	• Economic environment: economic system and economic policies. Concept of	
	Capitalism, Socialism and Mixed Economy	
	 Impact of business on Private sector, Public sector and Joint sector 	
	 Sun-rise sectors of India Economy. Challenges of Indian economy. 	

3	Social and Cultural Environment, Technological environment and Competitive	
3	Social and Cultural Environment, recimological environment and competitive	
	Environment	
	 Social and Cultural Environment: Nature, Impact of foreign culture on 	
	Business, Traditional Values and its Impact, Social Audit - Meaning and	
	Importance of Corporate Governance and Social Responsibility of Business	
	 Technological environment: Features, impact of technology on Business 	
	Competitive Environment: Meaning, Michael Porter's Five Forces Analysis,	
	Competitive Strategies	
4	International Environment	
	International Environment –	
	 GATT/WTO: Objective and Evolution of GATT, Uruguay round, GATT v/s 	
	WTO, Functions of WTO, Pros and Cons of WTO.	
	 Globalization: Meaning, Nature and stages of Globalization, features of 	
	Globalization, Foreign Market entry strategies, LPG model.	
	 MNCs: Definition, meaning, merits, demerits, MNCs in India 	
	 FDI: Meaning, FDI concepts and functions, Need for FDI in developing 	
	countries, Factors influencing FDI, FDI operations in India,	
	 Challenges faced by International Business and Investment Opportunities for 	
	Indian Industry.	

5. Essentials of Management

Sr.	Modules	No. of
No.		Lectures
1	Introduction to Business Environment	15
2	Political and Legal environment	15
3	Social and Cultural Environment, Technological environment and Competitive Environment	15
4	International Environment	15
	Total	60

Sr. No.		Modules / Units
51.140.		would by onits
1	Na	iture of Management
	•	Management: Concept, Significance, Role & Skills, Levels of Management,
		Concepts of PODSCORB, Managerial Grid.
	•	Evolution of Management thoughts, Contribution of F.W Taylor, Henri Fayol
		and Contingency Approach.
2	DL	anning and Decision Making
2	Pla	anning and Decision Making
	•	Planning: Meaning, Importance, Elements, Process, Limitations and MBO.
	•	Decision Making : Meaning, Importance, Process, Techniques of Decision
		Making.
		0
3	Or	ganizing
	•	Organizing: Concepts, Structure (Formal & Informal, Line & Staff and Matrix),
		Meaning, Advantages and Limitations
	•	Departmentation: Meaning, Basis and Significance
	•	Span of Control: Meaning, Graicunas Theory, Factors affecting span of
		ControlCentralization vs Decentralization
	•	Delegation: Authority & Responsibility relationship
4	Di	recting, Leadership, Co-ordination and Controlling
	•	Directing: Meaning and Process
	•	Leadership: Meaning, Styles and Qualities of Good Leader
	•	Co-ordination as an Essence of Management

 Controlling: Meaning, Process and Techniques
Recent Trends: Green Management & CSR

6.Contemporary Issues in Indian Society II

Sr.	Modules	No. of
No.		Lectures
1	Globalisation and Indian Society	07
2	Human Rights	10
3	Ecology	10
4	Understanding Stress and Conflict	
5	Managing Stress and Conflict in Contemporary Society	10
	Total	45

Sr. No	Modules /Units			
1	Globalisation and Indian Society			
	Understanding the concepts of liberalization, privatization and globalization; Growth			
	of information technology and communication and its impact manifested in			
	everyday life; Impact of globalization on industry: changes in employment and			
	increasing migration; Changes in agrarian sector due to globalization; rise in			
	corporate farming and increase in farmers' suicides.			
2	Human Rights			
	Concept of Human Dickto, origin and qualities of the concept. The Universal			
	Concept of Human Rights; origin and evolution of the concept; The Universal			
	Declaration of Human Rights;Human Rights constituents with special reference to			
	Fundamental Rights stated in the Constitution			
3	Ecology			
J				
	Importance of Environment Studies in the current developmental context;			
	Understanding concepts of Environment, Ecology and their interconnectedness;			
	Environment as natural capital and connection to quality of human life;			
	Environmental Degradation- causes and impact on human life;Sustainable			
	development- concept and components; poverty and environment			
4	Understanding Stress and Conflict			
	Causes of stress and conflict in individuals and society; Agents of socialization and			
	the role played by them in developing the individual; Significance of values, ethics			
	1			

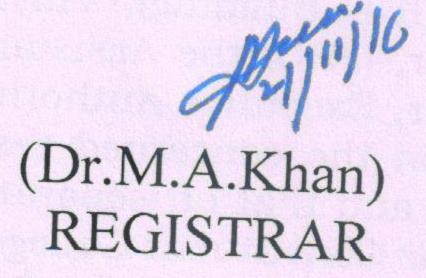
	and prejudices in developing the individual; Stereotyping and prejudice as		
	significant factors in causing conflicts in society. Aggression and violence as the		
	public expression of conflict		
5	Managing Stress and Conflict in Contemporary Society		
	Types of conflicts and use of coping mechanisms for managing individual stress;		
	Maslow's theory of self-actualisation; Different methods of responding to conflicts in		
	society; Conflict-resolution and efforts towards building peace and harmony in		
	society		

UNIVERSITY OF MUMBAI No. UG/176 of 2016-17

CIRCULAR:-

A reference is invited to the Syllabi relating to the B.Sc. degree course, vide this office Circular No. UG/177 of 2011, dated 20th June, 2011 and the Principals of affiliated Colleges in Arts, Science and Commerce are hereby informed that the recommendation made by the Ad-hoc Board of Studies in Information Technology at its meeting held on 4th July, 2016 has been accepted by the Academic Council at its meeting held on 14th July, 2016 vide item No. 4.76 and that in accordance therewith, the revised syllabus as per the Choice Based Credit System for F.Y. B.Sc. programme in Information Technology (Sem. I & II), which is available on the University's web site (www.mu.ac.in) and that the same has been brought into force with effect from the academic year 2016-17.

MUMBAI - 400 032 22 November, 2016



To,

The Principals of the affiliated Colleges in Arts, Science and Commerce. A.C/4.76/14.07.2016

No. UG/176 - A of 2016

MUMBAI-400 032

22 November, 2016

Copy forwarded with Compliments for information to:-

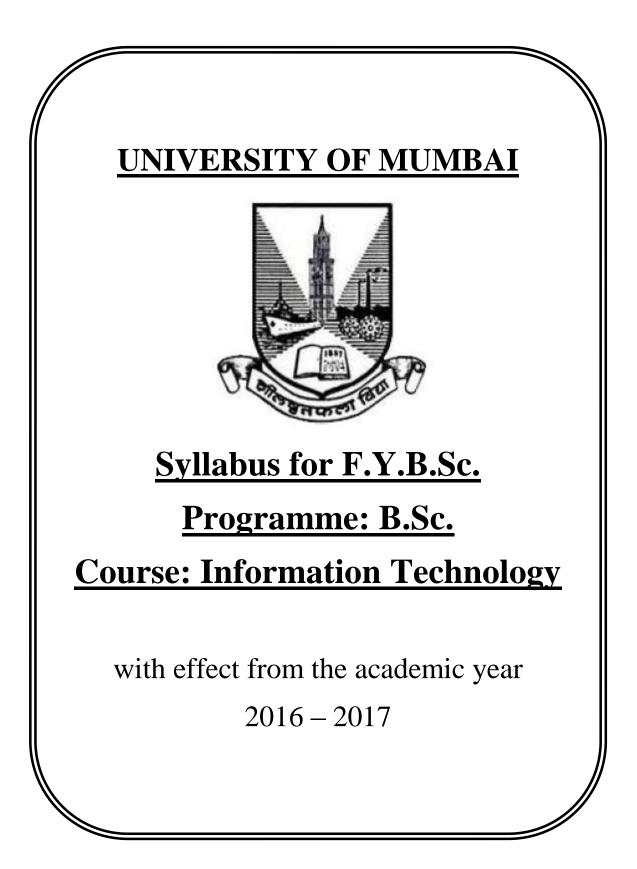
- 1) The Co-ordinator, Faculty of Science,
- 2) The Chairman, Board of Studies in Information Technology,
- The Professor-cum-Director, Institute of Distance & Open Learning (IDOL) 3)
- The Director, Board of College and University Development, 4)
- The Co-Ordinator, University Computerization Centre, 5)
- The Controller of Examinations. 6)

(Dr.M.A.Khan)

REGISTRAR



<u>Academic Council 14/07/2016</u> <u>Item No: 4.76</u>



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Semester – 1					
Course Code	Course Type	Course Title	Credits		
USIT101	Core Subject	Imperative Programming	2		
USIT102	Core Subject	Digital Electronics	2		
USIT103	Core Subject	Operating Systems	2		
USIT104	Core Subject	Discrete Mathematics	2		
USIT105	Ability Enhancement Skill	Communication Skills	2		
	Course				
USIT1P1	Core Subject Practical	Imperative Programming	2		
		Practical			
USIT1P2	Core Subject Practical	Digital Electronics Practical	2		
USIT1P3	Core Subject Practical	Operating Systems Practical	2		
USIT1P4	Core Subject Practical	Discrete Mathematics Practical	2		
USIT1P5	Ability Enhancement Skill	Communication Skills Practical	2		
	Course Practical				
Total Credits					

Semester – 2					
Course Code	Course Type	Course Title	Credits		
USIT201	Core Subject	Object oriented Programming	2		
USIT202	Core Subject	Microprocessor Architecture	2		
USIT203	Core Subject	Web Programming	2		
USIT204	Core Subject	Numerical and Statistical Methods	2		
USIT205	Ability Enhancement Skill Course	Green Computing	2		
USIT2P1	Core Subject Practical	Object Oriented Programming Practical	2		
USIT2P2	Core Subject Practical	Microprocessor Architecture Practical	2		
USIT2P3	Core Subject Practical	Web Programming Practical	2		
USIT2P4	Core Subject Practical	Numerical and Statistical Methods Practical	2		
USIT2P5	Ability Enhancement Skill Course Practical	Green Computing Practical	2		
		Total Credits	20		

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Preamble

The B.Sc. Information Technology programme was started in 2001 with an aim to make the students employable and impart industry oriented training. The main objectives of the course are:

- to think analytically, creatively and critically in developing robust, extensible and highly maintainable technological solutions to simple and complex problems.
- to apply their knowledge and skills to be employed and excel in IT professional careers and/or to continue their education in IT and/or related post graduate programmes.
- to be capable of managing complex IT projects with consideration of the human, financial and environmental factors.
- to work effectively as a part of a team to achieve a common stated goal.
- to adhere to the highest standards of ethics, including relevant industry and organizational codes of conduct.
- to communicate effectively with a range of audiences both technical and non-technical.
- to develop an aptitude to engage in continuing professional development.

The new syllabus is aimed to achieve the objectives. The syllabus spanning three years covers the industry relevant courses. The students will be ready for the jobs available in different fields like:

- Software Development (Programming)
- Website Development
- Mobile app development
- Embedded Systems Programming
- Embedded Systems Development
- Software Testing
- Networking
- Database Administration
- System Administration
- Cyber Law Consultant
- GIS (Geographic Information Systems)
- IT Service Desk
- Security

And many others

The students will also be trained in communication skills and green computing.

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SEMESTER I

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B. Sc (Information Tech	Semester – I		
Course Name: Imperative Programming		Course Code: USIT101	
Periods per week (1 Period is 50	Periods per week (1 Period is 50 minutes) 5		5
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	2 ¹ / ₂ 75	
	Internal		25

Unit	Details	Lectures
I	Introduction: Types of Programming languages, History, features and application. Simple program logic, program development cycle, pseudocode statements and flowchart symbols, sentinel value to end a program, programming and user environments, evolution of programming models., desirable program characteristics. Fundamentals: Structure of a program. Compilation and Execution of a Program, Character Set, identifiers and keywords, data types, constants, variables and arrays, declarations, expressions, statements, Variable definition, symbolic constants.	12
Π	Operators and Expressions: Arithmetic operators, unary operators, relational and logical operators, assignment operators, assignment operators, the conditional operator, library functions. Data Input and output: Single character input and output, entering input data, scanf function, printf function, gets and puts functions, interactive programming.	12
	Conditional Statements and Loops: Decision Making Within A Program, Conditions, Relational Operators, Logical Connectives, If Statement, If-Else Statement, Loops: While Loop, Do While, For Loop. Nested Loops, Infinite Loops, Switch Statement Functions: Overview, defining a function, accessing a function, passing arguments to a function, specifying argument data types, function prototypes, recursion, modular programming and functions, standard library of c functions, prototype of a function: foo1lal parameter list, return type, function call, block structure, passing arguments to a function: call by reference, call by value.	12
IV	 Program structure: Storage classes, automatic variables, external variables, static variables, multifile programs, more library functions, Preprocessor: Features, #define and #include, Directives and Macros Arrays: Definition, processing, passing arrays to functions, multidimensional arrays, arrays and strings. 	12
V	Pointers: Fundamentals, declarations, Pointers Address Operators, Pointer Type Declaration, Pointer Assignment, Pointer Initialization, Pointer Arithmetic, Functions and Pointers, Arrays And Pointers, Pointer Arrays, passing functions to other functions	12

Structures and Unions:	
Structure Variables, Initialization, Structure Assignment, Nested	
Structure, Structures and Functions, Structures and Arrays: Arrays of	
Structures, Structures Containing Arrays, Unions, Structures and	
pointers.	

Books ar	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	Programming with C	Byron Gottfried	Tata	2 nd	1996		
			McGRAW-				
			Hill				
2.	Programming Logic and	Joyce Farell	Cengage	8 th	2014		
	Design		Learning				
3.	"C" Programming"	Brian W.	PHI	2 nd			
		Kernighan and					
		Denis M.					
		Ritchie.					
4.	Let us C	Yashwant P.	BPB				
		Kanetkar,	publication				
5.	C for beginners	Madhusudan	X-Team	1 st	2008		
		Mothe	Series				
6.	21 st Century C	Ben Klemens	OReilly	1^{st}	2012		

B. Sc (Information Technology)		Semester – I	
Course Name: Imperative Programming Practical		Course Code: USIT1P2	
Periods per week (1 Period is 50	eriods per week (1 Period is 50 minutes) 3		3
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		

Practical: (Can be done in any imperative language)
Basic Programs:
Write a program to display the message HELLO WORLD.
Write a program to declare some variables of type int, float and double. Assign
some values to these variables and display these values.
Write a program to find the addition, subtraction, multiplication and division of
two numbers.
Programs on variables:
Write a program to swap two numbers without using third variable.
Write a program to find the area of rectangle, square and circle.
Write a program to find the volume of a cube, sphere, and cylinder.
Conditional statements and loops(basic)
Write a program to enter a number from the user and display the month name. If
number >13 then display invalid input using switch case.
Write a program to check whether the number is even or odd.
Write a program to check whether the number is positive, negative or zero.
Write a program to find the factorial of a number.
Write a program to check whether the entered number is prime or not.
Write a program to find the largest of three numbers.
Conditional statements and loops(advanced)
Write a program to find the sum of squares of digits of a number.
Write a program to reverse the digits of an integer.
Write a program to find the sum of numbers from 1 to 100.
Write a programs to print the Fibonacci series.
Write a program to find the reverse of a number.
Write a program to find whether a given number is palindrome or not.
Write a program that solve the quadratic equation
$b = -b \pm \sqrt{b^2 - 4ac}$
$\frac{2a}{2a}$ Write a program to check whether the entered number is Armstrong or not.
Write a program to calcek whether the entered number is Armstrong of not. Write a program to count the digit in a number
Programs on patterns:

6.	Functions:
a.	Programs on Functions.
7.	Recursive functions
a.	Write a program to find the factorial of a number using recursive function.
b.	Write a program to find the sum of natural number using recursive function.
8.	Arrays
a.	Write a program to find the largest value that is stored in the array.
b.	Write a program using pointers to compute the sum of all elements stored in an
	array.
с.	Write a program to arrange the 'n' numbers stored in the array in ascending and
	descending order.
d.	Write a program that performs addition and subtraction of matrices.
e.	Write a program that performs multiplication of matrices.
9.	Pointers
a.	Write a program to demonstrate the use of pointers.
b.	Write a program to perform addition and subtraction of two pointer variables.
10.	Structures and Unions
a.	Programs on structures.
b.	Programs on unions.

B. Sc (Information Technology)		Semester – I	
Course Name: Digital Electronics		Course Code: USIT102	
Periods per week (1 Period is 50	Period is 50 minutes) 5		5
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	$1 2^{1/2} 75$	
	Internal		25

Unit	Details	Lectures
Ι	Number System:	
	Analog System, digital system, numbering system, binary number system, octal number system, hexadecimal number system, conversion from one number system to another, floating point numbers, weighted codes binary coded decimal, non-weighted codes Excess – 3 code, Gray code, Alphanumeric codes – ASCII Code, EBCDIC, ISCII Code, Hollerith Code, Morse Code, Teletypewriter (TTY), Error detection and correction, Universal Product Code, Code conversion. Binary Arithmetic: Binary addition, Binary subtraction, Negative number representation, Subtraction using 1's complement and 2's complement, Binary multiplication and division, Arithmetic in octal number system,	12
	Arithmetic in hexadecimal number system, BCD and Excess -3 arithmetic.	
II	 Boolean Algebra and Logic Gates: Introduction, Logic (AND OR NOT), Boolean theorems, Boolean Laws, De Morgan's Theorem, Perfect Induction, Reduction of Logic expression using Boolean Algebra, Deriving Boolean expression from given circuit, exclusive OR and Exclusive NOR gates, Universal Logic gates, Implementation of other gates using universal gates, Input bubbled logic, Assertion level. Minterm, Maxterm and Karnaugh Maps: Introduction, minterms and sum of minterm form, maxterm and Product of maxterm form, Reduction technique using Karnaugh maps – 2/3/4/5/6 variable K-maps, Grouping of variables in K-maps, K-maps for product of sum form, minimize Boolean expression using K-map and obtain K-map from Boolean expression, Quine Mc Cluskey Method. 	12
ш	Combinational Logic Circuits: Introduction, Multi-input, multi-output Combinational circuits, Code converters design and implementations Arithmetic Circuits: Introduction, Adder, BCD Adder, Excess – 3 Adder, Binary Subtractors, BCD Subtractor, Multiplier, Comparator.	12
IV	Multiplexer, Demultiplexer, ALU, Encoder and Decoder: Introduction, Multiplexer, Demultiplexer, Decoder, ALU, Encoders. Sequential Circuits: Flip-Flop: Introduction, Terminologies used, S-R flip-flop, D flip-fop, JK flip- flop, Race-around condition, Master – slave JK flip-flop, T flip-flop,	12

	conversion from one type of flip-flop to another, Application of flip- flops	
V	flops. Counters: Introduction, Asynchronous counter, Terms related to counters, IC 7493 (4-bit binary counter), Synchronous counter, Bushing, Type T Design, Type JK Design, Presettable counter, IC 7490, IC 7492, Synchronous counter ICs, Analysis of counter circuits. Shift Register: Introduction, parallel and shift registers, serial shifting, serial–in serial– out, serial–in parallel–out , parallel–in parallel–out, Ring counter, Johnson counter, Applications of shift registers, Pseudo-random binary sequence generator, IC7495, Seven Segment displays, analysis of shift counters.	12

Books ar	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Digital Electronics and	N. G. Palan	Technova			
	Logic Design					
2.	Make Electronics	Charles Platt	O'Reilly	1 st	2010	
3.	Modern Digital Electronics	R. P. Jain	Tata	3 rd		
			McGraw			
			Hill			
4.	Digital Principles and	Malvino and	Tata			
	Applications	Leach	McGraw			
			Hill			
5.	Digital Electronics:	Anil K. Maini	Wiley		2007	
	Principles, Devices and					
	Applications,					

B. Sc (Information Tech	Semester – I		
Course Name: Digital Electronics Practical		Course Code: USIT1P2	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		

 Study of Logic gates and their ICs and universal gates: a. Study of AND, OR, NOT, XOR, XNOR, NAND and NOR gates b. IC 7400, 7402, 7404, 7408, 7432, 7486, 74266 c. Implement AND, OR, NOT, XOR, XNOR using NAND gates. d. Implement AND, OR, NOT, XOR, XNOR using NOR gates. Implement the given Boolean expressions using minimum num a. Verifying De Morgan's laws. b. Implement other given expressions using minimum number of gate 	
 b. IC 7400, 7402, 7404, 7408, 7432, 7486, 74266 c. Implement AND, OR, NOT, XOR, XNOR using NAND gates. d. Implement AND, OR, NOT, XOR, XNOR using NOR gates. 2. Implement the given Boolean expressions using minimum num a. Verifying De Morgan's laws. 	
 c. Implement AND, OR, NOT, XOR, XNOR using NAND gates. d. Implement AND, OR, NOT, XOR, XNOR using NOR gates. 2. Implement the given Boolean expressions using minimum num a. Verifying De Morgan's laws. 	
 d. Implement AND, OR, NOT, XOR, XNOR using NOR gates. 2. Implement the given Boolean expressions using minimum num a. Verifying De Morgan's laws. 	
2. Implement the given Boolean expressions using minimum num a. Verifying De Morgan's laws.	
a. Verifying De Morgan's laws.	
a. Verifying De Morgan's laws.	
	<u>'S.</u>
b. Implement other given expressions using minimum number of gate	S.
c. Implement other given expressions using minimum number of ICs.	
3. Implement combinational circuits.	
a. Design and implement combinational circuit based on the problem	given and
minimizing using K-maps.	Siventana
4. Implement code converters.	
a. Design and implement Binary – to – Gray code converter.	
b. Design and implement Gray – to – Binary code converter.	
c. Design and implement Binary – to – BCD code converter	
d. Design and implement Binary – to – XS-3 code converter	
5. Implement Adder and Subtractor Arithmetic circuits.	
a. Design and implement Half adder and Full adder.	
b. Design and implement BCD adder.	
c. Design and implement XS – 3 adder.	
d. Design and implement binary subtractor.	
e. Design and implement BCD subtractor.	
f. Design and implement XS – 3 subtractor.	
	-
6. Implement Arithmetic circuits.	
a. Design and implement a 2-bit by 2-bit multiplier.	
b. Design and implement a 2-bit comparator.	
7. Implement Encode and Decoder and Multiplexer and Demultip	lexers.
a. Design and implement 8:3 encoder.	
b. Design and implement 3:8 decoder.	
c. Design and implement 4:1 multiplexer. Study of IC 74153, 74157	
d. Design and implement 1:4 demultiplexer. Study of IC 74139	
e. Implement the given expression using IC 74151 8:1 multiplexer.	
f. Implement the given expression using IC 74138 3:8 decoder.	

8.	Study of flip-flops and counters.
a.	Study of IC 7473.
b.	Study of IC 7474.
с.	Study of IC 7476.
d.	Conversion of Flip-flops.
e.	Design of 3-bit synchronous counter using 7473 and required gates.
f.	Design of 3-bit ripple counter using IC 7473.
9.	Study of counter ICs and designing Mod-N counters.
a.	Study of IC 7490, 7492, 7493 and designing mod-n counters using these.
b.	Designing mod-n counters using IC 7473 and 7400 (NAND gates)
10.	Design of shift registers and shift register counters.
a.	Design serial – in serial – out, serial – in parallel – out, parallel – in serial – out,
	parallel – in parallel – out and bidirectional shift registers using IC 7474.
b.	Study of ID 7495.
с.	Implementation of digits using seven segment displays.

Books an	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	Digital Electronics and	N. G. Palan	Technova				
	Logic Design						
2.	Digital Principles and	Malvino and	Tata				
	Applications	Leach	McGraw				
			Hill				

B. Sc (Information Technology)		Semester – I		
Course Name: Operating Systems		Course Coo	le: USIT103	
Periods per week 1 Period is 5	0 minutes	5		
Credits		2		
		Hours	Marks	
Evaluation System	Theory Examination	ination 2 ¹ / ₂ 75		
Internal			25	

Unit	Details	Lectures
Ι	Introduction:	
	What is an operating system? History of operating system, computer	
	hardware, different operating systems, operating system concepts,	
	system calls, operating system structure.	12
	Processes and Threads:	
	Processes, threads, interprocess communication, scheduling, IPC	
	problems.	
II	Memory Management:	
	No memory abstraction, memory abstraction: address spaces, virtual	
	memory, page replacement algorithms, design issues for paging	
	systems, implementation issues, segmentation.	12
	File Systems:	14
	Files, directories, file system implementation, file-system management	
	and optimization, MS-DOS file system, UNIX V7 file system, CD	
	ROM file system.	
III	Input-Output:	
	Principles of I/O hardware, Principles of I/O software, I/O software	
	layers, disks, clocks, user interfaces: keyboard, mouse, monitor, thin	
	clients, power management,	12
	Deadlocks:	14
	Resources, introduction to deadlocks, the ostrich algorithm, deadlock	
	detection and recovery, deadlock avoidance, deadlock prevention,	
	issues.	
IV	Virtualization and Cloud:	
	History, requirements for virtualization, type 1 and 2 hypervisors,	
	techniques for efficient virtualization, hypervisor microkernels,	
	memory virtualization, I/O virtualization, Virtual appliances, virtual	12
	machines on multicore CPUs, Clouds.	
	Multiple Processor Systems	
	Multiprocessors, multicomputers, distributed systems.	
V	Case Study on LINUX and ANDROID:	
	History of Unix and Linux, Linux Overview, Processes in Linux,	
	Memory management in Linux, I/O in Linux, Linux file system,	
	security in Linux. Android	
	Case Study on Windows:	12
	History of windows through Windows 10, programming windows,	
	system structure, processes and threads in windows, memory	
	management, caching in windows, I/O in windows, Windows NT file	
	system, Windows power management, Security in windows.	

Books an	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	Modern Operating Systems	Andrew S.	Pearson	4 th	2014		
		Tanenbaum,					
		Herbert Bos					
2.	Operating Systems –	Willaim	Pearson	8 th	2009		
	Internals and Design	Stallings					
	Principles						
3.	Operating System Concepts	Abraham	Wiley	8 th			
		Silberschatz,					
		Peter B.					
		Galvineg Gagne					
4.	Operating Systems	Godbole and	McGraw	3 rd			
		Kahate	Hill				

B. Sc (Information Tech	Semester – II			
Course Name: Operating System	Course Co	ode: USIT1P3		
Periods per week (1 Period is 50	minutes)	3		
Credits	2			
		Hours	Marks	
Evaluation SystemPractical Examination		21/2	50	
	Internal			

List of	Practical
1.	Installation of virtual machine software.
2.	Installation of Linux operating system (RedHat / Ubuntu) on virtual machine.
3.	Installation of Windows operating system on virtial machine.
4.	Linux commands: Working with Directories:
a.	pwd, cd, absolute and relative paths, ls, mkdir, rmdir,
b.	file, touch, rm, cp. mv, rename, head, tail, cat, tac, more, less, strings, chmod
5.	Linux commands: Working with files:
a.	ps, top, kill, pkill, bg, fg,
b.	grep, locate, find, locate.
C.	date, cal, uptime, w, whoami, finger, uname, man, df, du, free, whereis, which.
d.	Compression: tar, gzip.
6.	Windows (DOS) Commands – 1
a.	Date, time, prompt, md, cd, rd, path.
b.	Chkdsk, copy, xcopy, format, fidsk, cls, defrag, del, move.
7.	Windows (DOS) Commands – 2
a.	Diskcomp, diskcopy, diskpart, doskey, echo
b.	Edit, fc, find, rename, set, type, ver
8.	Working with Windows Desktop and utilities
a.	Notepad
b.	Wordpad
с.	Paint
d.	Taskbar
e.	Adjusting display resolution
f.	Using the browsers
g.	Configuring simple networking
h.	Creating users and shares
9.	Working with Linux Desktop and utilities
	The vi editor.
a. b.	Graphics
0. C.	Terminal
ι.	1 Offilingi

d.	Adjusting display resolution
e.	Using the browsers
f.	Configuring simple networking
g.	Creating users and shares
10.	Installing utility software on Linux and Windows

B. Sc. (Information Tech	Semester – I		
Course Name: Discrete Mathematics		Course Code: USIT104	
Periods per week (1 Period is 50	minutes)	5	
Credits	2		2
		Hours	Marks
Evaluation System	Theory Examination	21/2 75	
Internal			25

Unit	Details	Lectures
I	 Introduction: Variables, The Language of Sets, The Language of Relations and Function Set Theory: Definitions and the Element Method of Proof, Properties of Sets, Disproofs, Algebraic Proofs, Boolean Algebras, Russell's Paradox and the Halting Problem. The Logic of Compound Statements: Logical Form and Logical Equivalence, Conditional Statements, Valid and Invalid Arguments 	12
П 	Quantified Statements: Predicates and Quantified Statements, Statements with Multiple Quantifiers, Arguments with Quantified Statements Elementary Number Theory and Methods of Proof: Introduction to Direct Proofs, Rational Numbers, Divisibility, Division into Cases and the Quotient-Remainder Theorem, Floor and Ceiling, Indirect Argument: Contradiction and Contraposition, Two Classical Theorems, Applications in algorithms.	12
m	Sequences, Mathematical Induction, and Recursion: Sequences, Mathematical Induction, Strong Mathematical Induction and the Well- Ordering Principle for the Integers, Correctness of algorithms, defining sequences recursively, solving recurrence relations by iteration, Second order linear homogenous recurrence relations with constant coefficients. general recursive definitions and structural induction. Functions: Functions Defined on General Sets, One-to-One and Onto, Inverse Functions, Composition of Functions, Cardinality with Applications to Computability	12
IV	Relations : Relations on Sets, Reflexivity, Symmetry, and Transitivity, Equivalence Relations, Partial Order Relations Graphs and Trees : Definitions and Basic Properties, Trails, Paths, and Circuits, Matrix Representations of Graphs, Isomorphism's of Graphs, Trees, Rooted Trees, Isomorphism's of Graphs, Spanning trees and shortest paths.	12
V	Counting and Probability: Introduction, Possibility Trees and the Multiplication Rule, Possibility Trees and the Multiplication Rule, Counting Elements of Disjoint Sets: The Addition Rule, The Pigeonhole Principle, Counting Subsets of a Set: Combinations, r-Combinations with Repetition Allowed, Probability Axioms and Expected Value, Conditional Probability, Bayes' Formula, and Independent Events.	12

Books an	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	Discrete Mathematics with	Sussana S. Epp	Cengage	4 th	2010		
	Applications		Learning				
2.	Discrete Mathematics,	Seymour	Tata		2007		
	Schaum's Outlines Series	Lipschutz, Marc	MCGraw				
		Lipson	Hill				
3.	Discrete Mathematics and	Kenneth H. Rosen	Tata				
	its Applications		MCGraw				
			Hill				
4.	Discrete mathematical	B Kolman RC	PHI				
	structures	Busby, S Ross					
5.	Discrete structures	Liu	Tata				
			MCGraw				
			Hill				

B. Sc. (Information Tech	Semester – I		
Course Name: Discrete Mathem	Course Code: USIT1P4		
Periods per week (1 Period is 50 minutes)			3
Credits	2		
		Hours	Marks
Evaluation System	valuation System Practical Examination		50
	Internal		

List of	Practical: Write the programs for the following using SCILAB
1.	Set Theory
a.	Inclusion Exclusion principle.
b.	Power Sets
с.	Mathematical Induction
2.	Functions and Algorithms
a.	Recursively defined functions
b.	Cardinality
с.	Polynomial evaluation
d.	Greatest Common Divisor
3.	Counting
a.	Sum rule principle
b.	Product rule principle
с.	Factorial
d.	Binomial coefficients
e.	Permutations
f.	Permutations with repetitions
g.	Combinations
h.	Combinations with repetitions
i.	Ordered partitions
j.	Unordered partitions
4.	Probability Theory
a.	Sample space and events
b.	Finite probability spaces
с.	Equiprobable spaces
d.	Addition Principle
e.	Conditional Probability
f.	Multiplication theorem for conditional probability
g.	Independent events
h.	Repeated trials with two outcomes
5.	Croph Theory
3. a.	Graph Theory Paths and connectivity
a. b.	Minimum spanning tree
0. c.	Isomorphism
U.	

6.	Directed Graphs
a.	Adjacency matrix
b.	Path matrix
7.	Properties of integers
a.	Division algorithm
b.	Primes
с.	Euclidean algorithm
d.	Fundamental theorem of arithmetic
e.	Congruence relation
f.	Linear congruence equation
8.	Algebraic Systems
a.	Properties of operations
b.	Roots of polynomials
9.	Boolean Algebra
a.	Basic definitions in Boolean Algebra
b.	Boolean algebra as lattices
10.	Recurrence relations
a.	Linear homogeneous recurrence relations with constant coefficients
b.	Solving linear homogeneous recurrence relations with constant coefficients
с.	Solving general homogeneous linear recurrence relations

B. Sc (Information Tech	Semester – I		
Course Name: Communication Skills		Course Code: USIT105	
Periods per week (1 Period is 50	minutes)	5	
Credits	2		
		Hours	Marks
Evaluation SystemTheory Examination		21/2	75
	Internal		25

Unit	Details	Lectures		
Ι	The Seven Cs of Effective Communication:			
	Completeness, Conciseness, Consideration, Concreteness, Clarity,			
	Courtesy, Correctness			
	Understanding Business Communication:	12		
	Nature and Scope of Communication, Non-verbal Communication,			
	Cross-cultural communication, Technology-enabled Business			
	Communication			
II	Writing Business Messages and Documents:			
	Business writing, Business Correspondence, Instructions			
	Business Reports and Proposals, Career building and Resume writing.	12		
	Developing Oral Communication Skills for Business:			
	Effective Listening, Business Presentations and Public Speaking,			
	Conversations, Interviews			
III	Developing Oral Communication Skills for Business:			
	Meetings and Conferences, Group Discussions and Team			
	Presentations, Team Briefing,	12		
	Understanding Specific Communication Needs:			
	Communication across Functional Areas			
IV	Understanding Specific Communication Needs:			
	Corporate Communication, Persuasive Strategies in Business	12		
	Communication, Ethics in Business Communication, Business			
X 7	Communication Aids			
V	Presentation Process: Planning the presentations, executing the			
	presentations, Impressing the audience by performing, Planning stage:			
	Brainstorming, mind maps / concept maps, executing stage: chunking	12		
	theory, creating outlines, Use of templates. Adding graphics to your			
	presentation: Visual communication, Impress stage: use of font, colour,			
	layout, Importance of practice and performance.			

Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Business Communication	Edited by	Oxford	Second		
		Meenakshi	University			
		Raman and	Press			
		Prakash Singh				
2.	Professional	Aruna Koneru	Tata			
	Communication		McGraw			
			Hill			

3.	Strategies for improving	Prof. M. S. Rao	Shroff		2016
	your business		publishers		
	communication		and		
			distributors		
4.	Business Communication	Dr. Rishipal and	SPD		2014
		Dr. Jyoti			
		Sheoran			
5.	Graphics for Learning:	Ruth C. Clark,	Pfeiffer,		2011
	Proven Guidelines for	Chopeta Lyons,	Wiley		
	Planning, Designing, and				
	Evaluating Visuals in				
	Training Materials				
6.	Basic Business	Lesikar	Tata	10 th	2005
	Communication: Skills for	Raymond V and	McGraw-		
	Empowering the Internet	Marie E. Flatley.	Hill		
	Generation				
7.	Nonverbal	Ruesh, Jurgen	University		1966
	Communication: Notes on	and Weldon	of		
	the Visual Perception of	Kees	California		
	Human Relations		Press		
8.	Business Communication	Bovee,	Pearson		2015
	Today	Courtland	Education		
		L.; Thill, John V.	Ltd.		
9.	Communication Skills	Dr. Nageshwar	Himalaya		
		Rao Dr.	Publishing		
		Rajendra P. Das	House		

B. Sc (Information Tech	Semester – I		
Course Name: Communication S	Course Code: USIT1P5		
Periods per week (1 Period is 50	3		
Credits	2		
		Hours	Marks
Evaluation SystemPractical Examination		2 ¹ / ₂	50
	Internal		

List of	Practical Questions:
1.	Communication Origami, Guessing Game, Guessing the emotion
2.	Body Language, Follow All Instructions, Effective Feedback Skills
3.	The Name Game, Square Talk (Effective Communication), Room 101
	(Influential and persuasive skills)
4.	Back to Back Communication, Paper Shapes (Importance of two-way
	communication), Memory Test(Presentation Skills)
5.	Exercises on Communication Principles
6.	Exercises on communication icebreakers
7.	Communication exercises
	For the following practicals, Microsoft Office, Open Office, Libre Office or
0	any other software suite can be used.
8.	Use of word processing tools for communication
0	Lize of grandels out to alg for communication
9.	Use of spreadsheet tools for communication
10.	Use of presentation tools for communication
10.	

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SEMESTER II

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B. Sc. (Information Tech	Semester – II		
Course Name: Object Oriented	Course Code: USIT201		
Periods per week (1 Period is 50	minutes)	5	
Credits	2		
		Hours	Marks
Evaluation SystemTheory Examination		21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Object Oriented Methodology:	
	Introduction, Advantages and Disadvantages of Procedure Oriented	
	Languages, what is Object Oriented? What is Object Oriented	
	Development? Object Oriented Themes, Benefits and Application of	12
	OOPS.	
	Principles of OOPS: OOPS Paradigm, Basic Concepts of OOPS:	
	Objects, Classes, Data Abstraction and Data Encapsulation,	
	Inheritance, Polymorphism, Dynamic Binding, Message Passing	
II	Classes and Objects: Simple classes (Class specification, class	
	members accessing), Defining member functions, passing object as an	
	argument, Returning object from functions, friend classes, Pointer to	12
	object, Array of pointer to object.	
	Constructors and Destructors: Introduction, Default Constructor,	
	Parameterized Constructor and examples, Destructors	
III	Polymorphism: Concept of function overloading, overloaded	
	operators, overloading unary and binary operators, overloading	
	comparison operator, overloading arithmetic assignment operator, Data	12
	Conversion between objects and basic types, Virtual Functions: Introduction and need, Pure Virtual Functions,	
	Static Functions, this Pointer, abstract classes, virtual destructors.	
IV	Program development using Inheritance: Introduction,	
1 V	understanding inheritance, Advantages provided by inheritance,	
	choosing the access specifier, Derived class declaration, derived class	
	constructors, class hierarchies, multiple inheritance, multilevel	12
	inheritance, containership, hybrid inheritance.	12
	Exception Handling: Introduction, Exception Handling Mechanism,	
	Concept of throw & catch with example	
V	Templates: Introduction, Function Template and examples, Class	
	Template and examples.	10
	Working with Files: Introduction, File Operations, Various File	12
	Modes, File Pointer and their Manipulation	

Books an	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	Object Oriented Analysis and Design	Timothy Budd	ТМН	3 rd	2012		
2.	Mastering C++	K R Venugopal, Rajkumar Buyya, T Ravishankar	Tata McGraw Hill	2 nd Edition	2011		

3.	C++ for beginners	B. M. Hirwani	SPD		2013
4.	Effective Modern C++	Scott Meyers	SPD		
5.	Object Oriented	E. Balagurusamy	Tata	4 th	
	Programming with C++		McGraw		
			Hill		
6.	Learning Python	Mark Lutz	O' Reilly	5 th	2013
7.	Mastering Object Oriented	Steven F. Lott	Pact		2014
	Python		Publishing		

B. Sc. (Information Technology)		Semester – II		
Course Name: Object Oriented Programming Practical			Course Code: USIT2P1	
Periods per week (1 Period is 50	3			
Credits		2		
		Hours	Marks	
Evaluation System	Practical Examination	21/2	50	
	Internal			

List of	Practical: To be implemented using object oriented language
1.	Classes and methods
a.	Design an employee class for reading and displaying the employee information, the getInfo() and displayInfo() methods will be used repectively. Where getInfo() will be private method
b.	Design the class student containing getData() and displayData() as two of its methods which will be used for reading and displaying the student information respectively.Where getData() will be private method.
с.	Design the class Demo which will contain the following methods: readNo(), factorial() for calculating the factorial of a number, reverseNo() will reverse the given number, isPalindrome() will check the given number is palindrome, isArmstrong() which will calculate the given number is armStrong or not.Where readNo() will be private method.
d.	Write a program to demonstrate function definition outside class and accessing class members in function definition.
2.	Using friend functions.
a.	Write a friend function for adding the two complex numbers, using a single class
b.	Write a friend function for adding the two different distances and display its sum, using two classes.
с.	Write a friend function for adding the two matrix from two different classes and display its sum.
3.	Constructors and method overloading.
a.	Design a class Complex for adding the two complex numbers and also show the use of constructor.
b.	Design a class Geometry containing the methods area() and volume() and also overload the area() function .
c.	Design a class StaticDemo to show the implementation of static variable and static function.
4.	Operator Overloading
a.	Overload the operator unary(-) for demonstrating operator overloading.
b.	Overload the operator + for adding the timings of two clocks, And also pass objects as an argument.
с.	Overload the + for concatenating the two strings. For e.g " Py " + "thon" = Python
5.	Inheritance
a.	Design a class for single level inheritance using public and private type derivation.
b.	Design a class for multiple inheritance.
с.	Implement the hierarchical inheritance.

6.	Virtual functions and abstract classes
a.	Implement the concept of method overriding.
b.	Show the use of virtual function
с.	Show the implementation of abstract class.
7.	String handling
a.	String operations for string length, string concatenation
b.	String operations for string reverse, string comparison,
с.	Console formatting functions.
8.	Exception handling
a.	Show the implementation of exception handling
b.	Show the implementation for exception handling for strings
с.	Show the implementation of exception handling for using the pointers.
9.	File handling
a.	Design a class FileDemo open a file in read mode and display the total number of
	words and lines in the file.
b.	Design a class to handle multiple files and file operations
с.	Design a editor for appending and editing the files
10.	Templates
a.	Show the implementation for the following
b.	Show the implementation of template class library for swap function.
с.	Design the template class library for sorting ascending to descending and vice-
	versa

B. Sc. (Information Technology)		Semester – II	
Course Name: Microprocessor Architecture		Course Code: USIT202	
Periods per week (1 Period is 50	5		
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	2 ¹ / ₂	75
	Internal		25

Unit	Details	Lectures
Ι	Microprocessor, microcomputers, and Assembly Language:	
	Microprocessor, Microprocessor Instruction Set and Computer	
	Languages, From Large Computers to Single-Chip Microcontrollers,	
	Applications.	
	Microprocessor Architecture and Microcomputer System:	
	Microprocessor Architecture and its operation's, Memory, I/O Devices,	
	Microcomputer System, Logic Devices and Interfacing,	12
	Microprocessor-Based System Application.	
	8085 Microprocessor Architecture and Memory Interface:	
	Introduction, 8085 Microprocessor unit, 8085-Based Microcomputer,	
	Memory Interfacing, Interfacing the 8155 Memory Segment,	
	Illustrative Example: Designing Memory for the MCTS Project,	
	Testing and Troubleshooting Memory Interfacing Circuit, 8085-Based Single-Board microcomputer.	
II	Interfacing of I/O Devices	
- 11	Basic Interfacing concepts, Interfacing Output Displays, Interfacing	
	Input Devices, Memory Mapped I/O, Testing and Troubleshooting I/O	
	Interfacing Circuits.	
	Introduction to 8085 Assembly Language Programming:	
	The 8085 Programming Model, Instruction Classification, Instruction,	
	Data and Storage, Writing assembling and Execution of a simple	12
	program, Overview of 8085 Instruction Set, Writing and Assembling	
	Program.	
	Introduction to 8085 Instructions:	
	Data Transfer Operations, Arithmetic Operations, Logic Operation,	
	Branch Operation, Writing Assembly Languages Programs, Debugging	
	a Program.	
III	Programming Techniques With Additional Instructions:	
	Programming Techniques: Looping, Counting and Indexing,	
	Additional Data Transfer and 16-Bit Arithmetic Instructions,	
	Arithmetic Instruction Related to Memory, Logic Operations: Rotate,	
	Logics Operations: Compare, Dynamic Debugging.	
	Counters and Time Delays:	
	Counters and Time Delays, Illustrative Program: Hexadecimal Counter,	12
	Illustrative Program: zero-to-nine (Modulo Ten) Counter, Generating	
	Pulse Waveforms, Debugging Counter and Time-Delay Programs.	
	Stacks and Sub-Routines:	
	Stack, Subroutine, Restart, Conditional Call, Return Instructions,	
	Advanced Subroutine concepts.	

IV	Code Conversion, BCD Arithmetic, and 16-Bit Data Operations:	
	BCD-to-Binary Conversion, Binary-to-BCD Conversion, BCD-to-	
	Seven-Segment-LED Code Conversion, Binary-to-ASCII and ASCII-	
	to-Binary Code Conversion, BCD Addition, BCD Subtraction,	
	Introduction To Advanced Instructions and Applications,	
	Multiplication, Subtraction With Carry.	
	Software Development System and Assemblers:	12
	Microprocessors-Based Software Development system, Operating	
	System and Programming Tools, Assemblers and Cross-Assemblers,	
	Writing Program Using Cross Assemblers.	
	Interrupts:	
	The 8085 Interrupt, 8085 Vectored Interrupts, Restart as S/W	
	Instructions, Additional I/O Concepts and processes.	
V	The Pentium and Pentium Pro microprocessors: Introduction,	
	Special Pentium registers, Memory management, Pentium instructions,	
	Pentium Pro microprocessor, Special Pentium Pro features.	
	Core 2 and later Microprocessors: Introduction, Pentium II software	12
	changes, Pentium IV and Core 2, i3, i5 and i7.	
	SUN SPARC Microprocessor: Architecture, Register file, data types	
	and instruction format	

Books ar	Books and References:				
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Microprocessors Architecture, Programming and Applications with the 8085.	Ramesh Gaonkar	PENRAM	Fifth	2012
2.	Computer System Architecture	M. Morris Mano	PHI		1998
3.	Structured Computer Organization	Andrew C. Tanenbaum	PHI		

B. Sc. (Information Technology)		Semester – II	
Course Name: Microprocessor A	Course Code: USIT2P2		
Periods per week (1 Period is 50	3		
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	2 ¹ / ₂	50
	Internal		

List of	Practical
1.	Perform the following Operations related to memory locations.
a.	Store the data byte 32H into memory location 4000H.
b.	Exchange the contents of memory locations 2000H and 4000H
2.	Simple assembly language programs.
a.	Subtract the contents of memory location 4001H from the memory location 2000H
	and place the result in memory location 4002H.
b.	Subtract two 8-bit numbers.
с.	Add the 16-bit number in memory locations 4000H and 4001H to the 16-bit number
	in memory locations 4002H and 4003H. The most significant eight bits of the two
	numbers to be added are in memory locations 4001H and 4003H. Store the result in
	memory locations 4004H and 4005H with the most significant byte in memory
	location 4005H.
d.	Add the contents of memory locations 40001H and 4001H and place the result in
	the memory locations 4002Hand 4003H.
e.	Subtract the 16-bit number in memory locations 4002H and 4003H from the 16-bit
	number in memory locations 4000H and 4001H. The most significant eight bits of
	the two numbers are in memory locations 4001H and 4003H. Store the result in
	memory locations 4004H and 4005H with the most significant byte in memory
	location 4005H.
f.	Find the l's complement of the number stored at memory location 4400H and store
	the complemented number at memory location 4300H.
g.	Find the 2's complement of the number stored at memory location 4200H and store
	the complemented number at memory location 4300H.
3.	Packing and unpacking operations.
a.	Pack the two unpacked BCD numbers stored in memory locations 4200H and 4201H
	and store result in memory location 4300H. Assume the least significant digit is
-	stored at 4200H.
b.	Two digit BCD number is stored in memory location 4200H. Unpack the BCD
	number and store the two digits in memory locations 4300H and 4301H such that
	memory location 4300H will have lower BCD digit.
4.	Register Operations.
a.	Write a program to shift an eight bit data four bits right. Assume that data is in
	register C.
b.	Program to shift a 16-bit data 1 bit left. Assume data is in the HL register pair
с.	Write a set of instructions to alter the contents of flag register in 8085.
d.	Write a program to count number of l's in the contents of D register and store the
	count in the B register.

5.	Multiple memory locations.
a.	Calculate the sum of series of numbers. The length of the series is in memory
	location 4200H and the series begins from memory location 4201H. a. Consider the
	sum to be 8 bit number. So, ignore carries. Store the sum at memory location 4300H.
	b. Consider the sum to be 16 bit number. Store the sum at memory locations 4300H
	and 4301H
b.	Multiply two 8-bit numbers stored in memory locations 2200H and 2201H by repetitive addition and store the result in memory locations 2300H and 2301H.
с.	Divide 16 bit number stored in memory locations 2200H and 2201H by the 8 bit
	number stored at memory location 2202H. Store the quotient in memory locations
	2300H and 2301H and remainder in memory locations 2302H and 2303H.
d.	Find the number of negative elements (most significant bit 1) in a block of data. The
	length of the block is in memory location 2200H and the block itself begins in
	memory location 2201H. Store the number of negative elements in memory location
	2300H
e.	Find the largest number in a block of data. The length of the block is in memory
	location 2200H and the block itself starts from memory location 2201H. Store the
	maximum number in memory location 2300H. Assume that the numbers in the block
	are all 8 bit unsigned binary numbers.
6.	Calculations with respect to memory locations.
a.	Write a program to sort given 10 numbers from memory location 2200H in the
	ascending order.
b.	Calculate the sum of series of even numbers from the list of numbers. The length of
	the list is in memory location 2200H and the series itself begins from memory
	location 2201H. Assume the sum to be 8 bit number so you can ignore carries and
	store the sum at memory location 2Sample problem:
с.	Calculate the sum of series of odd numbers from the list of numbers. The length of
	the list is in memory location 2200H and the series itself begins from memory
	location 2201H. Assume the sum to be 16-bit. Store the sum at memory locations
	2300H and 2301H.
d.	Find the square of the given numbers from memory location 6100H and store the
	result from memory location 7000H
e.	Search the given byte in the list of 50 numbers stored in the consecutive memory
	locations and store the address of memory location in the memory locations 2200H
	and 2201H. Assume byte is in the C register and starting address of the list is 2000H.
	If byte is not found store 00 at 2200H and 2201H
f.	Two decimal numbers six digits each, are stored in BCD package form. Each
	number occupies a sequence of byte in the memory. The starting address of first
	number is 6000H Write an assembly language program that adds these two numbers
	and stores the sum in the same format starting from memory location 6200H
g.	Add 2 arrays having ten 8-bit numbers each and generate a third array of result. It is
	necessary to add the first element of array 1 with the first element of array-2 and so
	on. The starting addresses of array l, array2 and array3 are 2200H, 2300H and
	2400H, respectively

7.	Assembly programs on memory locations.
a.	Write an assembly language program to separate even numbers from the given list
	of 50 numbers and store them in the another list starting from 2300H. Assume
	starting address of 50 number list is 2200H
b.	Write assembly language program with proper comments for the following:
	A block of data consisting of 256 bytes is stored in memory starting at 3000H.
	This block is to be shifted (relocated) in memory from 3050H onwards. Do not shift
	the block or part of the block anywhere else in the memory.
с.	Add even parity to a string of 7-bit ASCII characters. The length of the string is in
	memory location 2040H and the string itself begins in memory location 2041H.
	Place even parity in the most significant bit of each character.
d.	A list of 50 numbers is stored in memory, starting at 6000H. Find number of
	negative, zero and positive numbers from this list and store these results in memory
	locations 7000H, 7001H, and 7002H respectively
e.	Write an assembly language program to generate fibonacci number.
f.	Program to calculate the factorial of a number between 0 to 8.
	~
8.	String operations in assembly programs.
a.	Write an 8085 assembly language program to insert a string of four characters from
1	the tenth location in the given array of 50 characters
b.	Write an 8085 assembly language program to delete a string of 4 characters from
	the tenth location in the given array of 50 characters.
с.	Multiply the 8-bit unsigned number in memory location 2200H by the 8-bit unsigned
	number in memory location 2201H. Store the 8 least significant bits of the result in
d.	memory location 2300H and the 8 most significant bits in memory location 2301H.
u.	Divide the 16-bit unsigned number in memory locations 2200H and 2201H (most significant bits in 2201H) by the B-bit unsigned number in memory location 2300H
	store the quotient in memory location 2400H and remainder in 2401H
e.	DAA instruction is not present. Write a sub routine which will perform the same
С.	task as DAA.
9.	Calculations on memory locations.
a.	To test RAM by writing '1' and reading it back and later writing '0' (zero) and reading
	it back. RAM addresses to be checked are 40FFH to 40FFH. In case of any error, it
	is indicated by writing 01H at port 10
b.	Arrange an array of 8 bit unsigned no in descending order
с.	Transfer ten bytes of data from one memory to another memory block. Source
	memory block starts from memory location 2200H where as destination memory
	block starts from memory location 2300H
d.	Write a program to find the Square Root of an 8 bit binary number. The binary
	number is stored in memory location 4200H and store the square root in 4201H.
e.	Write a simple program to Split a HEX data into two nibbles and store it in memory
10.	Operations on BCD numbers.
a.	Add two 4 digit BCD numbers in HL and DE register pairs and store result in
	memory locations, 2300H and 2301H. Ignore carry after 16 bit.
b.	Subtract the BCD number stored in E register from the number stored in the D
	register
с.	Write an assembly language program to multiply 2 BCD numbers

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Microprocessors	Ramesh Gaonkar	PENRAM	Fifth	2012
	Architecture, Programming				
	and Applications with the				
	8085.				
2.	8080A/8085 Assembly	Lance A.	Osborne		1978
	Language Programming	Leventhel			

B. Sc (Information Tech	Semester – II		
Course Name: Web Programmin	Course Code: USIT203		
Periods per week (1 Period is 50	5		
Credits	2		
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Internet and the World Wide Web:	
	What is Internet? Introduction to internet and its applications, E-mail, telnet, FTP, e-commerce, video conferencing, e-business. Internet service providers, domain name server, internet address, World Wide Web (WWW): World Wide Web and its evolution, uniform resource locator (URL), browsers – internet explorer, Netscape navigator, opera, Firefox, chrome, Mozilla. search engine, web saver – apache, IIS, proxy server, HTTP protocol HTML5 : Introduction, Why HTML5? Formatting text by using tags, using lists and backgrounds, Creating hyperlinks and anchors. Style sheets, CSS formatting text using style sheets, formatting paragraphs using style sheets.	12
II	HTML5 Page layout and navigation:	
	Creating navigational aids: planning site organization, creating text based navigation bar, creating graphics based navigation bar, creating graphical navigation bar, creating image map, redirecting to another URL, creating division based layouts: HTML5 semantic tags, creating divisions, creating HTML5 semantic layout, positioning and formatting divisions. HTML5 Tables, Forms and Media: Creating tables: creating simple table, specifying the size of the table, specifying the width of the column, merging table cells, using tables for page layout, formatting tables: applying table borders, applying background and foreground fills, changing cell padding, spacing and alignment, creating user forms: creating basic form, using check boxes and option buttons, creating lists, additional input types in HTML5, Incorporating sound and video: audio and video in HTML5, HTML multimedia basics, embedding video clips, incorporating audio on web page.	12
Ш	Java Script: Introduction, Client-Side JavaScript, Server-Side JavaScript, JavaScript Objects, JavaScript Security, Operators: Assignment Operators, Comparison Operators, Arithmetic Operators, % (Modulus), ++(Increment),(Decrement), -(Unary Negation), Logical Operators, Short-Circuit Evaluation, String Operators, Special Operators, ?: (Conditional operator), , (Comma operator), delete, new, this, void Statements: Break, comment, continue, delete, dowhile, export, for, forin, function, ifelse, import, labelled, return, switch, var, while, with,	12

	Core JavaScript (Properties and Methods of Each) : Array, Boolean, Date, Function, Math, Number, Object, String, regExp Document and its associated objects: document, Link, Area, Anchor, Image, Applet, Layer Events and Event Handlers : General Information about Events, Defining Event Handlers, event, onAbort, onBlur, onChange, onClick, onDblClick, onDragDrop, onError, onFocus, onKeyDown, onKeyPress, onKeyUp, onLoad, onMouseDown, onMouseMove, onMouseOut, onMouseOver, onMouseUp, onMove, onReset, onResize, onSelect, onSubmit, onUnload	
IV	PHP: Why PHP and MySQL? Server-side scripting, PHP syntax and variables, comments, types, control structures, branching, looping, termination, functions, passing information with PHP, GET, POST, formatting form variables, superglobal arrays, strings and string functions, regular expressions, arrays, number handling, basic PHP errors/problems	12
V	Advanced PHP and MySQL : PHP/MySQL Functions, Integrating web forms and databases, Displaying queries in tables, Building Forms from queries, String and Regular Expressions, Sessions, Cookies and HTTP, E-Mail	12

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Web Design The Complete	Thomas Powell	Tata		-
	Reference		McGraw		
			Hill		
2.	HTML5 Step by Step	Faithe Wempen	Microsoft		2011
			Press		
3.	PHP 5.1 for Beginners	Ivan Bayross	SPD		2013
		Sharanam Shah,			
4.	PHP Project for Beginners	SharanamShah,	SPD		2015
		Vaishali Shah			
5.					
6.	PHP 6 and MySQL Bible	Steve Suehring,	Wiley		2009
		Tim Converse,			
		Joyce Park			
7.	Head First HTML 5	Eric Freeman	O'Reilly		2013
	programming				
8.	JavaScript 2.0: The	Thomas	Tata	2 nd	
	Complete Reference	Powell and Fritz	McGraw		
		Schneider	Hill		

B. Sc. (Information Technology)		Semester – II	
Course Name: Web Programming Practical		Course Code: USIT2P3	
Periods per week (1 Period is 50	minutes)	3	
Credits			2
		Hours	Marks
Evaluation System	Practical Examination	21/2 50	
	Internal		

List of	Practical
1.	Use of Basic Tags
a.	Design a web page using different text formatting tags.
b.	Design a web page with links to different pages and allow navigation between
	web pages.
с.	Design a web page demonstrating all Style sheet types
2.	Image maps, Tables, Forms and Media
a.	Design a web page with Imagemaps.
b.	Design a web page demonstrating different semantics
с.	Design a web page with different tables. Design a webpages using table so that
	the content appears well placed.
d.	Design a web page with a form that uses all types of controls.
e.	Design a web page embedding with multimedia features.
3.	Java Script
a.	Using JavaScript design, a web page that prints factorial/Fibonacci series/any
	given series.
b.	Design a form and validate all the controls placed on the form using Java Script.
с.	Write a JavaScript program to display all the prime numbers between 1 and 100.
a.	Write a JavaScript program to accept a number from the user and display the sum
	of its digits.
d.	Write a program in JavaScript to accept a sentence from the user and display the
	number of words in it. (Do not use split () function).
e.	Write a java script program to design simple calculator.
4.	Control and looping statements and Java Script references
a.	Design a web page demonstrating different conditional statements.
b.	Design a web page demonstrating different looping statements.
с.	Design a web page demonstrating different Core JavaScript references (Array,
	Boolean, Date, Function, Math, Number, Object, String, regExp).
5.	Basic PHP I
a.	Write a PHP Program to accept a number from the user and print it factorial.
b.	Write a PHP program to accept a number from the user and print whether it is prime
	or not.
6.	Basic PHP II
a.	Write a PHP code to find the greater of 2 numbers. Accept the no. from the user.

b.	Write a PHP program to display the following Binary Pyramid:			
	1			
	0 1			
	1 0 1			
	0 1 0 1			
7.	String Functions and arrays			
a.	Write a PHP program to demonstrate different string functions.			
b.	Write a PHP program to create one dimensional array.			
8.	PHP and Database			
a.	Write a PHP code to create:			
	Create a database College			
	• Create a table Department (Dname, Dno, Number_Of_faculty)			
b.	Write a PHP program to create a database named "College". Create a table named			
	"Student" with following fields (sno, sname, percentage). Insert 3 records of your			
	choice. Display the names of the students whose percentage is between 35 to 75			
	in a tabular format.			
с.	Design a PHP page for authenticating a user.			
9.	Email			
a.	Write a program to send email with attachment.			
10.	Sessions and Cookies			
a.	Write a program to demonstrate use of sessions and cookies.			

Books an	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	HTML5 Step by Step	Faithe Wempen	Microsoft Press		2011	
2.	JavaScript 2.0: The Complete Reference	Thomas Powell and Fritz Schneider	Tata McGraw Hill	2 nd		
3.	PHP 6 and MySQL Bible	Steve Suehring, Tim Converse, Joyce Park	Wiley		2009	
4.	PHP 5.1 for Beginners	Ivan Bayross Sharanam Shah,	SPD		2013	
5.	PHP Project for Beginners	SharanamShah, Vaishali Shah	SPD		2015	
6.	Murach's PHP and MySQL	Joel Murach Ray Harris	SPD		2011	

B. Sc. (Information Technology)		Semester – II	
Course Name: Numerical and Statistical Methods		Course Code: USIT204	
Periods per week (1 Period is 50	Periods per week (1 Period is 50 minutes)		5
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Mathematical Modeling and Engineering Problem Solving: A	
	Simple Mathematical Model, Conservation Laws and Engineering	
	Problems	
	Approximations and Round-Off Errors: Significant Figures,	12
	Accuracy and Precision, Error Definitions, Round-Off Errors	12
	Truncation Errors and the Taylor Series:	
	The Taylor Series, Error Propagation, Total Numerical Errors,	
	Formulation Errors and Data Uncertainty	
II	Solutions of Algebraic and Transcendental Equations: The	
	Bisection Method, The Newton-Raphson Method, The Regula-falsi	
	method, The Secant Method.	12
	Interpolation: Forward Difference, Backward Difference, Newton's	12
	Forward Difference Interpolation, Newton's Backward Difference	
	Interpolation, Lagrange's Interpolation.	
III	Solution of simultaneous algebraic equations (linear) using	
	iterative methods: Gauss-Jordan Method, Gauss-Seidel Method.	
	Numerical differentiation and Integration: Numberical	
	differentiation, Numerical integration using Trapezoidal Rule,	12
	Simpson's 1/3 rd and 3/8 th rules.	
	Numerical solution of 1st and 2nd order differential equations:	
	Taylor series, Euler's Method, Modified Euler's Method, Runge-Kutta	
IV	Method for 1 st and 2 nd Order Differential Equations.	
11	Least-Squares Regression:	
	Linear Regression, Polynomial Regression, Multiple Linear Regression, General Linear Least Squares, Nonlinear Regression	12
	Linear Programming: Linear optimization problem, Formulation and	12
	Graphical solution, Basic solution and Feasible solution.	
V	Random variables: Discrete and Continuous random variables,	
•	Probability density function, Probability distribution of random	
	variables, Expected value, Variance.	
	Distributions: Discrete distributions: Uniform, Binomial, Poisson,	
	Bernoulli, Continuous distributions: uniform distributions, exponential,	12
	(derivation of mean and variance only and state other properties and	
	discuss their applications) Normal distribution state all the properties	
	and its applications.	

Books ar	Books and References:				
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Introductory Methods of	S. S. Shastri	PHI	Vol-2	
	Numerical Methods				
2.	Numerical Methods for	Steven C. Chapra,	Tata Mc	6 th	2010
	Engineers	Raymond P.	Graw Hill		
		Canale			
3.	Numerical Analysis	Richard L.	Cengage	9 th	2011
		Burden, J.	Learning		
		Douglas Faires			
4.	Fundamentals of	S. C. Gupta, V. K.			
	Mathematical Statistics	Kapoor			
5.	Elements of Applied	P.N.Wartikar and	A. V.	Volume	
	Mathematics	J.N.Wartikar	Griha,	1 and 2	
			Pune		

B. Sc. (Information Tech	Semester – II		
Course Name: Numerical and Statistical Methods		Course Code: USIT2P4	
Practical			
Periods per week (1 Period is 50	Periods per week (1 Period is 50 minutes)		3
Credits	edits 2		2
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		

List of	Practical
1.	Iterative Calculation
a.	Program for iterative calculation.
b.	Program to calculate the roots of a quadratic equation using the formula.
с.	Program to evaluate e^x using infinite series.
2.	Solution of algebraic and transcendental equations:
a.	Program to solve algebraic and transcendental equation by bisection method.
b.	Program to solve algebraic and transcendental equation by false position method.
c.	Program to solve algebraic and transcendental equation by Secant method.
d.	Program to solve algebraic and transcendental equation by Newton Raphson method.
3.	Interpolation
a.	Program for Newton's forward interpolation.
b.	Program for Newton's backward interpolation.
с.	Program for Lagrange's interpolation.
4.	Solving linear system of equations by iterative methods
a.	Program for solving linear system of equations using Gauss Jordan method.
b.	Program for solving linear system of equations using Gauss Seidel method.
5.	Numerical Differentiation
a.	Programing to obtain derivatives numerically.
6	
<u>6.</u>	Numerical Integration
a.	Program for numerical integration using Trapezoidal rule.
b.	Program for numerical integration using Simpson's 1/3 rd rule.
с.	Program for numerical integration using Simpson's 3/8 th rule.
7.	Solution of differential equations
a.	Program to solve differential equation using Euler's method
b.	Program to solve differential equation using modified Euler's method.
c.	Program to solve differential equation using Runge-kutta 2 nd order and 4 th order
	methods.
8.	Regression
a.	Program for Linear regression.
b.	Program for Polynomial Regression.

с.	Program for multiple linear regression.
d.	Program for non-linear regression.
9.	Random variables and distributions
a.	Program to generate random variables.
b.	Program to fit binomial distribution.
с.	Program to fit Poisson distribution.
10.	Distributions
a.	Program for Uniform distribution.
b.	Program for Bernoulli distribution
с.	Program for Negative binomial distribution.

B. Sc. (Information Technology)		Semester – II		
Course Name: Green Computing		Course Code: USIT205		
Periods per week (1 Period is 50	minutes)	5		
Credits		2		
		Hours	Marks	
Evaluation System	Theory Examination	21/2 75		
	Internal		25	

Unit	Details	Lectures
I	Overview and Issues: Problems: Toxins, Power Consumption, Equipment Disposal, Company's Carbon Footprint: Measuring, Details, reasons to bother, Plan for the Future, Cost Savings: Hardware, Power. Initiatives and Standards: Global Initiatives: United Nations, Basel Action Network, Basel Convention, North America: The United States, Canada, Australia, Europe, WEEE Directive, RoHS, National Adoption, Asia: Japan, China, Korea.	12
Π	 Minimizing Power Usage: Power Problems, Monitoring Power Usage, Servers, Low-Cost Options, Reducing Power Use, Data De-Duplication, Virtualization, Management, Bigger Drives, Involving the Utility Company, Low-Power Computers, PCs, Linux, Components, Servers, Computer Settings, Storage, Monitors, Power Supplies, Wireless Devices, Software. Cooling: Cooling Costs, Power Cost, Causes of Cost, Calculating Cooling Needs, Reducing Cooling Costs, Economizers, On-Demand Cooling, HP's Solution, Optimizing Airflow, Hot Aisle/Cold Aisle, Raised Floors, Cable Management, Vapour Seal, Prevent Recirculation of Equipment Exhaust, Supply Air Directly to Heat Sources, Fans, Humidity, Adding Cooling, Fluid Considerations, System Design, Datacentre Design, Centralized Control, Design for Your Needs, Put Everything Together. 	12
III	Changing the Way of Work: Old Behaviours, starting at the Top, Process Reengineering with Green in Mind, Analysing the Global Impact of Local Actions, Steps: Water, Recycling, Energy, Pollutants, Teleworkers and Outsourcing, Telecommuting, Outsourcing, how to Outsource. Going Paperless: Paper Problems, The Environment, Costs: Paper and Office, Practicality, Storage, Destruction, Going Paperless, Organizational Realities, Changing Over, Paperless Billing, Handheld Computers vs. the Clipboard, Unified Communications, Intranets, What to Include, Building an Intranet, Microsoft Office SharePoint Server 2007, Electronic Data Interchange (EDI), Nuts and Bolts, Value Added Networks, Advantages, Obstacles.	12

IV	Recycling:	
	Problems, China, Africa, Materials, Means of Disposal, Recycling,	
	Refurbishing, Make the Decision, Life Cycle, from beginning to end,	
	Life, Cost, Green Design, Recycling Companies, Finding the Best One,	
	Checklist, Certifications, Hard Drive Recycling, Consequences,	
	cleaning a Hard Drive, Pros and cons of each method, CDs and DVDs,	
	good and bad about CD and DVDs disposal, Change the mind-set,	12
	David vs. America Online	14
	Hardware Considerations:	
	Certification Programs, EPEAT, RoHS, Energy Star, Computers,	
	Monitors, Printers, Scanners, All-in-Ones, Thin Clients, Servers, Blade	
	Servers, Consolidation, Products, Hardware Considerations, Planned	
	Obsolescence, Packaging, Toxins, Other Factors, Remote Desktop,	
	Using Remote Desktop, Establishing a Connection, In Practice	
\mathbf{V}	Greening Your Information Systems:	
	Initial Improvement Calculations, Selecting Metrics, Tracking	
	Progress, Change Business Processes, Customer Interaction, Paper	
	Reduction, Green Supply Chain, Improve Technology Infrastructure,	
	Reduce PCs and Servers, Shared Services, Hardware Costs, Cooling.	12
	Staying Green:	14
	Organizational Check-ups, Chief Green Officer, Evolution, Sell the	
	CEO, SMART Goals, Equipment Check-ups, Gather Data, Tracking	
	the data, Baseline Data, Benchmarking, Analyse Data, Conduct Audits,	
	Certifications, Benefits, Realities, Helpful Organizations.	

Books ar	Books and References:									
Sr. No.	Title	Author/s	Publisher	Edition	Year					
1.	1. Green IT Toby Velte,		McGraw		2008					
		Anthony Velte,	Hill							
		Robert Elsenpeter								
2.	Green Data Center: Steps	Alvin Galea,	Shroff		2011					
	for the Journey	Michael Schaefer,	Publishers							
		Mike Ebbers	and							
			Distributers							
3.	Green Computing and	Jason Harris	Emereo							
	Green IT Best Practice									
4.	Green Computing	Bud E. Smith	CRC Press		2014					
	Tools and Techniques for									
	Saving Energy, Money									
	and Resources									

B. Sc. (Information Tech	Semester – II			
Course Name: Green Computing	Course Co	de: USIT2P5		
Periods per week (1 Period is 50	minutes)	3		
Credits		2		
		Hours	Marks	
Evaluation System	Practical Examination	21/2	50	
	Internal			

Projec	t and Viva Voce
1.	A project should be done based on the objectives of Green Computing. A report
	of minimum 50 pages should be prepared. The report should have a font size of 12, Times new roman and 1.5 line spacing. The headings should have font
	size 14. The report should be hard bound.
2.	The project can be done individually or a group of two students.
3.	The students will have to present the project during the examination.
4.	A certified copy of the project report is essential to appear for the examination.

Evaluation Scheme:

1. Internal Evaluation (25 Marks). i Test 1 Class test of 20 ma

Q	Attempt <u>any four</u> of the following:	20
a.		
b.		
c.		
d.		
e.		
f.		

. Test: 1 Class test of 20 marks. (Can be taken online)

ii. 5 marks: Active participation in the class, overall conduct, attendance.

2. External Examination: (75 marks)

	All questions are compulsory	
Q1	(Based on Unit 1) Attempt <u>any three</u> of the following:	15
a.		
b.		
c.		
d.		
e.		
f.		
Q2	(Based on Unit 2) Attempt <u>any three</u> of the following:	15
Q3	(Based on Unit 3) Attempt <u>any three</u> of the following:	15
Q4	(Based on Unit 4) Attempt <u>any three</u> of the following:	15
Q5	(Based on Unit 5) Attempt <u>any three</u> of the following:	15

3. Practical Exam: 50 marks

A Certified copy journal is essential to appear for the practical examination.

1.	Practical Question 1	20
2.	Practical Question 2	20
3.	Journal	5
4.	Viva Voce	5

OR

1.	Practical Question	40
2.	Journal	5
3.	Viva Voce	5

Aniversity of Mumbai



Revised Syllabus of Courses of Master of Commerce (M.Com) Programme at Second Year Semester III and IV

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year 2017-2018)

Faculty of Commerce

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

M.Com II

(To be implemented from Academic Year- 2017-2018)

No. of Courses	Semester III	Credits	No. of Courses	Semester IV	Credits
1	Elective Courses (EC)		1	Elective Courses (EC)	
1,2 and 3	*Any one group of courses from the following list of the courses (Group – A/B/C/D/E)	18	1,2 and 3	**Any one group of courses from the following list of the courses (Group – A/B/C/D/E)	18
2	✓ Project Work		2	✓ Project Work	
4	Project Work - I	06	4	Project Work - II	06
Total Credits 24 Total Credits			24		

✓ Note: Project work is considered as a special course involving application of knowledge in solving/ analyzing/ exploring a real life situation/ difficult problem. Project work would be of 06 credits. A project work may be undertaken in any area of Elective Courses

1	*List of group of Elective Cour for Semester III (Any Three out	of Five)	1	** List of group of Elective Courses (for Semester IV (Any Three out of Fig	
Group A:	Advanced Accounting, Corpora	te Account	ing and	Financial Management	
1	Advanced Financial	06	1	Corporate Financial	06
	Accounting			Accounting	
2	Direct Tax	06	2	Indirect Tax- Introduction of	06
				Goods and Service Tax	
3	Advanced Cost Accounting	06	3	Financial Management	06
4	Advanced Auditing	06	4	International Financial	06
				Reporting Standards	
5	Financial Services	06	5	Personal Financial Planning	06
Group B:	Business Studies (Management)				
1	Human Resource	06	1	Supply chain management	06
	Management			and logistics	
2	Rural Marketing	06	2	Advertising and sales	06
	_			Management	
3	Entrepreneurial Management	06	3	Retail Management	06
4	Marketing Strategies and	06	4	Tourism Management	06
	practices				
5	Organizational Behaviour	06	5	Management of Business	06
				Relations	
Group C	: Banking & Finance				
1	Commercial Bank	06	1	International Finance	06
	Management				
2	Financial Markata	00	2	Einensiel Comisse	00
2	Financial Markets	06	2	Financial Services	06
3	Accounting of Banking Sector	06	3	Auditing of Banking Sector	06
4	Treasury Management	06	4	Investment Management	06
5	Debt Market	06	5	Currency Derivatives	06
Group D	: E-Commerce				
1	Database Management	06	1	E-Commerce Security and	06
	System			Law	
2	Internet & Web-Designing	06	2	Advance technology for E-	06
	(skill based)			Commerce	
3	Network Infrastructure and	06	3	Management Information	06
	Payment System			System	
4	Logistic & supply chain	06	4	Digital Marketing	06
	Management in E-Commerce			_	
5	Business Models in E-	06	5	International Business, Law	06
	Commerce & ICT Applications			and Taxation	

1	*List of group of Elective Co for Semester III (Any Three o		1	** List of group of Elective Courses (for Semester IV (Any Three out of Fig	
Group I	E : Business Economics				
1	Economics of Growth and Development	06	1	Urban Economics	06
2	Applied Econometrics	06	2	Entrepreneurship and Family business	06
3	Agriculture Economics	06	3	Indian Financial system	06
4	Monetary Economics	06	4	International Economics	06
5	Industrial Economics	06	5	Economics of Services	06

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

Semester III

No. of Courses	Semester III	Credits
1	Elective Courses (EC)	
-	Advanced Accounting, Corporate Accounting Management (Any Three out of Five)	g and
1	Advanced Financial Accounting	06
2	Direct Tax	06
3	Advanced Cost Accounting	06
4	Advanced Auditing	06
5	Financial Services	06
	Total Credits	18

Group A: Advanced Accounting, Corporate Accounting and Financial Management

1. Advanced Financial Accounting

SN	Modules	No. of Lectures
1	Foreign Currency Conversion (As per Applicable Accounting Standards)	15
2	Final Accounts & Statutory Requirements for Banking Companies	15
3	Accounting & Statutory Requirements of Insurance Companies	15
4	Accounting & Statutory Requirements of Co-operative Societies	15
	Total	60

SN	Modules/ Units	
1	Foreign Currency Conversion (As per Applicable Accounting Standards)	
	Requirements as per Accounting Standards Foreign Branches	
2	Final Accounts & Statutory Requirements for Banking Companies	
	Final Accounts of Banking Companies Provisioning of Non- Performing Assets Form & Requirements of Final Accounts	
3	Accounting & Statutory Requirements of Insurance Companies	
	 Accounting Provision for Insurance Act and Insurance Regulation and Development Authorities for Life Insurance Business General Insurance Business Forms and Requirements of Final Accounts for Life Insurance Business General Insurance Business General Insurance Business 	
4	Accounting & Statutory Requirements of Co-operative Societies	
	 Accounting Provisions of Maharashtra State Co-operative Societies Act and Rules Forms and Requirements of Final Accounts 	

Group A: Advanced Accounting, Corporate Accounting and Financial Management

2. Direct Tax

SN	Modules	No. of Lectures
1	Definitions and Basis of Charge	15
2	Heads of Income	15
3	Deductions u/s 80 and Exclusions from the Total Income	15
4	Computation of Income and Tax of Individual, Firm and Company (Excluding MAT) and Provisions for Filing Return of Income - Sec 139(1) and Sec 139(5)	15
	Total	60

SN	Modules/ Units
1	Definitions and Basis of Charge
	Definitions: Person, Assessee, Income
	Basis of Charge: Previous Year, Assessment Year, Residential Status, Scope of Total
	Income, Deemed Income
2	Heads of Income
	Income from Salary
	Income from House Property
	 Profits and Gains from Business and Profession
	Income from Capital Gains
	Income from Other Sources
3	Deductions u/s 80 and Exclusions from the Total Income
	• Deductions: 80C, 80CCF, 80D, 80DD, 80DDB, 80E, 80U
	• Exclusions: Exemptions related to Specific Heads of Income to be Covered with
	Relevant Provisions, Agricultural Income, Sums Received from HUF by a Member,
	Share of Profit from Firm, Income from Minor Child, Dividend
4	Computation of Income and Tax of Individual, Firm and Company (Excluding MAT)
-	and Provisions for Filing Return of Income - Sec 139(1) and Sec 139(5)
	 Computation of Income & Tax of Individual and Partnership Firm

Note:

- **1.** The Syllabus is restricted to study of particular sections, specifically mentioned rules and notifications only
- 2. All modules/units include computational problems/ Case study
- **3.** The Law in force on 1st April immediately preceding the commencement of Academic year will be applicable for ensuing Examinations

Group A: Advanced Accounting, Corporate Accounting and Financial Management

3. Advanced Cost Accounting

Modules at a Glance

SN	Modules	No. of Lectures
1	Process Costing	15
2	Cost Allocation and Activity Based Costing Systems	15
3	Responsibility Accounting	15
4	Strategic Cost Management	15
	Total	60

SN	Modules/ Units	
1	Process Costing	
	 A) Introduction - Features of process, Concept of Process Loss, Abnormal Loss, Normal Loss, Abnormal Gain. B) Computation of Inter Process Profit – Advantages and Disadvantages C) Computation of Equivalent Production – Weighted Average and FIFO. 	
2	Cost Allocation and Activity Based Costing Systems	
	 A) Cost Allocation – Meaning and its Types, Relationship between resources, activities, Cost and Cost drivers, Methods of allocating central costs - cost allocation using Direct Method, Step Down Method and Reciprocal Method. B) Activity Based Costing – Introduction, Advantages, Limitations, Identification of cost drivers, Practical Problems on Traditional V/s Activity Based Costing System. 	
3	Responsibility Accounting	
	 A) Responsibility Accounting – Meaning, Features, Objective, Assumptions, Problems, Responsibility Centre's – Cost, Profit, Revenue and Investment. B) Concept of Controllability – Introduction, Measuring Managerial Performance (ROI and Residual Income Approach) C) Preparation of Managerial Reports using Segmented Costs and Controllable costs approach. 	
4	Strategic Cost Management	
	 A) Transfer Pricing – Introduction, Advantages and Disadvantages, Setting Transfer Pricing – Negotiated transfer pricing, Cost Based transfer pricing. B) Target Costing – Introduction, Concept, Objectives, Comparison between Target Costing and Cost Plus Pricing. 	
	C) Inflation Accounting – Meaning, Features, Conversion of Income Statement, Balance Sheet, Stocks and Net Assets Block using Current Purchasing Power Method.	

Note – All Topics include practical sums.

Group A: Advanced Accounting, Corporate Accounting and Financial Management

4. Advanced Auditing

SN	Modules	No. of Lectures
1	Company Audit	15
2	Special Audits	15
3	Audit under other laws	15
4	Auditing in Computerized Environment	15
	Total	60

SN	Modules/ Units
1	Company Audit
	 Introduction to Audit - Audit of Ledgers, General Considerations, Scrutiny of Ledgers of Assets, Personal and Revenue Accounts Company Audit - Audit of Shares, Qualifications and Disqualifications of Auditors, Appointment of auditors, Removal of auditors, Powers and duties of auditors, Branch audit, Joint audit, Special audit, Reporting requirements under the Companies Act, 2013. Concepts of true and fair and materiality and audit risk in the context of audit of companies. Audit reports; qualifications, notes on accounts, distinction between notes and qualifications, detailed observations by the statutory auditor to the management vis-a-vis obligations of reporting to the members
2	Special Audits
	• Special points in audit of different types of undertakings, i.e., Educational institutions, Hotels, Clubs and Hospitals.
3	Audit under other Laws
	• Cost audit, Environmental Audit, Energy Audit., Audit under different statutes, viz; income tax, other direct tax laws and indirect taxes
4	Auditing in Computerized Environment
	• Audit under computerised environment: Computer auditing; specific problems of EDP audit, Need for review of internal control especially procedure controls and facility controls; techniques of audit of EDP output; Use of computers for internal and management audit purposes; test packs, computerised audit programmes; involvement of the auditor at the time of setting up the computer system

Group A: Advanced Accounting, Corporate Accounting and Financial Management

5. Financial Services

SN	Modules	No. of Lectures
1	Introduction to Financial Services and Merchant Banking	15
2	Venture Capital and Securitization	15
3	Hire Purchase Finance and Housing Finance	15
4	Stock Broking and Depository Services	15
	Total	60

SN	Modules/ Units
1	Introduction to Financial Services and Merchant Banking
	 A) Introduction to Financial Services - Overview of Financial Services in India, Growth, Structure and Types of financial services. B) Merchant Banking - Merchant Banking – Meaning, nature and functions; merchant banking in India, role in issue management; classification and regulation of merchant bankers by SEBI
2	Venture Capital and Securitization
	 A) Venture Capital- Meaning and Definition of Venture Capital, Characteristics of Venture Capital, Forms/Types of Venture Capital Assistances, Venture Capital Process, Modes of Venture Capital Assistance B) Securitization - Introduction, Definition, Concept, Need, Players Involved in Securitization, Securitization Structure, Instruments of Securitization, Differentiate between Pass Through Certificate and Pay Through Securities, Process of Securitization
3	Hire Purchase Finance and Housing Finance
	 A) Hire Purchase Finance - Meaning, concepts of hire purchase finance, installment credit and consumer credit; sources of finance in India B) Housing Finance – Introduction, Need, nature of housing finance, fixed and floating rate home loans; sources of housing finance in India, growth of housing finance in India; Role of National Housing Bank; concept of mortgage and reverse mortgage; housing loans and mortgage loans, types of mortgage loans
4	Stock Broking and Depository Services
	 A) Stock Broking – Meaning, types of stockbrokers, sub-brokers; stock broking in , E-broking – meaning, Indian experience B) Depository Services – Meaning, role of depositories and their services, Advantages of depository system; Functioning of depository system; Depositories in India – NSDL & CSDL; Depository participants (DPs) and their role Custodial services - meaning; obligations and responsibilities of custodians; code of conduct

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

Semester III

No. of Courses	Semester III	Credits
1	Elective Courses (EC)	
	Business Studies (Management) ree out of Five)	
1	Human Resource Management	06
2	Rural Marketing	06
3	Entrepreneurial Management	06
4	Marketing Strategies and practices	06
5	Organizational Behaviour	06
	Total Credits	18

Group B: Business Studies (Management)

1. Human Resource Management

SN	Modules	No. of Lectures
1	Human Resource Management	15
2	Human Resource Development	15
3	Latest Development in H.R.M. and Labour Legislation	15
4	Emerging Issues In H.R.M	15
	Total	60

SN	Modules/ Units	
1	Human Resource Management	
	 Human Resource Management (HRM). – Concept, Traditional HRM v/s Strategic HRM, Objectives of HRM, Organisation Structure of HRM Department – Changing Role of H.R. Manager. Human Resource Planning- Concept, Factors affecting HRP, Information Management in HRP – HRIS (Human Resource Information System), Job Analysis, Psychological and Behavioural Issues in HRP. Recruitment and Selection of managerial personnel - Factors affecting recruitment process, Role of Recruitment agencies, Online process of selection. 	
2	Human Resource Development	
	 Training and Development - Designing of the effective training programme Evaluation of the effective training programme, Challenges before trainers, Management Development Programme – Techniques. Performance Appraisal- Process, Guidelines for conducting appraisal Interviews, Ethical aspects in performance appraisal. Career Advancement and Succession Planning- Self-Development Mechanism and Knowledge enrichment, Managing Promotion and Transfers, Managing dismissal, Succession Planning- Problems and Issues, Culture as a factor in Succession Planning 	
3	Latest Development in H.R.M. And Labour Legislation	
	 Industrial Relation Act – Prominent features and recent changes in Trade Union Act 2016, Factories Act 1961, Industrial Disputes Act 1950. Prominent features and recent changes to Child and Women Labour Act 1986, Social Security Act 2016, Prevention of Sexual harassment Act, 2013. Prominent features and recent changes to Employees Acts like payment of Gratuity Act 2015, Provident Fund Act 1952, Minimum Wages Act 2016 and Payment of Wages Act 1991, Workmen Compensation Act 2014/ESI Scheme. 	
4	Emerging Issues In H.R.M	
	 Health and Safety – Safety measures and safety programmes, Stress and its Impact on Job Performance, Role of organization in ensuring mental and physical health of employees Work life balance – Need and Importance, Employee Engagement, Managing Millennials (Gen Y) Talent Management – Concept , Importance, Process, Talent Management and VUCA Environment(Volatility, Uncertainty, Complexity, Ambiguity), H.R. Practices at Global level 	

Group B: Business Studies (Management)

2. Rural Marketing

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Rural Marketing	15
2	Consumer Behaviour and Rural Marketing	15
3	Agricultural Marketing	15
4	Recent Trends in Rural Marketing	15
	Total	60

SN	Modules/ Units
1	Introduction to Rural Marketing
	 Rural Marketing: Concept, Scope, Nature and Evolution of Rural Marketing, Rural Marketing Strategies-4P's, Rural Infrastructural Facilities – Warehousing, Cold Storage, Logistics. Indian Rural Market: Profile, Rural Vs Urban Market, Importance of Branding, Scope and Importance of Transportation Networking in rural markets. Problems of Rural Consumer: Adulteration, Short Weight and Measures, Unfair Warranties and Guarantees, Unreasonable Pricing, Challenges and Future of Rural Marketing
2	Consumer Behaviour and Rural Marketing
	 Consumer Behaviour: Characteristics of Buying Behaviour- Awareness, Understanding, Consumer Purchase Decision, Importance of Rural Marketing Communication, Salesmen Influence. Government Schemes: Rural Development Programmes and Schemes of Government, Entreprenuership Development Programme, Role of Food Corporation of India (FCI), Role of <u>Khadi and Village Industries Commission</u> (KVIC). Role of Banks in Rural Marketing: Role of Agricultural Cooperative Banks, Commercial Banking for Rural Marketing
3	Agricultural Marketing
	 Agricultural Marketing- Importance, Prospects and Issues, Role of Cooperatives and Self Help Groups (SHG) in Rural Marketing Commodity Boards: Role and Contribution of Commodity Boards in generating revenue to government and employment in rural India. Agricultural Exports: Composition and Contribution of Agricultural Exports in generating revenue for India- Food Grains, Organic products, Marine Products, Role of Agricultural & Processed Food Products Export Development Authority (APEDA)
4	Recent Trends in Rural Marketing
	 E- Commerce: Importance of E-Commerce and Impact of E- Marketing on rural consumers, Concept of Digital Village, Role of Social Media in rural marketing. Information Technology: Impact of IT in Agricultural Marketing, E-Chaupal, Project Shakti, Web-casting-online training and guidance to farmers. Online Marketers: Role of Online Marketers, Growth and Challenges

Group B: Business Studies (Management)

3. Entrepreneurial Management

SN	Modules	No. of Lectures
1	Entrepreneurship Development Perspective	15
2	Creating Entrepreneurial Venture	15
3	Project Management	15
4	Assistance and Incentives for Promotion and Development of Entrepreneurship	15
	Total	60

SN	Modules/ Units	
1	Entrepreneurship Development Perspective	
	 Entrepreneurship – Concept, Factors affecting growth of Entrepreneurship, Types of Entrepreneurs, Requirements of Entrepreneurial structure. Entrepreneurial Culture -Elements of culture, Steps to change Entrepreneurial 	
	culture, Entrepreneurial v/s Administrative culture.	
	 Theories of Entrepreneurship- Schumpeter Dynamic Entrepreneurship Innovation Theory, Theory of High Achievement by McClelland, Theory of 	
	Personnel Resourcefulness Creating Entrepreneurial Venture	
2		
	 Entrepreneurial Environment- Significance, SWOC Analysis, Problems of Entrepreneurship 	
	• Financial Analysis of Entrepreneurial Venture - Significance, Tools of Financial Analysis, Sources of development finance	
	• Social Entrepreneurship- Features, Importance, Arguments (for and against)	
	Social Entrepreneurship, Women Entrepreneurs – concept and special Government schemes for women entrepreneurs in India.	
3	Project Management	
	 Project - Concepts and Classification of Project, Search of Business Idea, Project Cycle. 	
	 Project Cycle. Project formulationSteps for project formulation, Project Design and network analysis – concept and network analysis techniques: PERT/ CPM. 	
	 Project Management – Concept, Phases, Project Identification and Project Feasibility Analysis. 	
4	Assistance and Incentives for Promotion and Development of Entrepreneurship	
	 Incentives – Need, Promotion and development Entrepreneurship-Types of Assistance and incentives -Fiscal, Financial, Promotional, Marketing, and Organisational. 	
	• NPSD - National Policy for Skill Development and Entrepreneurship 2015.	
	 Institutions in aid of Entrepreneurship Development - The National institute for Entrepreneurship and small business development, District Industry Centre (DIC), National Alliance of young Entrepreneurs 	

Group B: Business Studies (Management)

4. Marketing Strategies and practices

SN	Modules	No. of Lectures
1	Introduction to Marketing Strategies	15
2	Developing Marketing Strategies & Plans	15
3	Market Environmental Trends & Building Customer Value	15
4	Recent Trends in Marketing Strategies	15
	Total	60

SN	Modules/ Units	
1	Introduction to Marketing Strategies	
	 Introduction: Marketing Strategies – Concept, Evolution, Role/ Importance, Types, Formulation of Marketing Strategies- Steps Marketing Opportunities and Plan: Analysing Marketing Opportunities, Future of Marketing, Effective Marketing Plan. New Marketing Strategies: Holistic, New Brand, Service, Green and Guerrilla Marketing Strategies 	
2	Developing Marketing Strategies & Plans	
	 Marketing Mix: Marketing Strategy Implementation - Steps, Marketing Mix 4 P's – Importance, Alternative Marketing Mix Prepositions- Profit, People, and Planet. 	
	 Marketing Plans: Marketing Planning- Importance, Types and Content, Strategic Business Unit - Structure, SWOT Analysis. 	
	• Defensive Marketing Strategies: Importance, Types, Offensive V/S Defensive Marketing Strategies, Position Defense Strategies.	
3	Market Environmental Trends & Building Customer Value	
	 Environmental Analysis: Analysing the Macro Environment, Theories of Marketing- PESTLE Analysis, VRIO Analysis, Porter's Competency Model, and Customer Perceived Value (CPV). 	
	 Customer Value: Applying Customer Value and Satisfaction, Customer Relationship Management (CRM)- Concepts and Techniques 	
	 Customer Loyalty: Importance, Consumer Behaviour – Impact of Personal, Cultural, Social and Psychological Factors. 	
4	Recent Trends in Marketing Strategies	
	• Emerging Strategies: 21 st Century Marketing Strategies, Global Marketing Strategies, and Strategies for Entering Emerging Market.	
	 E-Marketing: Concept, Pros and Cons, Digital Marketing – Concept and features, Experiential Marketing – Concept and features, Hospitality Marketing Management. 	
	 Social Marketing: Social Marketing - Importance, Barriers, Trends in Marketing Practices in India and across Globe. 	

Group B: Business Studies (Management)

5. Organizational Behaviour

SN	Modules	No. of Lectures
1	Organisational Setting	15
2	Foundation of Individual Behaviour	15
3	Group Dynamics and Behaviour	15
4	Emerging Challenges	15
	Total	60

SN	Modules/ Units
1	Organisational Setting
	Introduction to Organisational Behaviour (OB) – Concept, Nature,
	Foundation, Disciplines and Scope of OB.
	Evolution of OB–Evolution – Stages, Human Relations Approach – Hawthorne
	Experiments, Models of OB.
	Organisation Design – Key factors, Steps in Organisation Structure,
	Organisations for future - Types.
2	Foundation of Individual Behaviour
	Factors affecting Individual behaviour- Personal, Psychological, Organisation
	System, Environmental.
	Personality& Perception – Nature of personality, Determinants of personality,
	Personality Traits., Factors Influencing Perception, Managing perception
	Process, Perception and OB
	Attitude – Nature , components , work related attitudes , Barriers to
	attitudinal Change, Measures to attitudinal change.
3	Group Dynamics and Behaviour
	Group – Types of groups, Stages of Group Development, Group Decision
	making – Advantages and Problems.
	Work place behaviour – Determinants of Group Behaviour, Power and Politics
	 Sources of Power, Types of Organisational politics.
	Conflict – Levels of Conflict, Strategies for resolving Conflict, Guidelines for
	effective negotiation.
4	Emerging Challenges
	• Stress Management – Sources, Effects, Strategies, Stress and Performance.
	Organisation culture – Cultural Dimensions, Creating Organisational Culture,
	Maintaining Organisational Culture.
	 Workforce Diversity – Concept, Managing Diversity effectively, Ethical
	Behaviour in workplace, Managing Ethics at work place.

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

No. of Courses	Semester III	Credits
1	1 Elective Courses (EC)	
Group C:	Banking and Finance (Any Three out of Five)	
1	Commercial Bank Management	06
2	Financial Markets	06
3	Accounting of Banking Sector	06
4	Treasury Management	06
5	Debt Market	06
	Total Credits	18

Semester III

Group C: Banking and Finance

Commercial Bank Management

SN	Modules	No. of Lectures
1	Overview of Commercial Banking in India	15
2	Credit Management in Banks	18
3	Human Resource Management in Banks	12
4	Evolving Trends in Modern Banking	15
	Total	60

SN	Modules/ Units	
1	Overview of Commercial Banking in India	
	 A) Overview of Commercial Banking in India - Role and Functions of Commercial Banks, Introduction to Bank Management, Management of Banks in Rural Areas. B) Customer Relationship Management in Banks - Meaning and Objectives of CRM in banks, Strategies for Expanding Customer Base, Banking Ombudsman Scheme, Customer Retention, Handling Customer Grievances C) Services to Different Categories of Customers - Retail, Corporate, International and Rural. 	
2	Credit Management in Banks	
	 A) Credit Management in Banks – Principles of Sound Bank Lending, Loan Policy, Compliance with RBI guidelines, Credit Appraisal and Credit Decision Making, Monitoring and Review of Loan Portfolio, Management of Non-Performing Assets (NPAs), Classification of NPAs, Debt Restructuring- SARFAESI Act, 2002. B) Bank's Investment Policy – SLR Requirements & Non-SLR Investments, Nature and Significance of Investment Management in Commercial Banks, Fundamental Principles of Security Investment, Management of Security Investment, Reviewing Investment Portfolio and Organization of Investment Function in Bank 	
3	Human Resource Management in Banks	
	A) Human Resource Management in Banks – Importance of HRM in Banks, Policies relating to Human Resource Development in India, Selection, Training, Pay Structure in Public Sector Banks and Private Sector Banks, Workers Participation in Management, Motivations and Morals, Performance Evaluation, Promotion, Transfer Policy and VRS schemes in Public Sector Banks	
4	Evolving Trends in Modern Banking	
	 A) Evolving Trends in Modern Banking – Internet Banking, Mobile Banking, EFT services, Outsourcing of Non-core Services, Mergers and Acquisitions in Banking Sector. B) Financial Inclusion – Need and Importance of Financial Inclusion, Micro Credit SHGs, RBI Guidelines for Micro Credit, Portfolio Securitization, SHG-2, NRLM and SRLM, Priority Sector and its Classification. 	

Group C: Banking and Finance

Financial Markets

SN	Modules	No. of Lectures
1	Introduction to Financial system	15
2	Overview of Capital Market	20
3	Overview of Money Market	10
4	Overview of Derivatives Market	15
	Total	60

SN	Modules/ Units
1	Introduction to Financial System
	 A) An Overview of Financial System - Structure of Indian financial system, the nature and role of financial system, Relationship between financial system and economic development, Constituents of Financial System – Primary and Secondary, Development of Financial Markets in India, Components of financial system. B) Theories – Prior savings theory, Credit creation theory, Theory of post savings, Financial regulation theory, Financial liberalization theory.
2	Overview of Capital Market
	 A) Introduction to Capital Market - Structure and Growth of the Indian Capital Market, Indian Capital Market Forms - Industrial Securities, New Issue markets and Old Issue markets- Introduction, Features, Types and Government Securities (Gilt-edged market)- Introduction, Features, and Types B) Ownership Securities – Equity Shares, Preference Shares, No-par stock-(Introduction, Features and Types) C) Creditorship Securities – Debentures –Introduction, Features, and Types
3	Overview of Money Market
	 A) Money market- Meaning, Features, Structure of money market, Regulatory framework,- RBI/FIMMDA/FEDAI, Disadvantages of Money market, Characteristics and Features of developed money market, Recent development in money markets-DFHI, STCI B) Money Market Instruments-T Bills, Money at short and call notice, Commercial bills, Promissory notes, Certificate of deposits Commercial-papers, Banker's Acceptance CBLO, IBPC, MMMF and LAF
4	Overview of Derivatives Market
	 A) Derivatives Market - Meaning, Importance and Need for Derivatives Market, Kinds of financial derivatives and financial derivatives in India. B) Globalization of Financial Market - Indigenous Bond markets, Foreign Currency Bond Markets, Euro market, FDI- Inflows- Outflows, Emerging Trends and Challenges in Global Financial Markets and Impact of globalization on financial markets.

Group C: Banking and Finance

Accounting of Banking Sector

SN	Modules	No. of Lectures
1	Introduction of Banking Companies	10
2	Accounting Systems & Provisions in Banks	15
3	Calculation of Interest and Annuities	15
4	Preparation of Final Accounts and Reporting	20
	Total	60

SN	Modules/ Units	
1	Introduction of Banking Companies	
	 Definition and features of banking companies Types of banks Different types of accounts maintained by banks Bank products & services Cash Management Services and its Importance 	
2	Accounting Systems & Provisions in Banking Companies	
	 Significant Features of Accounting Systems of Banking Companies Books required to be maintained by banks Income recognition, Classification of assets and advances, Provisions, Classification of investments Provisions of Banking Regulation Act- 1949 applicable to banking companies:-Business, Capital and Reserve, Reserve funds, Dividend, Cash reserves, Loans and advances, Unclaimed deposits, Accounts and auditing 	
3	Calculation of Interest and Annuities	
	 Calculation of Simple Interest & Compound Interest; Calculation of Equated Monthly Instalments; Fixed and Floating Interest Rates; Calculation of Annuities, Interest Calculation using Products/Balances; Amortization of a Debt; Sinking Funds 	
4	Preparation of Final Accounts and Reporting	
	 Disclosure Requirements of Banks and Additional Disclosures prescribed by RBI Disclosures required under BASEL norms. Preparation of Financial Statements of Banking Companies as per regulatory requirements 	

Group C: Banking and Finance

Treasury Management

SN	Modules	No. of Lectures
1	Introduction to Treasury Management	15
2	Treasury Operations	15
3	Risk Analysis & Control	15
4	Regulatory, Supervising & Compliance Framework	15
	Total	60

SN	Modules/ Units		
1	Introduction to Treasury Management		
	 Concept & Evolution of Treasury [Including other important terminology in treasury:- Arbitrage; Bank Rate; Options; Capital Adequacy; Capital Fund; CRR; CDSL; Clearing House; DP; Hedging; LAF; OMOs; RTGS; Refinance; SLR; SWIFT; T-Bills; Tier-I & II Capital] Objectives & Role of Treasury Structure of Treasury & Functions of Treasurer 		
	 Scope & Functions of Treasury Management Internal Treasury Control System 		
	 Role of Information Technology in Treasury Management 		
	[Negotiated Dealing System(NDS); Straight-Through-Processing(STP)]		
2	Treasury Operations		
	 Liquidity Management [Objectives-CRR-SLR-RTGS-CCIL] Treasury Management in Commercial Banks [NPA & Capital Adequacy Norms (CRAR); Investment Policy Statement; Back office 		
	 support & Accounting] FOREX Market Operations [International Financial System & FOREX Market; Instrument traded; Exchange Rate mechanism; Indian FOREX market; RBI & Exchange Market] Risk Management in Market Operations 		
	 [Gilt-edged Markets; Exchange Rate & Currency Risk; Interest Risk Management] Impact of Treasury Operations [Structural & Statutory changes; Need for Regulation; Development in Markets] Practical Problems on FOREX Valuation [FEDAI Guidelines & Valuation] 		
3	Risk Analysis & Control		
	 Interest Rate risk: Investment /Trading Book Value at Risk [VaR] FOREX (Market) Risk Risk Management in banks [RBI Guidelines] Treasury & Asset-Liability Management(ALM) [Meaning & Objectives of ALM; Market Risk-Liquidity & Interest Risk; Role of Treasury in ALM; Use of Derivatives in ALM; Policy Environment] 		
4	Regulatory, Supervising & Compliance Framework		
	 Ethics, Morals & Code of Conduct- The Dealing Room [General Principles from FIMMDA] RBI guidelines & Policy [Organizational set up; Industrial Sickness; NPAs in Scheduled Commercial banks] Tax Environment in treasury [Corporate Taxation; Need for Tax Planning; Tax changes during 2004 to 2007 & at 		
	 Present; Tax on Investments; Tax Compliance] MIS for Treasury Operations [Current Monetary & Credit Policies; Fiscal & Budgetary Policies; Foreign Trade & Exchange Policies; Financial Market Trends; International Developments] Global framework in Treasury Operations 		

Group C: Banking and Finance

Debt Market

SN	Modules	No. of Lectures
1	Introduction to Indian Debt Market	10
2	Central Government Securities and State Government Bonds	15
3	Corporate Bond Market	15
4	Valuation of Bonds	20
Total		60

SN	Modules/ Units		
1	Introduction to Indian Debt Market		
	 A) Indian Debt Markets: A Profile of Products and Participants, Market Segments, Participants in the Debt Markets, Secondary Market for Debt Instruments B) Debt Instruments: Instrument Features, Modifying the coupon of the bond, Modifying the term to maturity of a bond, Modifying the principal repayment of a bond, Asset backed securities 		
2	Central Government Securities and State Government Bonds		
3	 A) Central Government Securities Bonds-Introduction, Developments Expected, G-Secs: Trends in Volumes, Tenor and Yields, Primary Issuance Process, Participants in Government Bond Markets, Constituent of SGL Accounts, Primary Dealers, Satellite Dealers, Secondary Markets for Government Bonds, Settlement of Trades in G-Secs, Clearing Corporation, Negotiated Dealing System, Liquidity Adjustment Facility (LAF). B) Central Government Securities: Treasury Bill Issuance Process, Cut-Off Yields, Investors in T-Bills, Secondary Market Activity in T-bills. C) State Government Bonds- Gross Fiscal Deficit of State Governments and its financing, Volume and Coupon rates on State Government Bonds, Ownership Pattern of State Government Bonds, and State Government Guaranteed Bonds. 		
-	Corporate Bond Market A) Corporate Bonds- Market Segments, Issue Process, Issue Management and		
	 Book Building, Terms of a debenture issue and Credit Rating. Bond Market Indices and Benchmarks I-Bex : Sovereign Bond Index, NSE – MIBOR 		
4	Valuation of Bonds		
	 A) Valuation of Bonds - Bond Valuation: First principles, Time path of a bond, Valuing a bond at any point on the time scale, Accrued Interest, Yield, Weighted Yield, YTM of a Portfolio, Realised Yield, Yield–Price relationships of bonds B) Yield Curve and Term Structure of Interest Rate - Yield Curve: The Simple Approach, Bootstrapping, Alternate Methodologies to Estimate the Yield Curve, Theories of the Term Structure of Interest Rates C) Duration - Introduction and Definition, Calculating Duration of a Coupon Paying Bond, Computing duration on dates other than coupon dates, Modified Duration, Rupee Duration, Price Value of a Basis Point, Portfolio Duration, Limitations of Duration 		

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

Semester III

No. of Courses	Semester III	Credits
1	Elective Courses (EC)	
Group D:	E-Commerce (Any Three out of Five)	
1	Database Management System	06
2	Internet & Web-Designing (skill based)	06
3	Network Infrastructure and Payment System	06
4	Logistic & supply chain Management in E- Commerce	06
5	Business Models in E-Commerce & ICT Applications	06
	Total Credits	18

Group D: E-Commerce

1. Database Management System

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Database Management System (DBMS)	15
2	Relational Database Design	15
3	Transaction Management and Recovery System	15
4	SQL Concept	15
	Total	60

SN	Modules/ Units	
1	Introduction to Database Management System (DBMS)	
	 Concept of Database, Database Management System: Concept,features, Importance and Evolution Environment, Classifications, Advantages and Issues of using DBMS, Functional component Three Level of Architecture, Implications of the Database Approach, Database Languages and Interfaces, The Database System Environment 	
2	Relational Database Design	
	 Codd's rule, Entity relationship model, Entity Types, Attributes, Keys, Roles and Structural Constraints, Constraints on Relationship Types, Basic Relational Algebra Operations • Additional Relational Operations Roles and functional Dependencies, Normalization, Mapping the ER model to Relational DB 	
3	Transaction Management and Recovery System	
	 Transaction Management: Transaction Concept, Transaction State, Implementation of Atomicity and Durability, Implementation of Isolation - Testing for serializability. Recovery System: Failure Classification, Storage Structure, Recovery and Atomicity - Log - Based Recovery - Recovery with Concurrent Transactions Buffer Management - Failure with loss of non-volatile storage, Advance Recovery systems, Remote Backup systems. 	
4	SQL Concept	
	 Basics of SQL: Form of Basic SQL Query - Examples of Basic SQL Queries, Multi table Queries, Introduction to Nested Queries, Correlated Nested Queries NULL values - Comparison using Null values - Disallowing NULL values, Complex Integrity Constraints in SQL Triggers and Active Data bases. 	

Group D: E-Commerce

2. Internet & Web-Designing (skill based)

SN	Modules	No. of Lectures
1	Introduction to Internet	15
2	Internet Security Management	15
3	Web designing	15
4	New trends	15
	Total	60

SN	Modules/ Units		
1	Introduction to Internet		
	 Concept, Evolution of internet, Significance, Limitations, Types of Network Internet Network Services and functions of internet, current trends on internet, Internet Technology and Protocol, Internet Connectivity, TCP/IP, Router, Internet Addressing Scheme 		
2	Internet Security Management		
	 Management Concepts and Information Privacy and Copyright Issues, Network etiquettes Overview of Internet Security, Firewalls, Internet Security, basics of asymmetric cryptosystems. Governance on internet, impact of internet on society, Internet Applications, 		
3	Web designing		
	 WWW- Concept, Web technology, Functioning of websites, Creating a Basic Web Page, Web Page Layout Techniques, Type of websites, Hypertext Markup Language (HTML)-Essential HTML for content, Cascading Style Sheets (CSS)-Selector Type, Common Properties, PhotoshopElements and Principles of Design Interactivity tools, Difference between web designer and web developers, web graphics 		
4	New trends		
	 Multimedia and Graphics, JavaScript, Adobe Dreamweaver, Facebook Page Designing, You Tube Videos Utilities: Gif Animation, On-Page Search Engine Optimization, Google Webmasters Tools, Mobile website development Email Network and server, Email Protocol, 		

Group D: E-Commerce

3. Network Infrastructure and Payment System

SN	Modules	No. of Lectures
1	Introduction to Network infrastructure for e-commerce	15
2	Internet Protocol, Security and Protection	15
3	E-payment System	15
4	Security Protocol, Threats and Measures	15
	Total	60

SN	Modules/ Units	
1	Introduction to Network infrastructure for E-Commerce	
	 Requirements for Network infrastructure for e-commerce, Market forces influencing I-way, Component of I-way, Global Information distribution Network, Network Access equipment, Strategic Alliances and I-Way Infrastructure, Public policy issues shaping I-way Telephone based infrastructure, Cable/ TV based infrastructure, Wireless infrastructure, Commercial online infrastructure, Narrow band V/S Broad band Network, 	
2	Internet Protocol, Security and Protection	
	 TCP/IP Internet protocol for Network Infrastructure, Wireless Access Protocol (WAP), Mobile Network Infrastructure Internet, Intranet and extranet as E-commerce infrastructure, Network Infrastructure Security- External and Internal Attack Integrated Services Digital Network (ISDN), Protecting Network infrastructure - Steps in hacking Network Infrastructure, A new model to protect Network infrastructure 	
3	E-payment System	
	 E-Payment System- Concept, Online Payment System – prepaid e-payment service, postpaid e-payment system;, Advantages and Limitations of Payment System, Role of E-payments, Classification of Payment System, Scope of Payment system, Payment meditation services V/S Payment system Payment processing Network, Payment Processing Settlement, Payment Gateway 	
4	Security Protocol, Threats and Measures	
	 Security Protocol, Digital certificates, Security threats in E-com environment, Credit & legal risk of e-payment system. Credit Card based Payment System, Electronic Payment security- Encryption, Digital signatures, Digital Certificate, Public Key Infrastructure (PKI) Secure Socket Layer (SSL), 3D SET and Secure, Case studies in E- payment system. 	

Group D: E-Commerce

4. Logistic & supply chain Management in E-Commerce

Modules at a Glance

SN	Modules	No. of Lectures
1	Logistic in E-Commerce	15
2	Warehouse and E-logistics	15
3	Introduction to Supply Chain Management (SCM)	15
4	Logistics/Supply Chain Management in the Global Environment-	15
	Total	60

SN	Modules/ Units		
1	Logistic in E-Commerce		
	 Logistic in E-commerce – Features, Significance, Evolution, E-Commerce logistics in developed market, ICT infrastructure for future logistics, E- logistics for transport modes and nodes, Airfreight, Rail-freight, Road-freight, Sheep-Freight Automating E-logistics- B2C E-commerce fulfillment, E-fulfillment dimension, Inventory Management 		
2	Warehouse and E-logistics		
	 Warehouse Management System (WMS)- Functions, Connectivity of WMS solution into ERP, Warehousing challenges of e-commerce, Radio Frequency Identification (RFID)- Cost and benefits, RFID to enhance data capture processes in warehouse environment GS1 keys used in logistics and E-procurement, The Global Data Synchronization Network (GDSN), Electronic Product Code Information System (EPCIS) 		
3	Introduction to Supply Chain Management (SCM)		
	 SCM- Concept, Significance, IT applications, Evolution of global SCM Value Chain Management- Concepts and features, Challenges, Sustainability E-Supply Chain planning(Component); E-Supply chain fusion; Channel Management and Channel Integration 		
4	Logistics/Supply Chain Management in the Global Environment-		
	 Managing the Global Supply Chain, Impact of Globalization on Logistics and Supply Chain Management, Global Logistics Trends, Global Issues and Challenges in Logistics and Supply Chain Management. New trends in logistics and SCM- Technology in SCM, Artificial intelligence, Single window system for Global SCM 		

Group D: E-Commerce

5. Business Models in E-Commerce & ICT Applications

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to E-enterprise and Business Models	15
2	E-commerce Business Models	15
3	Introduction to Information Communication Technology(ICT)	15
4	Vital ICT Applications	15
	Total	60

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SN	Modules/ Units
1	Introduction to E-enterprise and Business Models
	 E-Commerce and E-enterprise- Concepts, Features, types of Business models, Difference between E-commerce and E-business, Eight key elements of a business model, E-tailing Business Models, Primary revenue Models in e- commerce. e-Commerce Process Models: E-business Models Based on the Relationship of Transaction Parties, e-commerce Sales Life Cycle (ESLC) Model, selection of E-commerce business model
2	E-commerce Business Models
	 E-commerce Business Models: Business models in emerging E-commerce areas, Business to Consumer (B2C)- Characteristics, Process. Business to Business (B2B)- Characteristics, Importance, Alternative models of B2B, Features of C2C and C2B Marketing and Business strategies: B2C and B2B E-commerce, Role of Websites in B2C
3	Introduction to Information Communication Technology(ICT)
	 Evolution of computers – Features and design – Managing Hardware, Software, Computer Languages . Operating Systems – DOS Information Communication Technology(ICT)- Concept, Importance, Components, Use of ICT in E-commerce, Role of ICT in driving E-commerce business, ICT and E-commerce relationship, ICT Infrastructure and E-commerce
4	Vital ICT Applications
	 E-Governance: Models – G2G, G2B, G2C, Benefits and risks of E-Governance, ICT in manufacturing – overview of CAD in conjunction with CAM, E-environment- Geographical Information System (GIS) weather forecasting, E-education- statistical packages (SPSS), Computer aided learning/e-learning in schools and over the Internet. E-health –Stress, Repetitive Strain Injury (RSI), Eyestrain, Extremely Low Frequency (ELF) radiation. Computers, health and the law.

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

Semester IV

No. of Courses	Semester IV	Credits	
1	1 Elective Courses (EC)		
-	Group A: Advanced Accounting, Corporate Accounting and Financial Management (Any Three out of Five)		
1	Corporate Financial Accounting	06	
2	Indirect Tax- Introduction of Goods and Service Tax	06	
3	Financial Management	06	
4	International Financial Reporting Standards	06	
5	Personal Financial Planning	06	
	Total Credits	18	

Group A: Advanced Accounting, Corporate Accounting and Financial Management

1. Corporate Financial Accounting

SN	Modules	No. of Lectures
1	Corporate Financial Reporting	15
2	International Financial Reporting Standards (IFRS) & Ind - AS	15
3	Valuation of Business for Amalgamation & Merger	15
4	Consolidated Financial Statement	15
Total		60

SN	Modules/ Units	
1	Corporate Financial Reporting	
	Introduction of Financial Reporting	
	Need for reporting	
	Contents of Financial Report	
	Recent trends in Financial reporting	
2	International Financial Reporting Standards (IFRS) & Ind - AS	
	Accounting Standards (AS) – applicability, interpretation, scope and compliance in	
	India	
	Introduction to I.F.R.S	
	• Ind – AS	
	Specific Ind AS:	
	Borrowing Costs	
	Operating Segments	
	Earning per share	
	Income Taxes	
	Accounting for fixed assets	
3	Valuation of Business for Amalgamation & Merger	
	Meaning, Need & Approach	
	Methods of valuation	
4	Consolidated Financial Statement	
	Meaning, Stand Alone Financial Statements	
	Consolidated Financial statements – Applicability, Advantages & Disadvantages	
	Procedure of Consolidation of Balance-sheet & Profit & Loss Account (Excluding cross	
	holding, Chain Holding & Foreign Subsidiary)	

Group A: Advanced Accounting, Corporate Accounting and Financial Management

2. Indirect Tax- Introduction of Goods and Service Tax

SN	Modules	No. of Lectures
1	Overview of Goods and Service Tax	15
2	Registration under GST	15
3	Collection of Tax under Integrated Goods and Services Tax Act, 2017	10
4	Place of supply of goods or services or both under Integrated Goods and Services Tax Act, 2017	10
5	Payment of GST	10
Total		60

SN	Modules/ Units	
1	Overview of Goods and Service Tax	
	Introduction and Meaning of GST and IGST	
	Scope of GST Present/old Tax Structure v/s GST GST in Other Countries Existing taxes proposed to be subsumed under GST Principles adopted for subsuming the taxes Dual GST Benefits of GST	
	GST Council	
	GST Network (GSTN) and GST regime	
	Integrated Goods and Services Tax Act, 2017: title and definitions, administration.	
2	Registration Under GST	
	Rules and Procedure of registration	
	Special provisions relating to casual taxable person and non-resident taxable person	
	Amendment of registration	
	Cancellation of registration Revocation of cancellation of registration	
3	Collection of Tax under Integrated Goods and Services Tax Act, 2017	
	Sec 5 and Sec 6	
4	Place of supply of goods or services or both under Integrated Goods and Services Tax Act, 2017	
	Sec 10 and Sec 12	
5	Payment of GST	
	Introduction	
	Time of GST Payment	
	How to make payment	
	Challan Generation & CPIN	
	TDS & TCS	

Note: Relevant Law/Statute/Rules in force and relevant Standards in force on 1st April immediately preceding commencement of Academic Year is applicable for ensuring examination after relevant year

Group A: Advanced Accounting, Corporate Accounting and Financial Management

3. Financial Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Types of Financing	12
2	Investment Decisions : Capital Budgeting	12
3	Management of Working Capital	12
4	Financial Planning	12
5	Financial Policy and Corporate Strategy	12
	Total	60

SN	Modules/ Units		
1	Types of Financing		
	IntroductionNeeds of Finance and Sources: Long Term, Medium Term, Short TermLong Term Sources of FinanceOwners Capital / Equity CapitalPreference share capitalRetained EarningDebentures or BondsLoans from Financial Institutions / BanksShort Term Sources of FinanceTrade CreditAccrued Expenses and Deferred IncomeAdvances From CustomersCommercial PapersBank Advances:Loans, O/D, Clean O/Ds, Cash Credit, Advances against goods,Bills Purchased, Discounted, Advances against documents of title of goods,Advances against supply of bills, Term LoansInter Corporate DepositsCertificate of Deposits		
2	Public Deposits Investment Decisions : Capital Budgeting		
	 Introduction Nature of Capital Budgeting Purpose of Capital Budgeting Capital Budgeting Process Types of Capital Investment Decisions Project Cash Flows and Net profit Approval Basic Principle of Measuring Project Cash Flows Increment principle, Long Term Funds Principle, Exclusion of Financial Cost Principle, Post Tax Principle Probability technique for measurement of cash flow Capital Budgeting Techniques : Net Return Value; Internal Rate of Return; Profitability Index Methods A Comparison; Project Selection Under Capital Rationing (Note: Problems on computation of cash flow, ranking of projects on various techniques, selection and analysis with / without capital rationing. Comparison of IRR with Required rate of return i.e. cut off rate, IRR and mutually exclusive projects with unequal lives, multiple IRR) 		

SN	Modules/ Units		
3	Management of Working Capital		
	 Meanings, Concepts and policies of working capital Management of working capital Issues in working capital needs (only Theory) Operating or working capital cycle (only Theory) Management of components of working capital Management of Cash and Marketable Securities: Motives for Holding Cash; Objectives of Cash Management; Factors Determining Cash Needs; Basic Strategies of Cash Management; Cash Management Techniques / Processes; Marketable Securities; and Cash Management: Objectives; Credit Policies; Credit Terms; and Collection Policies. Inventory Management: Objectives; and Techniques. 		
4	Financial Planning		
	 Introduction Meaning of Budget Essentials of a budget, Types of Budgets Advantages of Budgeting Zero Based Budget (Note: Practical Questions on Sales Budget, Production Budget, Material Budget, Cash Budget and Master Budget) 		
5	Financial Policy and Corporate Strategy		
	 Meaning of strategic financial management Strategic financial decision making framework Functions of Strategic Financial Management Financial Planning 		

Group A: Advanced Accounting, Corporate Accounting and Financial Management

4. International Financial Reporting Standards

SN	Modules	No. of Lectures
1	Conceptual Foundations of Financial Statements	15
2	Presentation of Financial statements	15
3	Indian Accounting Standards for Assets, Liabilities and Revenue	15
4	Presentation of Single Entity Financial Statements Covered by IFRS Convergence	15
	Total	60

SN	Modules/ Units		
1	Conceptual Foundations of Financial Statements		
	 The objective of financial reporting; The main assumptions; Qualitative characteristics of financial reporting; Elements of Financial Statements: recognition and measurement 		
2	Presentation of Financial statements		
	Presentation of financial statements Accounting standards: Role/objectives of accounting standards, Development of accounting standards in India - Requirements of international accounting standards - International organizations engaged in accounting harmonization - IASB - FASB - Role of IASB in developing IFRS IFRS :- Introduction, scope Indian Accounting standards (Ind AS) : Introduction Road map Comparison of Ind AS, IFRS and AS Conceptual framework Definition of financial elements Principles of recognition, measurements, presentation and disclosure.		
2	(Theory and Practical)		
3	Indian Accounting Standards for Assets, Liabilities and Revenue Valuation of Inventories		
	Cash flow statement Accounting for tangible non-current assets Accounting for intangible assets Accounting for impairment of assets Accounting for borrowing costs Investment property Revenue from contracts with customers Income tax Employee benefits Provisions, contingent liabilities and contingent assets (Theory and Practical)		
4	Presentation of Single Entity Financial Statements Covered by IFRS Convergence		
	 Ind AS 1: Accounting policies, Accounting estimates IAS 8 and Ind AS 8- Events after reporting date IAS 10 and Ind AS 10 - Structure and contents of financial statements Preparation of financial statements: Statement of Financial Position (SOFP) - Statement of Profit or Loss (SOPL) - Statement of Changes in Equity (SOCE) - Cash Flow Statement (SOCF) (IAS 7 and Ind AS 7). (Theory and Practical) 		

Group A: Advanced Accounting, Corporate Accounting and Financial Management

5. Personal Financial Planning

SN	Modules	No. of Lectures
1	Understanding Personal Finance	15
2	Risk Analysis & Insurance Planning	15
3	Retirement Planning & Employees Benefits	15
4	Investment Planning	15
	Total	60

SN	Modules/ Units	
1	Understanding Personal Finance	
	 Introduction Time value of money applications Personal financial statements, Cash flow and debt management, tools and budgets Money Management Tax planning Managing Checking and Savings Accounts Maintaining Good Credit Credit Cards and Consumer Loans Vehicle and Other Major Purchases Obtaining Affordable Housing Income and Asset Protection Managing Property and Liability Risk Managing Health Expenses 	
2	Risk Analysis & Insurance Planning	
	 Risk management and insurance decision in personal financial planning, Various Insurance Policies and Strategies for General Insurance, Life Insurance, Motor Insurance, Medical Insurance. 	
3	Retirement Planning & Employees Benefits	
	Retirement need analysis techniques, Development of retirement plan, Various retirement schemes such as Employees Provident Fund (EPF), Public Provident Fund (PPF), Superannuation Fund, Gratuity, Other Pension Plan and Post- retirement counselling.	
4	Investment Planning	
	Risk Return Analysis Investing in Stocks and Bonds ,Mutual Fund, Derivatives, Investing in Real Estate, Asset Allocation, Investment strategies and Portfolio construction and management.	

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

Semester IV

No. of Courses	Semester IV	Credits	
1	1 Elective Courses (EC)		
-	Group B: Business Studies (Management) (Any Three out of Five)		
1	Supply chain management and logistics	06	
2	Advertising and sales Management	06	
3	Retail Management	06	
4	Tourism Management	06	
5	Management of Business Relations	06	
	Total Credits	18	

Group B: Business Studies (Management)

1. Supply chain management and logistics

SN	Modules	No. of Lectures
1	Introduction to Supply Chain Management	15
2	Perspectives of SCM	15
3	Introduction to Logistics	15
4	Design of SCM, Logistics and Use of Internet	15
Total		60

SN	Modules/ Units		
1	Introduction to Supply Chain Management (SCM)		
	 Supply Chain Management: Concept, Features, Evolution, Importance, Process and Barriers of Supply Chain Management. Principles and Strategies: Principles, Supply Chain Strategies – Organizations, Coordination, Innovation and Forecasting. Participants in SCM: Supply chain intermediaries- Concept and Types, Channels of Distribution for Industrial Goods and Consumer Goods, Channel of Distribution at Services Level, Factors for selection of suitable channels. 		
2	Perspectives of Supply Chain Management		
	 Global perspectives: Measuring and analyzing the value and efficiency of global Supply Chain Networks, Global market forces, Types of global supply chain. Indian Perspectives: Measuring and Analyzing the value and efficiency of domestic Supply Chain Networks, Economic effects of supply chains. Customer Perspectives: Customer values, Role of customers and Ways of improving customer services in SCM. 		
3	Introduction to Logistics		
	 Logistics Management: Concept and Process, Competitive Advantages and Three C's, Changing Logistics Environment, Reverse Logistics, Importance ofInventory Control, Bull-whip effect Transportation and Warehousing: Transport Functions and Participants in Transportation Decisions, Transport Infrastructure- Forms, Warehouse Functions and Operations Packaging and Materials Management- Consumer and Industrial Goods Packaging - Importance, Factors influencing Materials Planning, Preservation Safety and Measures of Materials Handling 		
4	Design of SCM, Logistics and Use of Internet		
	 SCM Plan- Demand Planning, Source of Procurement, Production or Assembly Steps, Sales return of defective or excess goods Use of Internet in SCM- E-market places, E-procurement, E-logistics, E- fulfilment, Operative Systems in SCM: Enterprise Resource Planning (ERP), Performance Modelling of supply chains using Markov chains, Inventory Control- Importance, Pareto's Law 		

Group B: Business Studies (Management)

2. Advertising and sales Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Advertising Fundamentals and Media	15
2	Creativity, Social and Regulatory Framework of Advertising	15
3	Sales Management	15
4	Sales Planning and Controlling	15
	Total	60

SN	Modules/ Units		
1	Advertising Fundamentals and Media		
	 Basics of Advertising : Concept and Features, Significance, Classification of Advertising, Integrated Marketing Communication (IMC) - Elements, Behavioural Model (E.K. Strong AIDA), DAGMAR Model (Russell Colley), Heirarchy of Effects (Lavidge and Steiners) Ad Agency : Various Functional Department, Types, Measures for gaining and reasons for loosing clients, Evaluation Criteria for Selecting an Advertising Agency, Media : New Media Options, Forms of Digital Media, Media Objectives, Criteria for Selecting Suitable Media, Methods of Setting Advertising Budget 		
2	Creativity, Social and Regulatory Framework of Advertising		
	 Creativity &Research:Developing advertising copy - print, broadcast and digital media, Pre-test and post-test methods. Society: Socio-economic contribution and criticisms of advertising, professional courses and careers in the field of advertising Regulatory framework of advertising: Legal Framework of Advertising, Role of Information and Broadcasting Ministry (IBM), Self-Regulatory Bodies – Advertising Standards Council of India(ASCI) and Indian Broadcasting Foundation(IBF) 		
3	Sales Management		
	 Introduction : Sales Management - Features, Functions and Importance, Art of Selling – Types, Process, Qualities of an Effective Salesman. Sales force management : Selection Procedure, Training Methods, Motivational Factors and Compensation methods of sales personnel Sales organistion : Concept, Objectives, Structure and Steps in Developing a Sales Organisation 		
4	Sales Planning and Controlling		
	 Sales planning : Concept, Process, Sales Forecasting - Methods and Limitations Sales controlling : Concept of Sales Budget and Sales Audit, Sales Quota - Methods and Types, Objectives and Factors Determining and Designing Sales Territory 		
	 Recent trends - Importance of Customer Feedback, Sales Management - Data Mining, Role of IT 		

Group B: Business Studies (Management)

3. Retail Management

SN	Modules	No. of Lectures
1	Introduction to Retail Management	15
2	Retail Management Strategy	15
3	Retail Location, Layoutand Merchandising	15
4	Use of Technology and Career options	15
	Total	60

SN	Modules/ Units		
1	Introduction to Retail Management		
	 Retailing:Concept, Scope and Importance of Retailing and Retail Management, Retail Formats, Theories of Retail change, Retail Environment-Economic, Legal, Technological & Competitive Retail sector in India: Size, and Drives of Retail changes, FDI in Retailing in Indian Context Recent Trends in Retailing: Modern Retail Formats, Mall System, Challenges Faced by the Retail Sector, Ethics in Retailing. 		
2	Retail Management Strategy		
	 Retail Strategies: Promotional Strategies, Retail Planning Process, Retail - Market Segmentation - Concept and Significance Relationship Marketing Strategies: CRM in Retailing, Retail Value Chain, Retail life Cycle, HRM in retailing- Growing importance of HR and Challenges faced by HR in retailing Consumer Strategies: Consumer Behaviour in Retail Context, Buying Decision Process, Customer Service as a Part of Retail Strategy. 		
3	Retail Location, Layoutand Merchandising		
	 Retail Location& Merchandising: Importance, Types, Steps involved in choosing a Retail Location. Merchandising: Concept and Merchandising Planning Process, Retail Branding, Merchandising Buying, Visual Merchandising Store Design and Layout: Store Design - Elements, Store Layout - Importance, Steps for Designing 		
4	Use of Technology and Career options		
	 Technologies: Use of Technologies in retailing - Electronic Data Interchange (EDI), Radio Frequency Identification (RFI), Data Base Management system E-Retailing: Formats, Challenges, Green Retailing - Concept and Importance Retail as a Career: Various Career Options, Responsibilities of Store Manager, Functions of Merchandising Manager 		

Group B: Business Studies (Management)

4. Tourism Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Tourism Management	15
2	Tourism Marketing	15
3	Tourism Practices	15
4	Tourism Development	15
	Total	60

SN	Modules/ Units		
1	Introduction to Tourism Management		
	Tourism – Concept, Characteristics Importance and Types of Tourism		
	• Tourism Industry: Concept, Nature, Structure and Components, Career options in		
	 Tourism. Tourism Destination: Concept, Elements, Tourism Destination Planning – Process 		
	and Importance.		
2	Tourism Marketing		
	• Tourism Product : Concept, Characteristics, Types, Tourism Product Planning- Need and Importance.		
	• Tourism Pricing: Influencing factors, Pricing objectives, Tourism Pricing Policies		
	Tourism Promotion: Importance, Elements of Tourism Promotion, Role of Adverticing Promotional Plan, Implementation Procedure		
3	Advertising, Promotional Plan – Implementation Procedure Tourism Practices		
3	• Travel Intermediaries: Travel Agency and Tour operators – Definition and		
	Differentiation, Types, Importance and Functions.		
	• Setting up of Travel Agency and Tour Operations and their Approval: Business		
	setting Procedure and process, Types of organization to be set up- Proprietorship,		
	Partnership, Franchise, Approval from Ministry of Tourism and IATA		
	International Tourism: Concept, Importance, Role of Institutions and organizations in promoting International Tourism, WITC, IATO, TAAL, ITDC		
4	in promoting International Tourism -WTTC , IATO, TAAI, ITDC. Tourism Development		
4	Sustainable Tourism Development: Concept, Principles, Approaches to Sustainable		
	Tourism, Code of Conduct for safe and sustainable Tourism in India		
	Government Policies: National Action Plan, National Tourism Policy, Government		
	incentives for Tourism Development and Promotion.		
	• Future Growth and Development of Indian Tourism - Factors influencing growth of		
	Tourism Industry in India, Major Tourism schemes of Government of India- Visa on		
	Arrival (VoA), PRASAD Scheme, HRIDAY Scheme, Travel Circuits; Incredible India Campaign.		

Group B: Business Studies (Management)

5. Management of Business Relations

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Management of Business Relations	15
2	Customer and Channel Relationship Management	15
3	Employee Relationship Management	15
4	Supplier, Investors and Community Relationship Management	15
	Total	60

SN	Modules/ Units		
1	Introduction to Management of Business Relations		
	 Business Relations - Need , Importance of Business relations, Business Relationship Management (BRM) Competencies. Business Relation Manager- Role, qualities, Skills. Business Relations- Principles, Steps , Trends, Impact of Communication on 		
2	Business Relations. Customer and Channel Relationship Management		
2			
	 Customer Relations Management: Concept, Characteristics of an empowered customer, Approaches & Types, Role of Customer Relations Manager. 		
	 Designing and developing customer Value- Turning customers to loyal clients, 		
	Strategic Framework for CRM, E-CRM: Concept and Benefits, Steps,		
	Successful CRM implementation.		
	Channel Relationship - Concept, importance , Challenges, Elements		
	contributing to effective channel relationships.		
3	Employee Relationship Management		
	Employee Relationship Management - Concept, Objectives of Employee		
	Relations, Approaches to Employee Relations,		
	Role of Employee Relations Manager, Prospects & Importance of Industrial Relations, Broklams & Challenges of Employee Relations, Key Drivers for		
	Relations, Problems & Challenges of Employee Relations, Key Drivers for shifting from Industrial Relations to Employee Relations,		
	 Strategic Framework for ERM, Factors influencing ERM, Essentials of an 		
	effective ERM, ERM strategy.		
4	Supplier, Investors and Community Relationship Management		
	Supplier Relations – Concept, Supplier Segmentation Pyramid, Supplier		
	Improvement Process for better relations, Challenges.		
	 Investors Relations –Concept, Focus, Keys to successful investors relations, 		
	Enhancing shareholders loyalty and retention.		
	Stakeholder relations- Types of stakeholders, Role of business in social		
	development, strategies to improve community relations, impact of		
	community relations on business.		

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2017-2018)

No. of Credits **Semester IV** Courses 1 **Elective Courses (EC)** Group C: Banking and Finance (Any Three out of Five) **International Finance** 06 1 2 **Financial Services** 06 3 Auditing of Banking Sector 06 4 **Investment Management** 06 **Currency Derivatives** 06 5 **Total Credits** 18

Semester IV

Group C: Banking and Finance

International Finance

SN	Modules	No. of Lectures
1	Introduction to International Finance	15
2	International Monetary System and Foreign Exchange Market	15
3	Currency Futures and Options	15
4	Global Financial Market	15
	Total	60

SN	Modules/ Units		
1	Introduction to International Finance		
	 A) Introduction to International Finance – Meaning, Scope of International Financial Management, Factors contributing to growth in International Finance, Recent Changes in Global Financial Markets. B) Balance Of Payments – Meaning, Components, Factors- Deficit and Surplus in BOP, Capital Account Convertibility and Current Account 		
2	International Monetary System and Foreign Exchange Market		
	 A) International Monetary System – Introduction to Exchange rate regime, Th International Monetary Fund - Objectives and Funding Facilities, Internationa Liquidity and Special Drawing Rights and Introduction to The Europea Monetary System B) Foreign Exchange Market - Major Participants in Spot market and Forwar market, Exchange Rate Quotation, Determination of exchange rates in spot and forward market, Factors influencing exchange rates and Types of Foreig Exchange Rates and Interest rate 		
3	Currency Futures and Options		
	 A) Currency Futures - Futures Contracts, Features, Trading Process- Hedging in currency futures market and Speculation in currency futures market, Determination of Futures prices, Forward prices and expected spot prices on delivery. B) Currency Options: Features, Terminology, Types of options, options pricing, hedging with currency options and Speculation with currency options. 		
4	Global Financial Market		
	 A) International Instruments – Introduction, Gains from International Market International Equities and Bonds Market, Short term and Medium term Instruments and Types of risks and tools. B) Multilateral Development Banks - The World Bank, International Finance Corporation, Asian Development Bank – Introduction, Characteristics and Functions. 		

Group C: Banking and Finance

Financial Services

SN	Modules	No. of Lectures
1	Evolution of Financial Services	15
2	Marketing of Financial Services	15
3	Mutual Funds and Merchant Banking	15
4	Portfolio Management and Other Financial Services	15
	Total	60

SN	Modules/ Units		
1	Evolution of Financial Services		
	 A) Evolution of Financial Services - Meaning of Financial Services, Types of Financial Services, Fund based and Non-fund based, Significance of Financial Services, Growth of Financial Services in India, Emerging Trends in Financial Services and constraints in growth of financial services. B) Regulatory Framework for Financial Services – Role of RBI, Role of SEBI, Provisions of Companies Act, Role of FEMA and Ethical issues in the Marketing of Financial services. 		
2	Marketing of Financial Services		
	 A) Categories of Financial Products – Insurance, Banks, Stocks, Mutual Funds, Pension Plans, other Savings Products, Financial Services Marketing Environment –Micro and Macro Environmental Forces, Marketing Mix for Financial Services, Promotional Strategies, Customer Relations and Servicing. B) Treasury Management – Structure and Organization, Functions and Responsibilities of a Treasurer, Cost Centre, Profit Centre, Integrated Treasury, Treasury and Asset Liability Management, Liquidity Management: CRR/CCIL/RTGS and Types of Exposure and Elimination of Exposure 		
3	Mutual Funds and Merchant Banking		
	 A) Mutual Funds Concept – History of Mutual fund Industry in India , Advantages Different Scheme, Fund Accounting and Valuation (Practical Problems on Mutual Fund) B) UTI: Objective, Functions, Regulation, Performance Measurement and Evaluation of Mutual Fund Schemes, Unit holder's Protection. C) Merchant Banking – Facets of Merchant Banking, Functions, Legal and Regulatory Frameworks, Relevant Provisions of Companies Act , SEBI Guidelines, Role in Issue Management, Appraisal of Projects, Designing Capital Structure and Instruments and Issue Pricing 		
4	Portfolio Management and Other Financial Services		
	 A) Portfolio Management Services - Meaning, Importance, Objectives, Strategies, Types of Strategies – Passive & Active Strategies, Role of Portfolio Managers. B) Other Financial Services – Leasing and Hire Purchase, Factoring and Forfaiting, Consumer Finance, Securitization, Venture Capital, Loan Syndication, Custodial and Depository Services, Credit rating 		

Group C: Banking and Finance

Auditing of Banking Sector

SN	Modules	No. of Lectures
1	Auditing Concepts	15
2	Auditing of Banks	15
3	Verification of Assets and Balances of Banking Companies	15
4	Introduction to Concurrent Audit	15
	Total	60

SN	Modules/ Units		
1	Auditing Concepts		
	 Nature, Scope and Significance of Auditing Audit Engagement, Audit Program, Audit Working Papers, Audit Note Book, Audit Evidence 		
2	Auditing of Banks		
	 Meaning and Appointment of Bank Auditors Internal control system in Banks Categories of Bank Audit: Concurrent audit, Internal Audit/ Information Systems Audit and Statutory audit Banking Regulation Act in pursuant to accounts and auditing of banking companies - Sec 29 to Sec 34A Guidance Note on Audit of Banks by ICAI 		
3	Verification of Assets and Balances of Banking Companies		
	 Cash, bank balances, money at call and short notice Investments Advances Fixed assets Other assets Capital Reserves and surplus Deposits Borrowings Other liabilities and provisions 		
4	 Introduction to Concurrent audit Concurrent audit system : Meaning, scope, coverage, Types of activities, Appointment of auditors and reporting Internal Audit/ Information Systems Audit – Meaning, Scope Statutory audit of banks/bank branches Audit of bank branch and reporting 		

Group C: Banking and Finance

Investment Management

SN	Modules	No. of Lectures
1	Portfolio Management – An Introduction	10
2	Portfolio Revision and Evaluation	15
3	Fundamental and Technical Analysis	20
4	Efficient Market Theory and CAPM	15
	Total	60

SN	Modules/ Units		
1	Portfolio Management – An Introduction		
	A)Portfolio Management – An Introduction		
	Investment - Meaning, Characteristics, Objectives, Investment V/s Speculation,		
	Investment V/s Gambling and Types of Investors		
	Portfolio Management – Meaning, Evolution, Phases, Role of Portfolio Managers,		
	Advantages of Portfolio Management.		
	Investment Environment in India and factors conducive for investment in India.		
	B) Portfolio Analysis and Selection		
	Portfolio Analysis – Meaning and its Components, Calculation of Expected Return		
	and Risk, Calculation of Covariance, Risk – Return Trade off.		
	Portfolio Selection – Meaning, Feasible Set of Portfolios, Efficient Set of Portfolios,		
	Selection of Optimal Portfolio, Markowitz Model, Limitations of Markowitz Model,		
	Measuring Security Return and Portfolio Return and Risk under Single Index Model		
	and Multi Index Model.		
2	Portfolio Revision and Evaluation		
	A)Portfolio Revision and Evaluation - Portfolio Revision – Meaning, Need,		
	Constraints and Strategies. Portfolio Evaluation – Meaning, Need, Measuring		
	Returns (Sharpe, Treynor and Jensen Ratios) and Decomposition of Performance.		
	B) Bond Valuation – Meaning, Measuring Bond Returns – Yield to Maturity, Yield to		
	call and Bond Pricing. Bond Pricing Theorems, Bond Risks and Bond Duration.		
	(Practical Problems on YTM and Bond Duration)		
3	Fundamental and Technical Analysis		
	A)Fundamental Analysis - Economy Analysis – Meaning, Framework of Economic		
	Analysis, Forecasting, Barometric or Indicator Approach, Econometric Model		
	Building and Opportunistic Model Building. Industry Analysis – Concept of		
	Analysis, Industry Life Cycle, Industry Characteristics. Company Analysis –		
	Financial Statements, Analysis of Financial Statements, (Practical questions on		
	Debt equity ratios, total debt ratio, proprietary ratios, interest coverage ratio,		
	Profitability ratios related to sales, investment, equity shares and Efficiency or		
	Activity Ratios) and Assessment of risk (Leverages)		
	B) Technical Analysis - Dow Theory, Meaning and Principles of Technical Analysis,		
	Price Chart, Line Chart, Bar Chart, Japanese Candlestick Chart, Trends and Trends		
	and Trend Reversals, Chart Patterns, Support and Resistance, Reversal Patterns,		
	Continuation Patterns and Elliot Wave Theory, Mathematical Indicators –		
	Calculation of Moving Averages (Simple and Exponential Moving Average),		
	Oscillators and Relative strength Index, Market Indicators and Fundamental		
	Analysis V/s Technical Analysis		
4	Efficient Market Theory and CAPM		
	A) Efficient Market Theory - Random Walk Theory, The Efficient Market Hypothesis,		
	Forms of Market Efficiency, Competitive Market Hypothesis		
	B) CAPM- Fundamental Notions of Portfolio Theory, Assumption of CAPM, Efficient		
	Frontier with Riskless Lending and Borrowing, Capital Market Line, Security Market		
	Line and Pricing of Securities with CAPM. Arbitrage Pricing Theory (APT) – The		
	Return Generating Model, Factors Affecting Stock Return, Expected Return on		
	Stock, APT V/s CAPM.		

Group C: Banking and Finance

Currency Derivatives

SN	Modules	No. of Lectures
1	Introduction to Currency Markets	15
2	Regulatory Framework for Currency Derivatives	15
3	Strategies using Currency Derivatives	15
4	Clearing and Settlement of Currency Futures	15
	Total	60

SN	Modules/ Units		
1	Introduction to Currency Markets		
	 A) Introduction to Currency Markets – Brief history of foreign exchange markets, Major Currency pairs, Overview of international currency markets, Basics of currency markets and peculiarities in India, Settlement date or value date, OTC forward rate, Exchange Rate arithmetic cross rate, Impact of market economics on currency prices and economic indicators B) Foreign Exchange Derivatives – Definition, Products , Growth drivers of derivatives, Market Players, Key economic function of derivatives, Financial Market stability: Exchange traded V/s OTC derivatives. 		
2	Regulatory Framework for Currency Derivatives		
	 A) Regulatory Framework for Currency Derivatives – Applicability of Securities Regulation Act, 1956, RBI-SEBI standing technical committee on exchange traded currency and interest rate derivatives, Foreign Exchange Management Act, 1999 – Provisions, Regulatory framework for exchanges, Regulatory framework for clearing corporations, Governing council of the exchange and clearing corporation and Eligibility criteria for members. B) Code of Conduct and Investor Protection - Adherence to SEBI codes of conduct for brokers/ sub-brokers, Adherence to codes of conduct specific to currency derivatives segment, Grievance redressal mechanism for investors. 		
3	Strategies using Currency Derivatives		
	 A) Strategies using Currency Derivatives – Market Participants – Hedgers, Speculators, Arbitrageurs, Computing pay offs from a portfolio of futures and trade remittances, Using foreign currency futures for hedging various kinds of foreign exchange exposures, Use of currency futures by speculators and arbitrageurs, trading spreads using currency futures, limitations of currency futures for hedgers. B) Trading in Currency Futures - Currency futures contract specification, Other terminologies with respect to contract specifications, Trader workstation screen (TWS), Entities in the trading system, Types of orders, Price Limit Circuit Filter and Rules, regulations and bye laws of Exchange. 		
4	Clearing and Settlement of Currency Futures		
	 A) Clearing and Settlement in Currency Futures- Clearing vs. Settlement, Clearing entities, Clearing mechanism, Regulatory guidelines on open position limits and Settlement mechanism. B) Risk Management in Currency Futures - Risk management measures, Margin requirements, Mark-to-Market, Settlement, Margin collection and enforcement, Periodic Risk Evaluation Report, Surveillance and Unique Client Code (UCC). 		

Master of Commerce (M.Com) Programme Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year 2017-2018)

No. of Credits **Semester IV** Courses 1 **Elective Courses (EC)** Group D: E-Commerce (Any Three out of Five) E-Commerce Security and Law 06 1 2 Advance technology for E-Commerce 06 3 **Management Information System** 06 **Digital Marketing** 4 06 International Business, Law and Taxation 06 5

Total Credits

18

Semester IV

Group D: E-Commerce

1. E-Commerce Security and Law

SN	Modules	No. of Lectures
1	Introduction to E-Commerce Security	15
2	Security Threats and Measures	15
3	Introduction to Cyber Law	15
4	Cyberspace Laws	15
	Total	60

SN	Modules/ Units		
1	Introduction to E-Commerce Security		
	 E-commerce security: Concept, Need/Importance, Security Issues in E-Commerce-Security risks of e-commerce, Threats and Risk Management: Type of threats, Sources of threats, Security tools & Risk – Types of security, management approach Network Security: Encryption, Protecting Web server with a Firewall, Firewall and the Security Policy, Network Firewalls and Application Firewalls, Proxy Server 		
2	Security Threats and Measures		
	 Current threats, Cryptography, public key certificates and infrastructures, authentication and authorization certificates, Mobile code security, security of agent-based systems, secure electronic transactions, electronic payment systems, intellectual property protection, Symmetric and Asymmetric Cryptosystem, Role of electronic signature, EDI Security 		
3	Introduction to Cyber Law		
	 Introduction to Cyber Laws-World Scenario, Cyber-crime& Laws in India and their limitations, Threats in Computer Systems: Virus, Cyber Crime, Hacking, Web Vandals, E-mail Abuse, Software Piracy and Patents. The problems of internet jurisdictions, Law relating to Electronic records, Importance of Electronic Records as Evidence. 		
4	Cyberspace Laws		
	 Cyberspace and Internet in India- Penalties, Offences and Compensation Protection of Cyber Consumers in India and CPA 1986, International efforts related to cyberspace laws, Trace an IP address, Security Tools, Client server network security, Encryption and concepts of public and private key infrastructure 		

Group D: E-Commerce

2. Advance technology for E-Commerce

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Advanced technology for E-commerce	15
2	Information Publishing Technology	15
3	E-commerce Success with Contain Marketing	15
4	New Trends	15
	Total	60

SN	Modules/ Units		
1	Introduction to Advanced technology for E-commerce		
	• Advanced technology for E-commerce: Concept of E-commerce, Internet & WWW, Functions,		
	 Types of technology, Electronic Data Interchange (EDI)- Benefits, Transaction and examples, Multimedia technology – desktop Video Conferencing 		
	Securing Network Transaction: Cryptology, Digital Signature, E-mail security		
2	TCP/IP and Information Publishing Technology		
	 Internet Protocols – OSI Model, TCP/IP, FTP; LAN, WAN Information Publishing Technology - HTML, URL, HTTP, HTML FORM, CG SERVICES, eXtensible Markup Language (XML) – Application and Architecture, Data Minin 		
	and Web Mining		
3	Mobile Agents& WAP		
	 Mobile Agents- Concept, Mobility and security issues, Client Server Approach v/s Mobile Agent based approach, Mobile computing, Mobile users in Global E-commerce, Coalition Formation Wireless Application Protocol (WAP) - Benefits and Architecture, Web Server and client (Web Browser). 		
4	New Trends		
	 New E-commerce Technology Trends, Broadband technologies, Affiliate Marketing, Content marketing - challenges, Key performance indicators (KPIs),Complex Server and Network Infrastructure, transitioning to Virtualization & Cloud Computing, use of fully or partially outsourced IT support Supercharged Kiosks, Role of Instant Messaging (IM), Digital literacy and multimedia design 		

Group D: E-Commerce

3. Management Information System

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Management Information System (MIS)	15
2	Business & Designing Information System	15
3	Information and System Concept	15
4	Decision Support System & Development of MIS	15
	Total	60

SN	Modules/ Units		
1	Introduction to Management Information System (MIS)		
	• MIS: Concept, Characteristics, Components, Strategic uses, Challenges of Global information system		
	 Information System Resources: Selection of Business Software and Hardware, Business Network and Data Warehouses 		
	Business Intelligence, Knowledge Management, System Planning and Development		
2	Business & Designing Information System		
	 Classification of MIS: Transaction Process System (TPS), Process Control System (PCS), Enterprise Collaboration System (ECS), Business information system, System Design: Conceptual Design, Objectives, Methods Structuring Data of MIS: Duramid structure, Ouerving, Approaching, and Visualizing, 		
	 Structuring Data of MIS: Pyramid structure, Querying, Aggregating and Visualizing Data 		
3	Information and System Concept		
	 Information: Concept, Types, Dimensions of Information, Information Quality System: Kinds, Elements of system, Human as information processing system Need of IT Industry, Scope of Infrastructure Management, Attributes of Computing System 		
4	Decision Support System& Development of MIS		
	 Decision Making: Concept, Types, Simon's Model, Decision Making and MIS Supporting Management Decision: Key Performance Indicators (KPI), Planning and Implementation. Development of MIS: Steps in developing a right MIS, System Development 		
	Approaches, System analysis and design- Determinants and requirement		

Group D: E-Commerce

4. Digital Marketing

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Digital Marketing & SEO	15
2	Google analytics and SMO	15
3	SEM and Social Media	15
4	Email and Mobile Marketing	15
	Total	60

SN	Modules/ Units
1	Introduction to Digital Marketing & SEO
	 Digital Marketing - Introduction, Features, Strategies, Types, Aligning Internet with Business Objectives, User Behaviour & Navigation, Branding & User Experience, Customer Insights Search Engine Optimization(SEO) – Search Engines Basics, Functioning of Search Engines, On&off-page Optimization,
2	Google analytics and SMO
	 Google Analytics–Concepts, steps, Accounts-profiles and users navigation, Basic metrics, The main sections of Google Analytics reports-Traffic Sources, Direct referring and
	 search traffic; Social Media Optimization (SMO) - Concepts, Pros & Cons, bookmarking & aggregating, content, content sharing, knowledge sharing; connecting to social networking
3	SEM and Social Media
	 Search Engine Marketing (SEM) - Concept, Understanding Google search - Organic & Paid, Overview of Google Adwords, Google Adsense, Microsoft AdCenter and Yahoo Search Marketing, Campaign Management, Pay Per Click (PPC) Management, Conversion Tracking, Targeting & Analytics, Keyword Selection, Conversion Metrics- CPA, CTR, Campaigns - Google PPC Campaigns, LinkedIn Campaigns, Facebook Campaign, YouTube Advertising
4	Email and Mobile Marketing
	 E-mail Marketing - User Behaviour, Segmentation, Key Metrics, Best Practice Case Studies, E-marketing strategies, Tracking landing pages, Choosing your metrics, A/B and Multivariate testing, Analyzing test results, Setting your budgets; Mobile Marketing - Concept, SMS Strategy, Mobile Advertising, Mobile Optimized Websites, Mobile Apps, Proximity Marketing,

Group D: E-Commerce

5. International Business, Law and Taxation

SN	Modules	No. of Lectures
1	Use of Internet in the International Business	15
2	International Outsourcing and Ethics	15
3	International Law and Taxation	15
4	Government Intervention in International Business	15
Total		60

SN	Modules/ Units		
1	Use of Internet in the International Business		
	International Business: Concept, Features, External and Internal Factors of International business		
	 International business Internet and International business: Significance, Use of Internet, Impact of E- 		
	commerce and Barriers		
	International E-commerce business: Concept of E-business, Features, Evolution,		
2	International Outsourcing and Ethics		
	Global outsourcing: Concept, Forms, Drivers, Development in IT-BPO Sector		
	 International Outsourcing in India: Benefits, Growth Drivers of India, Limitations 		
	• Ethics in International e-Business, Constraint in e-Business in India, International e-		
	Commerce Benchmarking,		
3	International Law and Taxation		
	 International Legal environment in E-commerce, European Community Law, Intellectual Property Law, Pillaging Patent 		
	 United States Taxation of International e-Commerce, Law and Policy of Organisation for Economic Co-operation and Development (OECD) 		
	 International Taxation and e-Commerce: Direct and Indirect taxation, Relevance of E-commerce, Effect of E-commerce on consumption taxes, Emerging Tax Policy, 		
4	Government Intervention in International Business		
	 Instruments of Government Intervention: Tariff and Non- Tariff Barriers, Investment Barriers, 		
	 Policies regarding e-commerce: FDI Policy, Foreign Trade Policy, Export-Import 		
	Policy- Methods of E-payment, e-Documentations		
	 Rationale for Government Intervention: Defensive and offensive rationale, Economic Freedom and Government Support 		

Scheme of Examination:

The performance of the learners will be evaluated in two components. One component will be the Internal Assessment component carrying 40% marks and the second component will be the Semester End Examination component carrying 60% marks.

Internal Assessment:

The Internal Assessment will consist of one class test of 40 marks for each course excluding projects. The question paper pattern will be shown as below:

Question Paper Pattern (Internal Assessment)

Maximum Marks: 40 marks

Questions to be set: 03

Duration: 1½ hours

Question No	Particular	Marks
Q-1	Objective Questions Students to answer 10 sub questions out of 15 sub questions. (*Multiple choice/ True or False/ Match the columns/ Fill in the blanks) OR Objective Questions A) Sub Questions to be asked 08 and to be answered any 05 B) Sub Questions to be asked 08 and to be answered any 05 (*Multiple choice/ True or False/ Match the columns/ Fill in the blanks)	10 Marks
Q-2	Concept based short questions Students to answer 5 sub questions out of 8 sub questions.	10 Marks
Q-3	Practical problems or short questions Students to answer 02 sub questions out of 03 sub questions	20 Marks

Question Paper Pattern (Practical Courses)

Maximum Marks: 60

Questions to be set: 04

Duration: 2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question	Particular	Marks
No		
Q-1	Practical Question	15 Marks
	OR	
Q-1	Practical Question	15 Marks
Q-2	Practical Question	15 Marks
	OR	
Q-2	Practical Question	15 Marks
Q-3	Practical Question	15 Marks
	OR	
Q-3	Practical Question	15 Marks
Q-4	Objective Question	15 Marks
	(Multiple Choice/ True or False/ Fill in the Blanks/ Match the	
	Columns/ Short Questions.)	
	OR	
Q-4	Short Notes (Any three out of five)	15 Marks

Note:

Full length question of 15 marks may be divided into two sub questions of 08 and 07 marks.

Question Paper Pattern (Theoretical Courses)

Maximum Marks: 60

Questions to be set: 04

Duration: 2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
Q-1	Full length Question	15 Marks
Q-1	OR Full length Question	15 Marks
Q-2	Full length Question	15 Marks
Q-2	OR Full length Question	15 Marks
Q-3	Full length Question	15 Marks
Q-3	OR Full length Question	15 Marks
Q-4	Objective Question (Multiple Choice/ True or False/ Fill in the Blanks/ Match the Columns/ Short Questions.)	15 Marks
Q-4	OR Short Notes (Any three out of five)	15 Marks

Note:

Full length question of 15 marks may be divided into two sub questions of 08 and 07 marks.

Aniversity of Mumbai



Master of Commerce (M.Com) Programme Guidelines for Project Work at Second Year Semester III and IV

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year 2017-2018)

Faculty of Commerce

Introduction

Inclusion of project work in the course curriculum of the M.Com. programme is one of the ambitious aspect in the programme structure. The main objective of inclusion of project work is to inculcate the element of research work challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret particular aspect of the study in his/ her own words. It is expected that the guiding teacher should undertake the counselling sessions and make the awareness among the learners about the methodology of formulation, preparation and evaluation pattern of the project work.

- There are two modes of preparation of project work
 - 1. Project work based on research methodology in the study area
 - 2. Project work based on internship in the study area

Guidelines for preparation of Project Work

Work Load

Work load for Project Work is 01 (one) hour per batch of 15-20 learners per week for the teacher. The learner (of that batch) shall do field work and library work in the remaining 03 (three) hours per week.

1. General guidelines for preparation of project work based on research methodology

- The project topic may be undertaken in any area of Elective Courses.
- Each of the learner has to undertake a Project individually under the supervision of a teacher-guide.
- The learner shall decide the topic and title which should be specific, clear and with definite scope in consultation with the teacher-guide concerned.
- University/college shall allot a guiding teacher for guidance to the students based on her / his specialization.
- The project report shall be prepared as per the broad guidelines given below:
 - Font type: Times New Roman
 - Font size: 12-For content, 14-for Title
 - Line Space : 1.5-for content and 1-for in table work
 - Paper Size: A4
 - Margin : in Left-1.5, Up-Down-Right-1
 - The Project Report shall be bounded.
 - The project report should be 80 to 100 pages

Format

1st page (Main Page)

Title of the problem of the Project

A Project Submitted to

University of Mumbai for partial completion of the degree of

Master in Commerce

Under the Faculty of Commerce

By

Name of the Learner

Under the Guidance of

Name of the Guiding Teacher

Name and address of the College

Month and Year

 2^{nd} Page This page to be repeated on 2^{nd} page (i.e. inside after main page)

Faculty of Commerce, University of Mumbai

Index

Chapter No. 1	Title of the Chapter	Page No.
(sub point 1.1, 1.1.1, And so on)		
Chapter No. 2	Title of the Chapter	
Chapter No. 3	Title of the Chapter	
Chapter No. 4	Title of the Chapter	
Chapter No. 5	Title of the Chapter	

List of tables, if any, with page numbers. List of Graphs, if any, with page numbers. List of Appendix, if any, with page numbers. Abbreviations used:

Faculty of Commerce, University of Mumbai

Structure to be followed to maintain the uniformity in formulation and presentation of Project Work

(Model Structure of the Project Work)

• Chapter No. 1: Introduction

In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner.

• Chapter No. 2: Research Methodology

This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc can be incorporated by the learner.

• Chapter No. 3: Literature Review

This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue.

• Chapter No. 4: Data Analysis, Interpretation and Presentation

This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner.

• Chapter No. 5: Conclusions and Suggestions

In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.

Note: If required more chapters of data analysis can be added.

- Bibliography
- Appendix

Name and address of the college

Certificate

This is to certify that Ms/Mr has worked and duly completed her/his Project Work for the degree of Master in Commerce under the Faculty of Commerce in the subject of and her/his project is entitled, "

Title of the Project "under my supervision.

I further certify that the entire work has been done by the learner under my guidance and that no part of it has been submitted previously for any Degree or Diploma of any University.

It is her/ his own work and facts reported by her/his personal findings and investigations.

Seal of the College

Name and Signature of Guiding Teacher

Date of submission:

Declaration by learner

I the un	dersig	ned N	Aiss / N	/Ir	Name of the learner				here by,		
declare	that	the	work	embodied	in	this	project	work	titled	"	
				Title	of th	e Pro	ject				,

forms my own contribution to the research work carried out under the guidance of <u>Name of the guiding teacher</u> is a result of my own research work and has not been previously submitted to any other University for any other Degree/ Diploma to this or any other University.

Wherever reference has been made to previous works of others, it has been clearly indicated as such and included in the bibliography.

I, here by further declare that all information of this document has been obtained and presented in accordance with academic rules and ethical conduct.

Name and Signature of the learner

Certified by

Name and signature of the Guiding Teacher

Faculty of Commerce, University of Mumbai

Acknowledgment

(Model structure of the acknowledgement)

To list who all have helped me is difficult because they are so numerous and the depth is so enormous.

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my **Principal**, ______for providing the necessary facilities required for completion of this project.

I take this opportunity to thank our **Coordinator**, for her moral support and guidance.

I would also like to express my sincere gratitude towards my project guide _______whose guidance and care made the project successful.

I would like to thank my **College Library**, for having provided various reference books and magazines related to my project.

Lastly, I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **my Parents and Peers** who supported me throughout my project.

2. Guidelines for Internship based project work

- Minimum 20 days/ 100 hours of Internship with an Organisation/ NGO/ Charitable Organisation/ Private firm.
- The theme of the internship should be based on any study area of the elective courses
- Project Report should be of minimum 50 pages
- Experience Certificate is Mandatory
- A project report has to be brief in content and must include the following aspects:

• Executive Summary:

A bird's eye view of your entire presentation has to be precisely offered under this category.

Introduction on the Company:

A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis.

Statement and Objectives:

The mission and vision of the organization need to be stated enshrining its broad strategies.

Your Role in the Organisation during the internship:

The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head.

Challenges:

The challenges confronted while churning out theoretical knowledge into practical world.

Conclusion:

A brief overview of your experience and suggestions to bridge the gap between theory and practice.

• The project report based on internship shall be prepared as per the broad guidelines given below:

- Font type: Times New Roman
- Font size: 12-For content, 14-for Title
- Line Space : 1.5-for content and 1-for in table work
- Paper Size: A4
- Margin : in Left-1.5, Up-Down-Right-1
- The Project Report shall be bounded.
- The project report should be 80 to 100 pages

Evaluation pattern of the project work

The Project Report shall be evaluated in two stages viz.		
Evaluation of Project Report (Bound Copy)	60 Marks	
 Introduction and other areas covered 	20 Marks	
 Research Methodology, Presentation, Analysis and interpretation of data 	30 Marks	
 Conclusion & Recommendations 	10 Marks	
Conduct of Viva-voce	40 Marks	
 In the course of Viva-voce, the questions may be asked such as importance / relevance of the study, objective of the study, methodology of the study/ mode of Enquiry (question responses) 	10 Marks	
 Ability to explain the analysis, findings, concluding observations, recommendation, limitations of the Study 	20 Marks	
Overall Impression (including Communication Skill)	10 Marks	

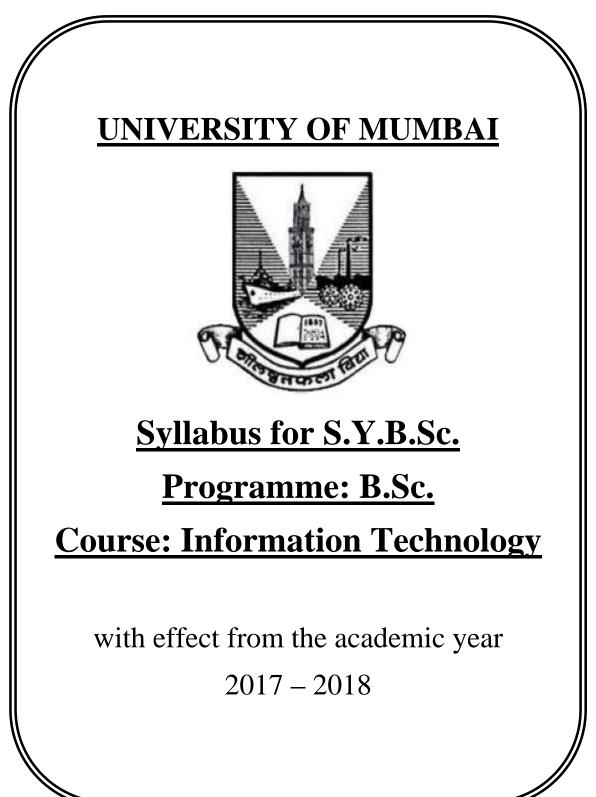
Note:

• The guiding teacher along with the external evaluator appointed by the University/ College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern

Passing Standard

- Minimum of Grade E in the project component
- In case of failing in the project work, the same project can be revised for ATKT examination.
- Absence of student for viva voce: If any student fails to appear for the viva voce on the date and time fixed by the department such student shall appear for the viva voce on the date and time fixed by the Department, such student shall appear for the viva voce only along with students of the next batch.

Academic Council 11/05/2017 Item No:



Semester – 3				
Course Code	Course Type	Course Title	Credits	
USIT301	Skill Enhancement Course	Python Programming	2	
USIT302	Core Subject	Data Structures	2	
USIT303	Core Subject	Computer Networks	2	
USIT304	Core Subject	Database Management Systems	2	
USIT305	Core Subject	Applied Mathematics	2	
USIT3P1	Skill Enhancement Course	Python Programming Practical	2	
	Practical			
USIT3P2	Core Subject Practical	Data Structures Practical	2	
USIT3P3	Core Subject Practical	Computer Networks Practical	2	
USIT3P4	Core Subject Practical	Database Management Systems	2	
		Practical		
USIT3P5	Core Subject Practical	Mobile Programming Practical	2	
		Total Credits	20	

Semester – 4				
Course Code	Course Type	Course Title	Credits	
USIT401	Skill Enhancement Course	Core Java	2	
USIT402	Core Subject	Introduction to Embedded Systems	2	
USIT403	Core Subject	Computer Oriented Statistical Techniques	2	
USIT404	Core Subject	Software Engineering	2	
USIT405	Core Subject	Computer Graphics and Animation	2	
USIT4P1	Skill Enhancement Course Practical	Core Java Practical	2	
USIT4P2	Core Subject Practical	Introduction to Embedded Systems Practical	2	
USIT4P3	Core Subject Practical	Computer Oriented Statistical Techniques Practical	2	
USIT4P4	Core Subject Practical	Software Engineering Practical	2	
USIT4P5	Core Subject Practical	Computer Graphics and Animation Practical	2	
		Total Credits	20	

SEMESTER III

B. Sc. (Information Technology)		Semester – III		
Course Name: Python Programming		Course Co	ode: USIT301	
Periods per week (1 Period is 50 minutes)		5		
Credits		2		
		Hours	Marks	
Evaluation System	Theory Examination	21/2	75	
	Internal		25	

Unit	Details	Lectures
Ι	Introduction: The Python Programming Language, History, features,	
	Installing Python, Running Python program, Debugging : Syntax	
	Errors, Runtime Errors, Semantic Errors, Experimental Debugging,	
	Formal and Natural Languages, The Difference Between Brackets,	
	Braces, and Parentheses,	
	Variables and ExpressionsValues and Types, Variables, Variable	12
	Names and Keywords, Type conversion, Operators and Operands,	
	Expressions, Interactive Mode and Script Mode, Order of Operations.	
	Conditional Statements: if, if-else, nested if –else	
	Looping: for, while, nested loops	
II	Control statements: Terminating loops, skipping specific conditions	
11	Functions: Function Calls, Type Conversion Functions, Math Functions, Composition, Adding New Functions, Definitions and	
	Uses, Flow of Execution, Parameters and Arguments, Variables and	
	Parameters Are Local, Stack Diagrams, Fruitful Functions and Void	
	Functions, Why Functions?Importing with from, Return Values,	
	Incremental Development, Composition, Boolean Functions, More	12
	Recursion, Leap of Faith, Checking Types	12
	Strings: A String Is a Sequence, Traversal with a for Loop, String	
	Slices, Strings Are Immutable, Searching, Looping and Counting,	
	String Methods, The in Operator, String Comparison, String	
	Operations.	
III	Lists: Values and Accessing Elements, Lists are mutable, traversing a	
	List, Deleting elements from List, Built-in List Operators,	
	Concatenation, Repetition, In Operator, Built-in List functions and	
	methods	
	Tuples and Dictionaries : Tuples, Accessing values in Tuples, Tuple	
	Assignment, Tuples as return values, Variable-length argument tuples,	
	Basic tuples operations, Concatenation, Repetition, in Operator,	12
	Iteration, Built-in Tuple Functions	14
	Creating a Dictionary, Accessing Values in a dictionary, Updating	
	Dictionary, Deleting Elements from Dictionary, Properties of	
	Dictionary keys, Operations in Dictionary, Built-In Dictionary	
	Functions, Built-in Dictionary Methods	
	Files: Text Files, The File Object Attributes, Directories	
	Exceptions: Built-in Exceptions, Handling Exceptions, Exception	

	with Arguments, User-defined Exceptions	
IV	 Regular Expressions – Concept of regular expression, various types of regular expressions, using match function. Classes and Objects: Overview of OOP (Object Oriented Programming), Class Definition, Creating Objects, Instances as Arguments, Instances as return values, Built-in Class Attributes, Inheritance, Method Overriding, Data Encapsulation, Data Hiding Multithreaded Programming: Thread Module, creating a thread, synchronizing threads, multithreaded priority queue Modules: Importing module, Creating and exploring modules, Math module, Random module, Time module 	12
V	 Creating the GUI Form and Adding Widgets: Widgets: Button, Canvas, Checkbutton, Entry, Frame, Label, Listbox, Menubutton, Menu, Message, Radiobutton, Scale, Scrollbar, text, Toplevel, Spinbox, PanedWindow, LabelFrame, tkMessagebox. Handling Standard attributes and Properties of Widgets. Layout Management: Designing GUI applications with proper Layout Management features. Look and Feel Customization:Enhancing Look and Feel of GUI using different appearances of widgets. Storing Data in Our MySQL Database via Our GUI :Connecting to a MySQL database from Python, Configuring the MySQL connection, Designing the Python GUI database, Using the INSERT command, Using the UPDATE command, Using the DELETE command, Storing and retrieving data from MySQL database. 	12

Books a	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Think Python	Allen Downey	O'Reilly	1^{st}	2012	
2.	An Introduction to	JasonMontojo, Jennifer	SPD	1 st	2014	
	Computer Science using	Campbell, Paul Gries				
	Python 3					
3.	Python GUI	Burkhard A. Meier	Packt		2015	
	Programming Cookbook					
4.	Introduction to Problem	E. Balagurusamy	TMH	1^{st}	2016	
	Solving with Python					
5.	Murach's Python	Joel Murach, Michael	SPD	1^{st}	2017	
	programming	Urban				
6.	Object-oriented	Michael H.	Pearson	1^{st}	2008	
	Programming in Python	Goldwasser, David	Prentice			
		Letscher	Hall			
7.	Exploring Python	Budd	TMH	1^{st}	2016	

	B. Sc. (Information Technology)	Semester – III
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			ode: USIT302
Periods per week (1 Period is 50		5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
I	 Introduction: Data and Information, Data Structure, Classification of Data Structures, Primitive Data Types, Abstract Data Types, Data structure vs. File Organization, Operations on Data Structure, Algorithm, Importance of Algorithm Analysis, Complexity of an Algorithm, Asymptotic Analysis and Notations, Big O Notation, Big Omega Notation, Big Theta Notation, Rate of Growth and Big O Notation. Array:Introduction, One Dimensional Array, Memory Representation of One Dimensional Array, Traversing, Insertion, Deletion, Searching, Sorting, Merging of Arrays, Multidimensional Arrays, General Multi-Dimensional Arrays, Sparse Arrays, SparseMatrix, Memory Representation of Special kind of Matrices, Advantages and Limitations of Arrays. 	12
II	Linked List: Linked List, One-way Linked List, Traversal of Linked List, Searching, Memory Allocation and De-allocation, Insertion in Linked List, Deletion from Linked List, Copying a List into Other List, Merging Two Linked Lists, Splitting a List into Two Lists, Reversing One way linked List, Circular Linked List, Applications of Circular Linked List, Two way Linked List, Traversing a Two way Linked List, Searching in a Two way linked List, Insertion of an element in Two way Linked List, Deleting a node from Two way Linked List, Header Linked List, Applications of the Linked list, Representation of Polynomials, Storage of Sparse Arrays, Implementing other Data Structures.	12
III	 Stack: Introduction, Operations on the Stack Memory Representation of Stack, Array Representation of Stack, Applications of Stack, Evaluation of Arithmetic Expression, Matching Parenthesis, infix and postfix operations, Recursion. Queue: Introduction, Queue, Operations on the Queue, Memory Representation of Queue, Array representation of queue, Linked List Representation of Queue, Circular Queue, Some special kinds of queues, Deque, Priority Queue, Application of Priority Queue, Applications of Queues. 	12
IV	Sorting and Searching Techniques Bubble, Selection, Insertion, Merge Sort. Searching: Sequential,	12

	 Binary, Indexed Sequential Searches, Binary Search. Tree:Tree,Binary Tree, Properties of Binary Tree, Memory Representation of Binary Tree, Operations Performed on Binary Tree,Reconstruction of Binary Tree from its Traversals, Huffman Algorithm, Binary Search Tree, Operations on Binary Search Tree, Heap, Memory Representation of Heap, Operation on Heap, Heap Sort. Advanced Tree Structures:Red Black Tree, Operations Performed 	
	on Red Black Tree, AVL Tree, Operations performed on AVL Tree, 2-3 Tree, B-Tree.	
V	 Hashing Techniques Hash function, Address calculation techniques, Common hashing functions Collision resolution, Linear probing, Quadratic,Double hashing, Buckethashing, Deletion and rehashing Graph: Introduction, Graph, Graph Terminology, Memory Representation of Graph, Adjacency Matrix Representation of Graph, Adjacency List or Linked Representation of Graph, Operations Performed on Graph, GraphTraversal, Applications of the Graph, Reachability, Shortest Path Problems, Spanning Trees. 	12

Books ar	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	A Simplified Approach to	Lalit	SPD	1^{st}	2014	
	Data Structures	Goyal, Vishal				
		Goyal, Pawan				
		Kumar				
2.	An Introduction to Data	Jean – Paul	Tata	2^{nd}	2007	
	Structure with Applications	Tremblay and	MacGraw			
		Paul Sorenson	Hill			
3.	Data Structure and	Maria Rukadikar	SPD	1^{st}	2017	
	Algorithm					
4.	Schaum's Outlines Data	Seymour	Tata	2^{nd}	2005	
	structure	Lipschutz	McGraw			
			Hill			
5.	Data structure – A	AM Tanenbaum,	Prentice	2^{nd}	2006	
	Pseudocode Approach with	Y Langsamand	Hall India			
	С	MJ Augustein				
6.	Data structure	Weiss, Mark	Addison	1^{st}	2006	
	andAlgorithm Analysis in C	Allen	Wesley			

B. Sc. (Information Tech	Semester – III			
Course Name: Computer Networks Cou			ode: USIT303	
Periods per week (1 Period is 50	minutes)	5		
Credits		2		
		Hours	Marks	
Evaluation System	Theory Examination	2 ¹ / ₂	75	
	Internal		25	

Unit	Details	Lectures
I	 Introduction: Data communications, networks, network types, Internet history,standards and administration. Network Models:Protocol layering, TCP/IP protocol suite, The OSI model. Introduction to Physical layer:Data and signals, periodic analog signals, digital signals, transmission impairment, data rate limits, performance. Digital and Analog transmission: Digital-to-digital conversion, analog-to-digital conversion, transmission modes, digital-to-analog 	12
II	 conversion, analog-to-analog conversion. Bandwidth Utilization: Multiplexing and SpectrumSpreading: Multiplexing, Spread Spectrum Transmission media:Guided Media, Unguided Media Switching: Introduction, circuit switched networks, packet switching, structure of a switch. Introduction to the Data Link Layer:Link layer addressing, Data Link Layer Design Issues, Error detection and correction, block coding, cyclic codes, checksum, forward error correction, error correcting codes, error detecting codes. 	12
III	 Data Link Control: DLC services, data link layer protocols, HDLC, Point-to-point protocol. Media Access Control: Random access, controlled access, channelization, Wired LANs – Ethernet Protocol, standard ethernet, fast ethernet, gigabit ethernet, 10 gigabit ethernet, Wireless LANs: Introduction, IEEE 802.11 project, Bluetooth, WiMAX, Cellular telephony, Satellite networks. Connecting devices and Virtual LANs. 	12
IV	 Introduction to the Network Layer: Network layer services, packet switching, network layer performance, IPv4 addressing, forwarding of IP packets, Internet Protocol, ICMPv4, Mobile IP Unicast Routing:Introduction, routing algorithms, unicast routing protocols. Next generation IP: IPv6 addressing, IPv6 protocol, ICMPv6 protocol, transition from IPv4 to IPv6. 	12
V	Introduction to the Transport Layer : Introduction, Transport layer protocols (Simple protocol, Stop-and-wait protocol, Go-Back-n protocol, Selective repeat protocol, Bidirectional protocols), Transport	12

ſ	layer services, User datagram protocol, Transmission control protocol,	
	Standard Client0Server Protocols:World wide-web and HTTP,	
	FTP, Electronic mail, Telnet, Secured Shell, Domain name system.	

Books a	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Data Communication	Behrouz A.	Tata McGraw	Fifth	2013	
	and Networking	Forouzan	Hill	Edition		
2.	TCP/IP	Behrouz A.	Tata McGraw	Fourth	2010	
	Protocol Suite	Forouzan	Hill	Edition		
3.	Computer Networks	Andrew	Pearson	Fifth	2013	
		Tanenbaum				

B. Sc. (Information Technology)	Semester – III
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Course Name: Database Manag	Course Code: USIT304		
Periods per week (1 Period is 50		5	
Credits	2		2
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Introduction to Databases and Transactions	
	 What is database system, purpose of database system, view of data, relationaldatabases, database architecture, transaction management Data Models The importance of data models, Basic building blocks, Business rules, The evolution of data models, Degrees of data abstraction. Database Design, ER Diagram and Unified Modeling Language Database design and ER Model:overview, ERModel, Constraints, ERDiagrams, ERDIssues, weak entity sets, Codd's rules, Relational 	12
п	Schemas, Introduction to UML Relational database model:	
	 Logical view of data, keys, integrity rules, Relational Database design: features of good relational database design, atomic domain and Normalization (1NF, 2NF, 3NF, BCNF). Relational Algebra and Calculus Relational algebra: introduction, Selection and projection, set operations, renaming, Joins, Division, syntax, semantics. Operators, grouping and ungrouping, relational calculus, Domain relational Calculus, calculus vsalgebra, computational capabilities 	12
III	Constraints, Views and SQL	
	Constraints, types of constrains, Integrity constraints, Views: Introduction to views, data independence, security, updates on views, comparison between tables and views SQL: data definition, aggregate function, Null Values, nested sub queries, Joined relations. Triggers.	12
IV	Transaction management and Concurrency	
	Control Transaction management: ACID properties, serializability and concurrency control, Lock based concurrency control (2PL, Deadlocks),Time stamping methods, optimistic methods, database recovery management.	12
V	PL-SQL : Beginning with PL / SQL,Identifiers and Keywords, Operators, Expressions, Sequences,Control Structures, Cursors and Transaction,Collections and composite data types, Procedures and Functions, Exceptions Handling,Packages,With Clause and Hierarchical Retrieval,Triggers.	12

Books ar	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Database System and	A Silberschatz,	McGraw-	Fifth		
	Concepts	H Korth, S	Hill	Edition		
		Sudarshan				
2.	Database Systems	RobCoronel	Cengage Learning	Twelfth Edition		
3.	Programming with PL/SQL for Beginners	H.Dand, R.Patil and T. Sambare	X –Team	First	2011	
4.	Introduction to Database System	C.J.Date	Pearson	First	2003	

B. Sc. (Information T	Semeste	er – III	
Course Name: Applied Mathematics Course Code: USIT:		ode: USIT305	
Periods per week (1 Period is 50	week (1 Period is 50 minutes) 5		
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Matrices: Inverse of a matrix, Properties of matrices, Elementary Transformation, Rank of Matrix, Echelon or Normal Matrix, Inverse of matrix, Linear equations, Linear dependence and linear independence of vectors, Linear transformation, Characteristics roots and characteristics vectors, Properties of characteristic vectors, Caley- Hamilton Theorem, Similarity of matrices, Reduction of matrix to a diagonal matrix which has elements as characteristics values. Complex Numbers: Complex number, Equality of complex numbers, Graphical representation of complex number(Argand's Diagram), Polar form of complex numbers, Polar form of x+iy for different signs of x,y, Exponential form of complex numbers, Mathematical operation with complex numbers and their representation on Argand's Diagram, Circular functions of complex angles, Definition of hyperbolic function, Relations between circular and hyperbolic functions, Inverse hyperbolic functions, Differentiation and Integration, Graphs of the hyperbolic functions, Logarithms of complex quality, j(=i)as an operator(Electrical circuits)	12
Π	Equation of the first order and of the first degree: Separation of variables, Equations homogeneous in x and y, Non-homogeneous linear equations, Exact differential Equation, Integrating Factor, Linear Equation and equation reducible to this form, Method of substitution. Differential equation of the first order of a degree higher than the first: Introduction, Solvable for p (or the method of factors), Solve for y, Solve for x, Clairaut's form of the equation, Methods of Substitution, Method of Substitution. Linear Differential Equations with Constant Coefficients: Introduction, The Differential Operator, Linear Differential Equation f(D) $y = 0$, Different cases depending on the nature of the root of the equation $f(D) = 0$, Linear differential equation $f(D) y = X$, The complimentary Function, The inverse operator $1/f(D)$ and the symbolic expiration for the particular integral $1/f(D) X$; the general methods, Particular integral : Short methods, Particular integral : Other methods, Differential equations reducible to the linear differential equations with constant coefficients.	12
III	The Laplace Transform: Introduction, Definition of the Laplace Transform, Table of Elementary Laplace Transforms, Theorems on	12

	Important Properties of Laplace Transformation, First Shifting		
	Theorem, Second Shifting Theorem, The Convolution Theorem,		
	Laplace Transform of an Integral, Laplace Transform of Derivatives,		
	Inverse Laplace Transform: Shifting Theorem, Partial fraction		
	Methods, Use of Convolution Theorem, Solution of Ordinary Linear		
	Differential Equations with Constant Coefficients, Solution of		
	Simultaneous Ordinary Differential Equations, Laplace		
	Transformation of Special Function, Periodic Functions, Heaviside		
	Unit Step Function, Dirac-delta Function(Unit Impulse Function),		
IV	Multiple Integrals: Double Integral, Change of the order of the		
	integration, Double integral in polar co-ordinates, Triple integrals.	12	
	Applications of integration: Areas, Volumes of solids.		
V	Beta and Gamma Functions – Definitions, Properties and Problems.		
	Duplication formula.	10	
	Differentiation Under the Integral Sign	12	
	Error Functions		

Books an	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	A text book of Applied	P. N. Wartikar	Pune				
	Mathematics Vol I	and J. N.	VidyathiGraha				
		Wartikar					
2.	Applied Mathematics II	P. N. Wartikar	Pune				
		and J. N.	VidyathiGraha				
		Wartikar					
3.	Higher Engineering	Dr. B. S.	Khanna				
	Mathematics	Grewal	Publications				

B. Sc. (Information Tech	Semester – III			
Course Name: Python Program	Course Code: USIT3P1			
Periods per week (1 Period is 50	minutes)	3		
Credits		2		
		Hours	Marks	
Evaluation System	Practical Examination	21/2	50	
	Internal			

List of	Practical
1.	Write the program for the following:
a.	Create a program that asks the user to enter their name and their age. Print out a
	message addressed to them that tells them the year that they will turn 100 years
	old.
b.	Enter the number from the user and depending on whether the number is even or
	odd, print out an appropriate message to the user.
с.	Write a program to generate the Fibonacci series.
d.	Write a function that reverses the user defined value.
e.	Write a function to check the input value is Armstrong and also write the
	function for Palindrome.
f.	Write a recursive function to print the factorial for a given number.
2.	Write the program for the following:
a.	Write a function that takes a character (i.e. a string of length 1) and returns True
	if it is a vowel, False otherwise.
b.	Define a function that computes the <i>length</i> of a given list or string.
с.	Define a <i>procedure</i> histogram() that takes a list of integers and prints a
	histogram to the screen. For example, histogram([4, 9, 7]) should print the
	following:
	* * * *

3.	Write the program for the following:
a.	A pangram is a sentence that contains all the letters of the English alphabet at
	least once, for example: The quick brown fox jumps over the lazy dog. Your task
	here is to write a function to check a sentence to see if it is a pangram or not.
b.	Take a list, say for example this one:
	a=[1,1,2,3,5,8,13,21,34,55,89]
	a-[1,1,2,3,3,0,13,21,31,33,07]
	and write a program that prints out all the elements of the list that are less than 5.

4.	Write the program for the following:
a.	Write a program that takes two lists and returns True if they have at least one
	common member.
b.	Write a Python program to print a specified list after removing the 0th, 2nd, 4th
	and 5th elements.
с.	Write a Python program to clone or copy a list
5.	Write the program for the following:
a.	Write a Python script to sort (ascending and descending) a dictionary by value.
b.	Write a Python script to concatenate following dictionaries to create a new one.
	Sample Dictionary :
	dic1= $\{1:10, 2:20\}$
	$dic2=\{3:30, 4:40\}$
	$dic3 = \{5:50, 6:60\}$
	Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
с.	Write a Python program to sum all the items in a dictionary.
6.	Write the program for the following:
a.	Write a Python program to read an entire text file.
b.	Write a Python program to append text to a file and display the text.
с.	Write a Python program to read last n lines of a file.
7	Write the program for the following:
7.	Write the program for the following:
7. a.	Design a class that store the information of student and display the same
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a.	Design a class that store the information of student and display the same
a. b.	Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should
a. b.	Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers).
a. b.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y.
a. b.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number
a. b.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER.
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a. b.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x
a. b. c.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x and y. Make this method into a property, and write a setter and a deleter for manipulating the values of x and y.
a. b. c.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x and y. Make this method into a property, and write a setter and a deleter for manipulating the values of x and y. Write the program for the following:
a. b. c.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x and y. Make this method into a property, and write a setter and a deleter for manipulating the values of x and y. Write the program for the following: Open a new file in IDLE ("New Window" in the "File" menu) and save it as
a. b. c.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x and y. Make this method into a property, and write a setter and a deleter for manipulating the values of x and y. Write the program for the following: Open a new file in IDLE ("New Window" in the "File" menu) and save it as geometry.py in the directory where you keep the files you create for this course.
a. b. c.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x and y. Make this method into a property, and write a setter and a deleter for manipulating the values of x and y. Write the program for the following: Open a new file in IDLE ("New Window" in the "File" menu) and save it as geometry.py in the directory where you keep the files you create for this course. Then copy the functions you wrote for calculating volumes and areas in the
a. b. c.	 Design a class that store the information of student and display the same Implement the concept of inheritance using python Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. iii. Write a static method called subtract, which takes two number parameters, b and c, and returns b - c. iv. Write a method called value which returns a tuple containing the values of x and y. Make this method into a property, and write a setter and a deleter for manipulating the values of x and y. Write the program for the following: Open a new file in IDLE ("New Window" in the "File" menu) and save it as geometry.py in the directory where you keep the files you create for this course.

	to importyour own module like this:		
	importgeometry		
	Try and add print dir(geometry) to the file and run it.		
	Now write a function pointyShapeVolume(x, y, squareBase) that calculates the volume of a square pyramid if squareBase is True and of a right circular cone if squareBase is False. x is the length of an edge on a square if squareBase is True and the radius of a circle when squareBase is False. y is the height of the object. First use squareBase to distinguish the cases. Use the circleArea and squareArea from the geometry module to calculate the base areas.		
b.	Write a program to implement exception handling.		
9.	Write the program for the following:		
a.	Try to configure the widget with various options like: bg="red", family="times", size=18		
b.	Try to change the widget type and configuration options to experiment with other widget types like Message, Button, Entry, Checkbutton, Radiobutton, Scale etc.		
10.	Design the database applications for the following:		
a.	Design a simple database application that stores the records and retrieve the		
	same.		
b.	Design a database application to search the specified record from the database.		
с.	Design a database application to that allows the user to add, delete and modify		
	the records.		

Books a	Books and References:						
Sr.	Title	Author/s	Publisher	Edition	Year		
No.							
1.	Think Python	Allen Downey	O'Reilly	1 st	2012		
2.	An Introduction to	JasonMontojo, Jennifer	SPD	1 st	2014		
	Computer Science	Campbell, Paul Gries					
	using Python 3						

B. Sc. (Information Tecl	Semester – III		
Course Name: Data Structures	Course Code: USIT3P2		
Periods per week (1 Period is 50	Periods per week (1 Period is 50 minutes) 3		
Credits		2	
		Hours	Marks
Evaluation SystemPractical Examination		21/2	50
	Internal		

List of	Practical
1.	Implement the following:
a.	Write a program to store the elements in 1-D array and perform the operations
	like searching, sorting and reversing the elements. [Menu Driven]
b.	Read the two arrays from the user and merge them and display the elements in
	sorted order.[Menu Driven]
с.	Write a program to perform the Matrix addition, Multiplication and Transpose
	Operation. [Menu Driven]
2.	Implement the following for Linked List:
a.	Write a program to create a single linked list and display the node elements in
	reverse order.
b.	Write a program to search the elements in the linked list and display the same
с.	Write a program to create double linked list and sort the elements in the linked
	list.
3.	Implement the following for Stack:
a.	Write a program to implement the concept of Stack with Push, Pop, Display and
1	Exit operations.
b.	Write a program to convert an infix expression to postfix and prefix conversion.
с.	Write a program to implement Tower of Hanoi problem.
4.	Implement the following for Queue:
a.	Write a program to implement the concept of Queue with Insert, Delete, Display
	and Exit operations.
b.	Write a program to implement the concept of Circular Queue
с.	Write a program to implement the concept of Deque.
5.	Implement the following sorting techniques:
a.	Write a program to implement bubble sort.
b.	Write a program to implement selection sort.
с.	Write a program to implement insertion sort.
<u>6.</u>	Implement the following data structure techniques:
a.	Write a program to implement merge sort.
b.	Write a program to search the element using sequential search.

с.	Write a program to search the element using binary search.
7.	Implement the following data structure techniques:
a.	Write a program to create the tree and display the elements.
b.	Write a program to construct the binary tree.
с.	Write a program for inorder, postorder and preorder traversal of tree
8.	Implement the following data structure techniques:
a.	Write a program to insert the element into maximum heap.
b.	Write a program to insert the element into minimum heap.
9.	Implement the following data structure techniques:
a.	Write a program to implement the collision technique.
b.	Write a program to implement the concept of linear probing.
10.	Implement the following data structure techniques:
a.	Write a program to generate the adjacency matrix.
b.	Write a program for shortest path diagram.

Books a	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	Data Structures and Algorithms Using Python	RanceNecaise	Wiley	First	2016		
2.	Data Structures Using C and C++	Langsam,Augenstein, Tanenbaum	Pearson	First	2015		

B. Sc. (Information Tech	Semester – III		
Course Name:Computer Networ	Course Code: USIT3P3		
Periods per week (1 Period is 50 minutes) 3			3
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		

List of I	Practical				
1.	IPv4 Addressing and Subnetting				
	a) Given an IP address and network mask, determine other information about the				
	IP addresssuch as:				
	Network address				
	Network broadcast address				
	• Total number of host bits				
	• Number of hosts				
	b) Given an IP address and network mask, determine other information about the IP addresssuch as:				
	• The subnet address of this subnet				
	• The broadcast address of this subnet				
	• The range of host addresses for this subnet				
	• The maximum number of subnets for this subnet mask				
	• The number of hosts for each subnet				
	• The number of subnet bits				
	• The number of this subnet				
2.	Use of ping and tracert / traceroute, ipconfig / ifconfig, route and arp utilities.				
3.	Configure IP static routing.				
4.	Configure IP routing using RIP.				
5.	Configuring Simple OSPF.				
6.	Configuring DHCP server and client.				
7. 8.	Create virtual PC based network using virtualization software and virtual NIC.				
<u>ð.</u> 9.	Configuring DNS Server and client.				
9. 10.	Configuring OSPF with multiple areas. Use of Wireshark to scan and check the packet information of following protocols				
10.	HTTP				
	• ICMP				
	• TCP				
	• SMTP				
	POP3				
	▼ rurj				

B. Sc. (Information Technology)		Semester – III	
Course Name: Database Manag	Course Code: USIT3P4		
Periods per week (1 Period is 50	minutes)	3	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	2 ¹ / ₂	50
	Internal		

List of	Practical
1.	SQL Statements – 1
a.	Writing Basic SQL SELECT Statements
b.	Restricting and Sorting Data
с.	Single-Row Functions
2.	SQL Statements – 2
<u> </u>	Displaying Data from Multiple Tables
a. b.	Aggregating Data Using Group Functions
0. C.	Subqueries
ι.	Subqueries
3.	Manipulating Data
a.	Using INSERT statement
b.	Using DELETE statement
с.	Using UPDATE statement
4.	Creating and Managing Tables
a.	Creating and Managing Tables
<u>b.</u>	Including Constraints
5.	Creating and Managing other database objects
a.	Creating Views
b.	Other Database Objects
с.	Controlling User Access
6.	Using SET operators, Date/Time Functions, GROUP BY clause (advanced
	features) and advanced subqueries
a.	Using SET Operators
b.	Datetime Functions
с.	Enhancements to the GROUP BY Clause
d.	Advanced Subqueries
7	DI /COL Deging
7.	PL/SQL Basics
a. h	Declaring Variables
b.	Writing Executable Statements
с.	Interacting with the Oracle Server

d.	Writing Control Structures
8.	Composite data types, cursors and exceptions.
a.	Working with Composite Data Types
b.	Writing Explicit Cursors
с.	Handling Exceptions
9.	Procedures and Functions
a.	Creating Procedures
b.	Creating Functions
с.	Managing Subprograms
d.	Creating Packages
10.	Creating Database Triggers

Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Database System and	A Silberschatz,	McGraw-	Fifth		
	Concepts	H Korth, S	Hill	Edition		
		Sudarshan				
2.	Programming with PL/SQL	H.Dand, R.Patil	X –Team	First	2011	
	for Beginners	and T. Sambare				
3.	PL/SQL Programming	Ivan Bayross	BPB	First	2010	

B. Sc. (Information Technology)		Semester – III	
Course Name: Mobile Program	Course Code: USIT3P5		
Periods per week (1 Period is 50 minutes) 3			3
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		

The practical's will be based on HTML5, CSS, CORDOVA and PhoneGAP API. (Android will be introduced later after they learn Java)

List of	Practical
	Setting up CORDOVA, PhoneGAP Project and environment.
1.	• Creating and building simple "Hello World" App using Cordova
	Adding and Using Buttons
	Adding and Using Event Listeners
2.	Creating and Using Functions
	 Using Events
	Handling and Using Back Button
3.	Installingand Using Plugins
	Installing and Using Battery Plugin
	Installing and Using Camera Plugin
4.	Installing and Using Contacts Plugin
	Installing and Using Device Plugin
	Installing and Using Accelerometer Plugin
5.	Install and Using Device Orientation plugin
	Install and Using Device Orientation plugin
	Create and Using Prompt Function
6.	Installing and Using File Plugin
	Installing and Using File Transfer Plugin
	Using Download and Upload functions
7.	Installing and Using Globalization Plugin
	Installing and Using Media Plugin
	Installing and Using Media Capture Plugin
8.	Installing and Using Network Information Plugin

	 Installing and Using Splash Screen Plugin Installing and Using Vibration Plugin
9.	 Developing Single Page Apps Developing Multipage Apps Storing Data Locally in a Cordova App
10.	 Use of sqlite plugin with PhoneGap / apache Cordova Using Sqlite read/write and search Populating Cordova SQLite storage with the JQuery API

Books ar	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Apache Cordova 4	John M. Wargo	Addison-	1 st	2015	
	Programming		Wesley			
			Professional			
2.	Apache Cordova in Action	Raymond	Manning	1 st	2015	
	-	Camden	Publications			
3.	PhoneGap By Example	Andrey	PACKT	1 st	2015	
		Kovalenko	Publishing			

SEMESTER IV

B. Sc. (Information Technology)		Semester – IV	
Course Name: Core Java		Course Code: USIT401	
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Introduction: History, architecture and its components,Java Class File, Java Runtime Environment, The Java Virtual Machine, JVM Components, The Java API, java platform, java development kit, Lambda Expressions, Methods References, Type Annotations, Method Parameter Reflection, setting the path environment variable, Java Compiler And Interpreter, java programs, java applications, main(), public, static, void, string[] args, statements, white space, case sensitivity, identifiers, keywords, comments, braces and code blocks, variables, variable name Data types: primitive data types, Object Reference Types, Strings, Auto boxing, operators and properties of operators, Arithmetic operators, assignment operators, increment and decrement operator, relational operator, logical operator, bitwise operator, conditional operator.	12
II	Control Flow Statements: The IfElse IfElse Statement, The SwitchCase Statement Iterations: The While Loop, The Do While Loop, The For Loop, The Foreach Loop, Labeled Statements, The Break And Continue Statements, The Return Statement Classes: Types of Classes, Scope Rules, Access Modifier, Instantiating Objects From A Class, Initializing The Class Object And Its Attributes, Class Methods, Accessing A Method, Method Returning A Value, Method's Arguments, Method Overloading, Variable Arguments [Varargs], Constructors, this Instance, super Instance, Characteristics Of Members Of A Class, constants, this instance, static fields of a class, static methods of a class, garbage collection.	12
Ш	Inheritance: Derived Class Objects, Inheritance and Access Control, Default Base Class Constructors, this and super keywords. Abstract Classes And Interfaces, Abstract Classes, Abstract Methods, Interfaces, What Is An Interface? How Is An Interface Different From An Abstract Class?, Multiple Inheritance, Default Implementation, Adding New Functionality, Method Implementation, Classes V/s	12

	Interfaces, Defining An Interface, Implementing Interfaces.	
	Packages: Creating Packages, Default Package, Importing Packages,	
	Using A Package.	
IV	 Enumerations, Arrays: Two Dimensional Arrays, Multi-Dimensional Arrays, Vectors, Adding Elements To A Vector, Accessing Vector Elements, Searching For Elements In A Vector, Working With The Size of The Vector. Multithreading: the thread control methods, thread life cycle, the main thread, creating a thread, extending the thread class. Exceptions: Catching Java Exceptions, Catching Run-Time Exceptions, Handling Multiple Exceptions, The finally Clause, The throws Clause Byte streams: reading console input, writing console output, reading file, writing file, writing binary data, reading binary data, getting started with character streams, writing file, reading file 	12
V	 Event Handling: Delegation Event Model, Events, Event classes, Event listener interfaces, Using delegation event model, adapter classes and inner classes. Abstract Window Toolkit: Window Fundamentals, Component, Container, Panel, Window, Frame, Canvas.Components – Labels, Buttons, Check Boxes, Radio Buttons, Choice Menus, Text Fields, Text, Scrolling List, Scrollbars, Panels, Frames Layouts: Flow Layout, Grid Layout, Border Layout, Card Layout. 	12

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Core Java 8 for	Vaishali Shah, Sharnam	SPD	1st	2015
	Beginners	Shah			
2.	Java: The Complete	Herbert Schildt	McGraw 9th	2014	
	Reference		Hill		
3.	Murach's beginning	Joel Murach , Michael	SPD	1st	2016
	Java with Net Beans	Urban			
4.	Core Java, Volume I:	Hortsman	Pearson	9th	2013
	Fundamentals				
5.	Core Java, Volume II:	Gary Cornell and	Pearson	8th	2008
	Advanced Features	Hortsman			
6.	Core Java: An	R. Nageswara Rao	DreamTech	1st	2008
	Integrated Approach				

B. Sc. (Information Tech	Semester – IV		
Course Name: Introduction to E	Course Code: USIT402		
Periods per week (1 Period is 50	5		
Credits	2		
	Hours	Marks	
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures		
Ι	Introduction: Embedded Systems and general purpose			
	computersystems, history, classifications, applications and purpose			
	ofembedded systems			
	Core of embedded systems: microprocessors and microcontrollers,RISC and CISC controllers, Big endian and Little			
	endian processors, Application specific ICs, Programmable logic			
	devices, COTS, sensors and actuators, communication interface,			
	embedded firmware, other system components.			
	Characteristics and quality attributes of embedded systems:			
	Characteristics, operational and non-operational quality attributes.			
II	Embedded Systems – Application and Domain			
	Specific: Application specific - washing machine, domain specific -			
	automotive.			
	Embedded Hardware: Memory map, i/o map, interrupt map,			
	processor family, external peripherals, memory – RAM, ROM, types of RAM and ROM, memory testing, CRC, Flash memory.			
	Peripherals: Control and Status Registers, Device Driver, Timer			
	Driver - Watchdog Timers.			
III	The 8051 Microcontrollers: Microcontrollers and Embedded			
	processors, Overview of 8051 family.8051 Microcontroller hardware,			
	Input/output pins, Ports, and Circuits, External Memory.	12		
	8051 Programming in C:			
	Data Types and time delay in 8051 C, I/O Programming, Logic			
IV	operations, Data conversion Programs.Designing Embedded System with 8051 Microcontroller:Factors to			
1 4	be considered in selecting a controller, why 8051 Microcontroller,			
	Designing with 8051.	12		
	Programming embedded systems: structure of embedded program,			
	infinite loop, compiling, linking and debugging.			
V	Real Time Operating System (RTOS):Operating system basics,			
	types of operating systems, Real-Time Characteristics, Selection			
	Process of an RTOS.			
	Design and Development: Embedded system			
	developmentEnvironment - IDE, types of file generated on cross			

ſ	compilation, disassembler/ de-compiler, simulator, emulator and	
	debugging, embedded product development life-cycle, trends in	
	embedded industry.	

Books	Books and References:					
Sr.	Title	Author/s	Publisher	Edition	Year	
No.						
1.	Programming	Michael	O'Reilly	First	1999	
	Embedded Systems in	Barr				
	C and C++					
2.	Introduction to	Shibu K V	Tata Mcgraw-Hill	First	2012	
	embedded systems					
3.	The 8051	Muhammad	Pearson	Second	2011	
	Microcontroller and	Ali Mazidi				
	Embedded Systems					
4.	Embedded Systems	Rajkamal	Tata Mcgraw-Hill			

B. Sc. (Information Tech	Semester – IV		
Course Name: Computer Oriented Statistical Techniques Course Code: USI		ode: USIT403	
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	The Mean, Median, Mode, and Other Measures of Central	
	Tendency: Index, or Subscript, Notation, Summation Notation,	
	Averages, or Measures of Central Tendency ,The Arithmetic Mean ,	
	The Weighted Arithmetic Mean ,Properties of the Arithmetic Mean	
	, The Arithmetic Mean Computed from Grouped Data , The Median	
	, The Mode, The Empirical Relation Between the Mean, Median, and	
	Mode, The Geometric Mean G, The Harmonic Mean H, The Relation Between the Arithmetic, Geometric, and Harmonic Means, The Root	
	Mean Square, Quartiles, Deciles, and Percentiles, Software and	
	Mean Square, Quarties, Decles, and Tercentiles, software and Measures of Central Tendency.	
	The Standard Deviation and Other Measures of Dispersion:	12
	Dispersion, or Variation, The Range, The Mean Deviation, The Semi-	12
	Interquartile Range, The 10–90 Percentile Range, The Standard	
	Deviation, The Variance, Short Methods for Computing the Standard	
	Deviation, Properties of the Standard Deviation, Charlie's Check,	
	Sheppard's Correction for Variance, Empirical Relations Between	
	Measures of Dispersion, Absolute and Relative Dispersion;	
	Coe fiscientarobized/atvatiable; Standard Scores,	
	Software and Measures of Dispersion.	
	Introduction to R: Basic syntax, data types, variables, operators,	
	control statements, R-functions, R – Vectors, R – lists, R Arrays.	
II	Moments, Skewness, and Kurtosis : Moments , Moments for	
	Grouped Data ,Relations Between Moments , Computation of	
	Moments for Grouped Data, Charlie's Check and Sheppard's	
	Corrections, Moments in Dimensionless Form, Skewness, Kurtosis,	
	Population Moments, Skewness, and Kurtosis, Software Computation	12
	of Skewness and Kurtosis.	
	Elementary Probability Theory : Definitions of Probability, Conditional Probability; Independent and Dependent Events, Mutually	
	Exclusive Events, Probability Distributions, Mathematical	
	Expectation, Relation Between Population, Sample Mean, and	
L	Experiment, relation between ropulation, bample Mean, and	

	Variance, Combinatorial Analysis, Combinations, Stirling's Approximation to n!,Relation of Probability to Point Set Theory, Euler or Venn Diagrams and Probability. Elementary Sampling Theory : Sampling Theory, Random Samples and Random Numbers, Sampling With and Without Replacement, Sampling Distributions, Sampling Distribution of Means, Sampling Distribution of Proportions, Sampling Distributions of Di and Sums, Standard Errors, Software Demonstration of Elementary Sampling Theory.	
III	 Statistical Estimation Theory: Estimation of Parameters, Unbiased Estimates, E fficientates, Point Estimates and Interval Estimates; Their Reliability, Confidence-Interval Estimates of Population Parameters, Probable Error. Statistical Decision Theory: Statistical Decisions, Statistical Hypotheses, Tests of Hypotheses and Significance, or Decision Rules, Type I and Type II Errors, Level of Significance, Tests Involving Normal Distributions, Two-Tailed and One-Tailed Tests, Special Tests, Operating-Characteristic Curves; the Power of a Test, p-Values for Hypotheses Tests, Control Charts, Tests Involving Sample Di fferences/volving Binomial Distributions. Statistics in R: mean, median, mode, Normal Distribution , Binomial Distribution, Frequency Distribution in R. Small Sampling Theory: Small Samples, Student's t Distribution, Confidence Intervals, Tests of Hypotheses and Significance, The Chi-Square Test: Observed and Theoretical Frequencies, Definition of chi-square, Significance Tests, The Chi-Square Test for Goodness of Fit, Contingency Tables, Yates' Correction for Continuity, Simple Formulas for Computing chi-square, Coe Contingency, Correlation of Attributes, Additive Property of chi- 	12
V	square.Curve Fitting and the Method of Least Squares: RelationshipBetween Variables, Curve Fitting, Equations of ApproximatingCurves,Freehand Method of Curve Fitting, The Straight Line, TheMethod of Least Squares,The Least-Squares Line, NonlinearRelationships, The Least-Squares Parabola, Regression, Applicationsto Time Series, Problems Involving More Than Two Variables.Correlation Theory:Correlation,Measures of Correlation, The Least-Squares RegressionLines, Standard Error of Estimate, Explained and UnexplainedVariation, CoefickenthaidsCorrelation CoefickenthaidsCorrelation Of CorrelationKegressionLines and the Linear Correlation Coefickentelation of TimeSeries, Correlation of Attributes, Sampling Theory of Correlation,	12

Sampling Theory of Regression.	

Book	Books and References:					
Sr.	Title	Author/s	Publisher	Edition	Year	
No.						
1.	STATISTICS	Murray R.	McGRAW –	FOURTH		
		Spiegel, Larry	HILL			
		J. Stephens.	ITERNATIONAL			
2.	A Practical Approach	R.B. Patil,	SPD	1^{st}	2017	
	using R	H.J. Dand and				
		R. Bhavsar				
3.	FUNDAMENTAL	S.C. GUPTA	SULTAN	ELEVENTH	2011	
	OF	and V.K.	CHAND and	REVISED		
	MATHEMATICAL	KAPOOR	SONS			
	STATISTICS					
4.	MATHEMATICAL	J.N. KAPUR	S. CHAND	TWENTIETH	2005	
	STATISTICS	and H.C.		REVISED		
		SAXENA				

B. Sc. (Information Technology)		Semester – IV	
Course Name: Software Engineering		Course Code: USIT404	
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
I	 Introduction: What is software engineering? Software Development Life Cycle, Requirements Analysis, Software Design, Coding, Testing, Maintenance etc. Software Requirements: Functional and Non-functional requirements, User Requirements, System Requirements, Interface Specification, Documentation of the software requirements. Software Processes: Process and Project, Component Software Processes. Software Development Process Models. Waterfall Model. Prototyping. Iterative Development. Rational Unified Process. The RAD Model Time boxing Model. Agile software development: Agile methods, Plan-driven and agile development, Extreme programming, Agile project management, Scaling agile methods. 	12
II	 Socio-technical system: Essential characteristics of socio technical systems, Emergent System Properties, Systems Engineering, Components of system such as organization, people and computers, Dealing Legacy Systems. Critical system: Types of critical system, A simple safety critical system, Dependability of a system, Availability and Reliability, Safety and Security of Software systems. Requirements Engineering Processes: Feasibility study, Requirementselicitation and analysis, Requirements Validations, Requirements Management. 	12

	System Models: Models and its types, Context Models, Behavioural	
	Models, Data Models, Object Models, Structured Methods.	
III	Architectural Design: Architectural Design Decisions, System Organisation, Modular Decomposition Styles, Control Styles,	
	Reference Architectures.	
	User Interface Design: Need of UI design, Design issues, The UI	
	design Process, User analysis, User Interface Prototyping, Interface	
	Evaluation.	12
	Project Management	14
	Software Project Management, Management activities, Project Planning, Project Scheduling, Risk Management.	
	Quality Management: Process and Product Quality, Quality assurance and Standards, Quality Planning, Quality Control, Software Measurement and Metrics.	
IV	Verification and Validation: Planning Verification and Validation,	
	Software Inspections, Automated Static Analysis, Verification and	
	Formal Methods. Software Testing: System Testing, Component	
	Testing, Test Case Design, Test Automation.	
	Software Measurement: Size-Oriented Metrics, Function-Oriented	12
	Metrics, Extended Function Point Metrics	
	Software Cost Estimation:Software Productivity, Estimation	
	Techniques, Algorithmic Cost Modelling, Project Duration and	
	Staffing	
V	Process Improvement: Process and product quality, Process	
	Classification, Process Measurement, Process Analysis and Modeling,	
	Process Change, The CMMI Process Improvement Framework.	
	Service Oriented Software Engineering: Services as reusable	
	components,	
	Service Engineering, Software Development with Services.	12
	Software reuse: The reuse landscape, Application frameworks,	
	Software product lines, COTS product reuse.	
	Distributed software engineering: Distributed systems issues,	
	Client-server computing, Architectural patterns for distributed	
	systems, Software as a service	

Books	Books and References:					
Sr.	Title	Author/s	Publisher	Edition	Year	
No.						
1.	Software Engineering,	Ian	Pearson	Ninth		
	edition,	Somerville	Education.			
2.	Software Engineering	Pankaj Jalote	Narosa			
			Publication			
3.	Software engineering,	Roger	Tata Mcgraw-hill	Seventh		
	a practitioner's	Pressman				
	approach					

4.	Software Engineering	WS	Tata Mcgraw-hill		
	principles and practice	Jawadekar			
5.	Software Engineering-	S.A Kelkar	PHI India.		
	A Concise Study				
6.	Software Engineering	SubhajitDatta	Oxford Higher		
	Concept and		Education		
	Applications				
7.	Software Design	D.Budgen	Pearson	2nd	
			education		
8.	Software Engineering	KL James	PHI	EEE	2009

B. Sc. (Information Tech	Semester – IV		
Course Name: Computer Graph	Course Co	ode: USIT405	
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Details	Lectures
Introduction to Computer Graphics:	
Overview of Computer Graphics, Computer Graphics Application and	
Technologies, Storage Tube Graphics Displays, Calligraphic Refresh	
Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays,	
	12
	12
•	
* * *	
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1	
	Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh

	Transformations, Affine and Perspective Geometry, Perspective	
	Transformations, Techniques for Generating Perspective Views,	
	Vanishing Points, the Perspective Geometry and camera models,	
	Orthographic Projections, Axonometric Projections, Oblique	
	Projections, View volumes for projections.	
III	Viewing in 3D	
	Stages in 3D viewing, Canonical View Volume (CVV), Specifying an	
	Arbitrary 3D View, Examples of 3D Viewing, The Mathematics of	
	Planar Geometric Projections, Combined transformation matrices for	
	projections and viewing, Coordinate Systems and matrices, camera	12
	model and viewing pyramid.	
	Light:Radiometry,Transport,Equation,Photometry	
	Color:Colorimetry,ColorSpaces,ChromaticAdaptation, Color	
	Appearance	
IV	Visible-Surface Determination:	
	Techniques for efficient Visible-Surface Algorithms, Categories of	
	algorithms, Back face removal, The z-Buffer Algorithm, Scan-line	
	method, Painter's algorithms (depth sorting), Area sub-division	
	method, BSP trees, Visible-Surface Ray Tracing, comparison of the	
	methods.	
	Plane Curves and Surfaces:	12
	Curve Representation, Nonparametric Curves, Parametric Curves,	
	Parametric Representation of a Circle, Parametric Representation of	
	an Ellipse, Parametric Representation of a Parabola, Parametric	
	Representation of a Hyperbola, Representation of Space Curves,	
	Cubic Splines, , Bezier Curves, B-spline Curves, B-spline Curve Fit,	
	B-spline Curve Subdivision, Parametric Cubic Curves, Quadric	
	Surfaces. Bezier Surfaces.	
V	Computer Animation:	
	Principles of Animation, Key framing, Deformations, Character	
	Animation, Physics-Based Animation, Procedural Techniques, Groups	
	of Objects.	
	Image Manipulation and Storage:	12
	What is an Image? Digital image file formats, Image compression	
	standard - JPEG, Image Processing - Digital image enhancement,	
	contrast stretching, Histogram Equalization, smoothing and median	
	Filtering.	

Books ar	nd References:				
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Computer Graphics -	J. D. Foley, A. Van	Pearson		
	Principles and	Dam, S. K. Feiner		2^{nd}	
	Practice	and J. F. Hughes			
2.	Steve Marschner,	Fundamentals of	CRC press	4^{th}	2016
	Peter Shirley	Computer Graphics		4	
3.	Computer Graphics	Hearn, Baker	Pearson	2^{nd}	

4.	Principles of	William M.	TM	ſΗ	2^{nd}	
	Interactive Computer Graphics	Newman and Robert F. Sproull				
5.	Mathematical Elements for CG	D. F. Rogers, J. A. Adams	TM	1H	2^{nd}	
B. Sc.	(Information Tecl	hnology)		Semest	er –IV	
Course N	cal		Course C	ode: USI	Г4Р1	
Periods j	per week	Lectures per week 3		3		
1 Period is 50 minutes						
				Hours	Mai	rks
Evaluation System		Practical Examination	ion	21/2	50)

List of	Practical
1.	Java Basics
a.	Write a Java program that takes a number as input and prints its multiplication
1-	table upto 10.
b.	Write a Java program to display the following pattern.

	**
	*
с.	Write a Java program to print the area and perimeter of a circle.
2.	Use of Operators
a.	Write a Java program to add two binary numbers.
b.	Write a Java program to convert a decimal number to binary number and vice
	versa.
с.	Write a Java program to reverse a string.
3.	Java Data Types
a.	Write a Java program to count the letters, spaces, numbers and other characters of an input string.
b.	Implement a Java function that calculates the sum of digits for a given char array
	consisting of the digits '0' to '9'. The function should return the digit sum as a long
	value.
с.	Find the smallest and largest element from the array
4.	Methods and Constructors
a.	Designed a class SortData that contains the method asec() and desc().
b.	Designed a class that demonstrates the use of constructor and destructor.
c.	Write a java program to demonstrate the implementation of abstract class.
L	

5.	Inheritance
a.	Write a java program to implement single level inheritance.
b.	Write a java program to implement method overriding
с.	Write a java program to implement multiple inheritance.
6.	Packages and Arrays
a.	Create a package, Add the necessary classes and import the package in java class.
b.	Write a java program to add two matrices and print the resultant matrix.
с.	Write a java program for multiplying two matrices and print the product for the
	same.
7.	Vectors and Multithreading
a.	Write a java program to implement the vectors.
b.	Write a java program to implement thread life cycle.
с.	Write a java program to implement multithreading.
8.	File Handling
a.	Write a java program to open a file and display the contents in the console
	window.
b.	Write a java program to copy the contents from one file to other file.
с.	Write a java program to read the student data from user and store it in the file.
9.	GUI and Exception Handling
a.	Design a AWT program to print the factorial for an input value.
b.	Design an AWT programto perform various string operations like reverse string,
	string concatenation etc.
с.	Write a java program to implement exception handling.
10.	GUI Programming.
a.	Design an AWT application that contains the interface to add student information
	and display the same.
b.	Design a calculator based on AWT application.
с.	Design an AWT application to generate result marks sheet.

Books an	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Core Java 8 for	Vaishali Shah,	SPD	1st	2015	
	Beginners	Sharnam Shah				
2.	Java: The Complete	Herbert Schildt	McGraw	9th	2014	
	Reference		Hill			
3.	Murach's beginning Java	Joel Murach, Michael	SPD	1st	2016	
	with Net Beans	Urban				

4.	Core Java, Volume I:	Hortsman	Pearson	9th	2013
	Fundamentals				
5.	Core Java, Volume II:	Gary Cornell and	Pearson	8th	2008
	Advanced Features	Hortsman			
6.	Core Java: An Integrated	R. Nageswara Rao	DreamTech	1st	2008
	Approach				

B. Sc. (Information Technology)		Semester – IV		
Course Name: Introduction to Embedded Systems Practical		Course Code: USIT4P2		
Periods per week Lectures per week		3		
1 Period is 50 minutes				
		Hours	Marks	
Evaluation System	Practical Examination	21/2	50	

List of Practi	cal		
1.	Design and develop a reprogrammable embedded computer using 8051 microcontrollers and to show the following aspects. a. Programming b. Execution c. Debugging		
2. A	Configure timer control registers of 8051 and develop a program to generate given time delay.		
В	To demonstrate use of general purpose port i.e. Input/ output port of two controllers for data transfer between them.		
3. A	Port I / O: Use one of the four ports of 8051 for O/P interfaced to eight LED's. Simulate binary counter (8 bit) on LED's		
В	To interface 8 LEDs at Input-output port and create different patterns.		
C	To demonstrate timer working in timer mode and blink LED without using any loop delay routine.		
4. A	Serial I / O: Configure 8051 serial port for asynchronous serial communication with serial port of PC exchange text messages to PC and display on PC screen. Signify end of message by carriage return.		
В	To demonstrate interfacing of seven-segment LED display and generate counting from 0 to 99 with fixed time delay.		
С	Interface 8051 with D/A converter and generate square wave of given frequency on oscilloscope.		
5. A	Interface 8051 with D/A converter and generate triangular wave of given frequency on oscilloscope.		

B	Using D/A converter generate sine wave on oscilloscope with the help of lookup table stored in data area of 8051.
6.	Interface stepper motor with 8051 and write a program to move the motor through a given angle in clock wise or counter clock wise direction.
7.	Generate traffic signal.
8.	Implement Temperature controller.
9.	Implement Elevator control.
10.	Using FlashMagic
Α	To demonstrate the procedure for flash programming for reprogrammable embedded system board using FlashMagic
В	To demonstrate the procedure and connections for multiple controllers programming of same type of controller with same source code in one go, using flash magic.

B. Sc. (Information Technology)		Semester – IV		
Course Name: Computer Oriented Statistical			Course Code: USIT4P3	
Techniques Practical				
Periods per week	Lectures per week	3		
1 Period is 50 minutes				
		Hours	Marks	
Evaluation System	Practical Examination	21/2	50	

List of	Practical
1.	Using R execute the basic commands, array, list and frames.
2.	Create a Matrix using R and Perform the operations addition, inverse, transpose and multiplication operations.
3.	Using R Execute the statistical functions:mean, median, mode, quartiles, range, inter quartile range histogram
4.	Using R import the data from Excel / .CSV file and Perform the above functions.
5.	Using R import the data from Excel / .CSV file and Calculate the standard deviation, variance, co-variance.
6.	Using R import the data from Excel / .CSV file and draw the skewness.
7.	Import the data from Excel / .CSV and perform the hypothetical testing.
8.	Import the data from Excel / .CSV and perform the Chi-squared Test.
9.	Using R perform the binomial and normal distribution on the data.
10.	Perform the Linear Regression using R.
11	
11.	Compute the Least squares means using R.
12.	Compute the Linear Least Square Regression

Sr.	Title	Author/s	Publ	blisher Edition		Year
No.						
1. A Practical Approach R.		R.B. Patil,	SPD		First	2011
		H.J. Dand and				
R		R. Dahake				
2.	2. STATISTICS Murray R.		McGRAV	V –HILL	FOURTH	2006
		Spiegel, Larry J.	INTERNA	ATIONAL		
		Stephens.				
B. Sc. (Information Technology)				Semest	er – IV	
Cour	se Name: Software Engi	neering		Course C	ode: USIT4	P4
Perio	ods per week	Lectures	per week		3	
1 Per	riod is 50 minutes		_			
			Hours	Marks	5	
Evalı	uation System	Practical Exa	amination 2 ¹ / ₂		50	

List of l	Practical (To be executed using Star UML or any similar software)
1.	Study and implementation of class diagrams.
2.	Study and implementation of Use Case Diagrams.
2	
3.	Study and implementation of Entity Relationship Diagrams.
4.	Study and implementation of Sequence Diagrams.
5.	Study and implementation of State Transition Diagrams.
6.	Study and implementation of Data Flow Diagrams.
7.	Study and implementation of Collaboration Diagrams.
8.	Study and implementation of Activity Diagrams.
9.	Study and implementation of Component Diagrams.
10.	Study and implementation of Deployment Diagrams.

Books	Books and References:							
Sr.	Title	Author/s	Publisher	Edition	Year			
No.								
3.	Object - Oriented	Michael Blaha,	Pearson		2011			
	Modeling and Design	James Rumbaugh						

4.	Learning UML 2. 0	Kim Hamilton, Russ	O'Reilly	2006
		Miles	Media	
5.	The unified modeling	Grady Booch, James	Addison-	2005
	language user guide	Rumbaugh, Ivar	Wesley	
		Jacobson		
6.	UML A Beginners	Jason T. Roff	McGraw Hill	2003
	Guide		Professional	

B. Sc. (Information Tecl	Semester – IV		
Course Name: Computer Graph	Course Code: USIT4P5		
Periods per week	Lectures per week		3
1 Period is 50 minutes			
		Hours	Marks
Evaluation System	Practical Examination	21/2	50

List of	Practical
1.	Solve the following:
a.	Study and enlist the basic functions used for graphics in C / C++ / Python
	language. Give an example for each of them.
b.	Draw a co-ordinate axis at the center of the screen.
2.	Solve the following:
a.	Divide your screen into four region, draw circle, rectangle, ellipse and half ellipse
	in each region with appropriate message.
b.	Draw a simple hut on the screen.
3.	Draw the following basic shapes in the center of the screen :
	i. Circle ii. Rectangle iii. Square iv. Concentric Circles v. Ellipse vi. Line
4.	Solve the following:
a.	Develop the program for DDA Line drawing algorithm.
b.	Develop the program forBresenham's Line drawing algorithm.
5.	Solve the following:
a.	Develop the program for the mid-point circle drawing algorithm.
b.	Develop the program for the mid-point ellipse drawing algorithm.
6.	Solve the following:
a.	Write a program to implement 2D scaling.
b.	Write a program to perform 2D translation

7.	Solve the following:
a.	Perform 2D Rotation on a given object.
b.	Program to create a house like figure and perform the following operations.
	i.Scaling about the origin followed by translation.
	ii. Scaling with reference to an arbitrary point.
	iii. Reflect about the line $y = mx + c$.
8.	Solve the following:
a.	Write a program to implement Cohen-Sutherland clipping.
b.	Write a program to implement Liang - Barsky Line Clipping Algorithm
9.	Solve the following:
a.	Write a program to fill a circle using Flood Fill Algorithm.
b.	Write a program to fill a circle using Boundary Fill Algorithm.
10.	Solve the following:
a.	Develop a simple text screen saver using graphics functions.
b.	Perform smiling face animation using graphic functions.
с.	Draw the moving car on the screen.

Books ar	Books and References:							
Sr. No.	Title	Author/s	Publisher	Edition	Year			
1.	Computer Graphics -	J. D. Foley, A.	Pearson	Second				
	Principles and Practice	Van Dam, S. K.	Education	Edition				
		Feiner and J. F.						
		Hughes						
2.	Steve Marschner, Peter	Fundamentals of	CRC press	Fourth	2016			
	Shirley	Computer		Edition				
		Graphics						
3.	Computer Graphics	Hearn, Baker	Pearson	Second				
			Education					
4.	Principles of Interactive	William M.	Tata	Second				
	Computer Graphics	Newman and	McGraw					
		Robert F.	Hill					
		Sproull						

AS PER letter No. AAlico/2018-19/542 UNIVERSITY OF MUMBAI dt. 10/10/2018

Revised

No. UG/58 of 2018-19

CIRCULAR:-

Attention of the Principals of the Affiliated Colleges and Directors of the recognized Institutions in Humanities Faculty is invited to this office circular No. UG/270 of 2017-18, dated 26th October, 2017 relating to syllabus of Bachelor of Arts.

They are hereby informed that the recommendations made by the Board of Studies in Economics at its meeting held on 18th May, 2018 have been accepted by the Academic Council at its meeting held on 14th June, 2018 <u>vide</u> item No. 4.3 and that in accordance therewith, the revised syllabus as per the (CBCS) for the T.Y.B.A. in Economics – Sem V & VI has been brought into force with effect from the academic year 2018-19, accordingly. (The same is available on the University's website www.mu.ac.in).

una

(Dr. Dinesh Kamble) I/c REGISTRAR

MUMBAI - 400 032 6th Anne, 2018 To July

The Principals of the affiliated Colleges and Directors of the recognized Institutions in Humanities Faculty. (Circular No. UG/334 of 2017-18 dated 9th January, 2018.)

A.C./4.3/14/06/2018

No. UG/58 -A of 2018

MUMBAI-400 032

6th tune, 2018

Copy forwarded with Compliments for information to:-

1) The I/c Dean, Faculty of Humanities,

2) The Chairman, Board of Studies in Economics,

3) The Director, Board of Examinations and Evaluation,

4) The Director, Board of Students Development,

5) The Professor-cum-Director, Institute of Distance and Open Learning (IDOL),

對.

6) The Co-Ordinator, University Computerization Centre,

100112 2016/18

(Dr. Dinesh Kamble) I/c REGISTRAR

AC 14-6-18

Item No. 4.3

University of Mumbai

University of Mumbai



Revised Syllabus Sem. V & Sem. VI Program: B. A. Course: Economics

(As per the Credit Based Semester and Grading System with effect from the academic year 2018-2019)

PREAMBLE:

The syllabus of TYBA has been revised by keeping in view of the recent trends in the subject of economics. The Board of Studies in Economics has revised the syllabi of papers at the TYBA which will be made effective **from the Academic Year 2018-19**. In this revision, some of the existing optional papers have been replaced by new papers. A broad overview of the structure, followed by the syllabi of individual papers, is given below.

DURATION:

- The course shall be a full time course.
- The duration of B.A. course shall be of Three years /Six Semesters. FYBA: SEMESTER – I & II (One paper each semester) SYBA: SEMESTER – III & IV (Two papers each semester) TYBA: SEMESTER – V & VI (Six papers each semester)

PATTERN:

The T.Y.B. A. [Entire Economics] Course shall have 12 papers. Every semester shall have six papers, each carrying 100 marks. However students can opt combination of any two subjects (Economics and any other subject) in which every semester shall have three papers of each subject, carrying 100 marks. Moreover, Papers IX and Papers XII of Semester V and Paper XV and XVIII Semester VI are bifurcated into 80 marks of written exam and 20 marks of project. It is hereby stipulated to have a maximum page limit of 20 for the project.

SCHEME OF EXAMINATION:

The duration of the examination, paper pattern and the allotment of lectures as well as marks are given in detail as follows:

Duration:

• **Three Hours** for each 100 marks paper and Two and Half an Hour for 80 marks paper.

Allotment of Lectures:

• The allotment of lectures is as per the common guidelines stipulated by the Academic Council for Humanities of University of Mumbai.

Paper Pattern:

- There shall be five questions each of 20 marks, for 100 marks paper divided into three sub questions (a, b, c,) with an internal option to choose any two.
- There shall be four questions of 20 marks for 80 marks paper with internal options mentioned as the same above.
- All questions shall be compulsory with internal choice within the questions.
- Questions may be subdivided into sub-questions a, b, c as mentioned earlier and the allocation of marks shall depend on the weightage given to the topic.

Questions	Modules	Marks
Qn.1	Unit I	20
Qn.2	Unit II	20

Qn.3 Unit III 20	Qn.3	Unit III	20

Qn.4	Unit IV	20
Qn.5	4 Sub-questions from Unit I, II, III & IV	20

COURSE STRUCTURE

(APPLICABLE FROM ACADEMIC YEAR 2018 2019)

<u>TYBA (SEMESTER –V)</u>

SGROUP-I : CORE PAPERSECOMIE501VIIMICROECONOMICS- III4100ECODEV502VIIIECONOMICS OF DEVELOPMENT4100GROUP-II :ELECTIVE PAPERSECOFEA503IXFINANCIAL ECONOMICS380ORORECOFEA503IXFINANCIAL ECONOMICS380ORECOFEACB503IXFINANCIAL ECONOMICS OF AGRICULTURE AND COOPERATION380ORECOILEC503IXINDUSTRIAL AND LABOUR ECONOMICS380ORINDUSTRIAL AND LABOUR ECONOMICS380	COURSE CODE		REVISED PAPER	CREDIT	MARK
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ECOEHIC504	X	ECONOMIC HISTORY OF INDIA	4	100
		INTRODUCTION TO		
ECOIEA505	XI	ECONOMETRICS	4	100
		OR		
ECOMMEB505	XI	MATHEMATICAL METHODS IN ECONOMICS	4	100
		OR		
ECOENVC505	XI	ENVIRONMENTAL ECONOMICS	4	100
ECOHET506	XII	HISTORY OF ECONOMIC THOUGHT	3	80

MICROECONOMICS III: PAPERVII

COURSE CODE	PAPER TITLE	CREDITS	MADIZO
GROUP - I	CORE PAPERS		MARKS
ECOMIC501	MICROECONOMICS III : PAPER VII	4	100

SEMESTER -V

Preamble:

The course is designed to provide sound understanding in microeconomic theory. Since students have been taught perfect competition, this course focuses on three aspects, which are the study of imperfect competition, general equilibrium and welfare economics.

Module 1: Monopoly

Sources of monopoly - Profit maximising monopoly – Calculation of price, output and profit for a monopoly- Price discrimination: First, Second and Third degree- Public policy towards monopoly.

Module 2: Basics of Game theory

Prisoner"s Dilemma – Dominant strategy equilibrium – Battle of sexes game – Nash equilibrium – Extensive form games – Game tree.

Module 3: Oligopoly

The Cournot model – The Bertrand model – The Edgeworth model – The Chamberlin model – The Kinked demand curve model – Collusion and Cartels – Price Leadership.

Module 4: General Equilibrium and Welfare Economics

Interdependence in the Economy – General Equilibrium and its Existence -The Pareto Optimality Condition of Social Welfare, Marginal Conditions for Pareto Optimal Resource Allocation.

Perfect Competition and Pareto Optimality – Kaldor- Hicks Compensation Criterion -

Arrow"s Impossibility Theorem.

- 1. Koutsoyannis, Modern Microeconomics, Macmillan Press Ltd., London, 1975.
- 2. Mankiw, N. Gregory, Principles of Microeconomics, Cengage Learning, 2015.
- 3. Mansfield, Edwin, Micro-economics: Theory & Applications, 5th edition, W.W. Norton & Company, New York, 1985.
- 4. Sen Anindya, Microeconomics: Theory and Applications, Second edition Oxford University Press, New Delhi, 2007.
- 5. Salvatore, D. Microeconomics : Theory and Applications , New Delhi Oxford, New Delhi, Oxford University Press 2006.
- 6. R.Gibbons, A Primer in Game Theory, Harvester Wheatsheaf, 1992.

ECONOMICS OF DEVELOPMENT: PAPER VIII

SEMESTER-V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP -I	COMPULSORY PAPERS		1
ECODEV502	ECONOMICS OF DEVELOPMENT :PAPER VIII	4	100

Preamble:

This course is designed to inculcate diverse concepts related to economic growth and development by giving special emphasis on structural issues related to the process of development. In order to create an awareness on policy options, the pressing problems on the path of development such as inequality, poverty and technological aspects are dealt in.

Module1:Concepts of Economic Growth and Development:

Meaning of Growth and Development – Distinction between growth & development– Concept of human development. HDI, GDI, Sustainable development – Green GDP – Three core values of development – Capability Approach.

Module 2:Structural Issues in Development Process:

Big push theory – Theory of human capital – Role of Education, Health & nutrition in economic development- Schumpeter's theory of development, Dual economy models of growth, Solow's growth model.

Module 3: Inequality, Poverty and Development:

Measures of poverty and inequality – Kuznet"s inverted U-hypothesis – Policy options for poverty alleviation – Inclusive growth – Self Help Groups and Micro Finance.

Module 4:Technology and Economic Development:

Role of Infrastructure in economic development –Role of technology in economic development, Types of technical progress –Schumacher"s Concept of Intermediate/ Appropriate technology, Green technology.

- 1. Todaro, Michael P. and Stephen C. Smith. Economic Development, 8e. Delhi: Pearson Education, 2003.
- 2. Thirlwall, A.P. Growth and Development 8e. New York: Palgrave MacMillan, 2005.
- 3. Meier, Gerald M. and James E. Rauch. Leading Issues in Economic Development, 8e. New Delhi: Oxford Univ. Press, 2006.
- 4. Mamoria, Joshi, Principles and practice of marketing in India, Kitab Mahal, 1979.
- 5. Boldwin, Economic Development: Theory, History and Policy, Willy Publishers, 1957
- 6. Sinha Francis, Microfinance self Help Groups in India: Living up to Their Promises, Practical Action Publishing, England, 2009.

FINANCIAL ECONOMICS: PAPER IX

COURSE CODE	PAPER TITLE	CREDITS	MADUC
GROUP - II	ELECTIVE PAPERS		MARKS
ECOFEA503	FINANCIAL ECONOMICS: PAPER IX	3	80

SEMESTER – V

Preamble:

The course introduces students to the economics of Finance. It aims at imparting knowledge about the basic models of investment and portfolio analysis, including the CAPM. The valuation of assets, derivatives and options is to be studied in addition to patterns of corporate financing.

Module1: Investment & portfolio Analysis:

Basic theory of interest, discounting & present value; internal rate of return, evaluation criteria, fixed income securities; bonds prices & yields. Structure of interest rate, yield curves, spot & forward rates. Portfolio of assets, random asset returns, Mean variance portfolio analysis, The Markowitz Model & two fund theorem.

Module 2:CAPM:

The capital Market line, the CAP Model, the beta of an asset & of a portfolio, security market line, CAPM model in investment & pricing formula.

Module 3: Options & Derivatives:

Meaning, functions & types of derivatives - forward contracts, futures - forward & future prices, stock index futures, interest rate futures, future for hedging. Options & Swaps and their types - Option market: call & put options, option trading strategies - spreads, straddles, strips & straps, strangles, the principle of arbitrage. Participants of derivatives market- hedgers, speculators, arbitrageurs.

Module 4: Corporate Finance:

Patterns of corporate financing: stock, debt, preferences, convertibles. Capital structure & the cost of capital, corporate debt & dividend policy, the Modigliani –Miller theorem. **References:**

- 1. David Luenberger, Investment Science, Oxford University Press, 1997.
- 2. Hull John C, Options, Futures and other derivatives, Pearson Education, 2005.
- 3. Thomas Copeland, J. Fred Weston and Kuldeep Shastri, Financial Theory and Corporate Policy, Prentice Hall, 2003.
- 4. Richard Brealey and Stewart Myers, Principles of Corporate Finance, McGraw Hill, 2002.
- 5. Stephen Ross and Bradford Jordan, Fundamentals of Corporate Finance, McGraw Hill, 2005.
- 6. William Sharpe, Gordon Alexander and J. Bailey, Investment, Prenice Hall of India, 2003.

ECONOMICS OF AGRICULTURE AND COOPERATION : PAPER IX

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOEACB503	ECONOMICS OF AGRICULTURE AND COOPERATION : PAPER IX	3	80

Preamble:

This paper provides an overview of the role of agriculture in the economic development of the country and the salient features associated to agricultural productivity and agricultural labour. The pertinent aspects related to agricultural credit, agricultural marketing as well as the global problems existing in the marketing are dealt in. Students can acquire understanding about the features of agricultural policy and the agrarian crisis as well as the problems and challenges in the field of agriculture and cooperation.

Module 1: Agricultural Productivity:

Role of agriculture in economic development - Cropping Pattern Agricultural Productivity, Causes of Low Productivity in Agriculture - Measures taken to improve the Agricultural Productivity in India - Water Management and agricultural development - Agricultural labour: Problems and suggestions.

Module 2: Agricultural Credit:

Institutional and Non-Institutional Sources of Credit - Co-operative Credit and Agriculture, Rural Indebtedness - Commercial Banks and Regional Rural Banks, microfinance - NABARD - Role and Performance.

Module 3: Agricultural Marketing :

Types of Marketing - Corporate, Commodity and Global Problems and Measures of Agricultural Marketing - WTO and Indian Agriculture. Problems of Agricultural Marketing and its measures- National Agricultural Market.

Module 4: Agricultural Price and Policy:

New Agricultural Policy – 2007 - Food Security in India - Price Policy of CACP Evaluation, Agricultural Crisis and Farmers" Suicide. Agro-Tourism and its policy

- 1. Bilgram, S.A.R, Agricultural Economics, Himalaya Publication House, Delhi, 1966
- 2. Raj K.N, Essays in Commercialization of Indian Agriculture, Oxford University Press, New Delhi, 1988.
- 3. Thamarajalaxmi R, Intersectoral Relationship in Developing Economy, Academic Foundation, Delhi, 1994.
- 4. Memoria C. B, Agricultural Problems of India, Kitab Mahal Allahabad, 1979.

- 5. Datt and Sundaram, Indian Economy, S.Chand & Company, New Delhi, 2012.
- 6. Mishra & Puri, Indian Economy, Himalaya Publishing House, New Delhi, 2012.

INDUSTRIAL AND LABOUR ECONOMICS: PAPER IX

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOILEC503	INDUSTIRAL AND LABOUR CONOMICS : PAPER IX	3	80

Preamble:

There has been a paradigm shift in the structure of the Indian industrial sector and the policies governing it ever since the new era of globalisation and liberalisation has ushered in. This paper intends to equip the students with the knowledge about the fundamentals of Industrial Economics and also the changing policies related to the Indian industry in the globalised era.

Module 1: Introduction

Meaning and Scope of Industrial Economics, Industrial Profile : Private sector -Performance and Problems; Cooperatives - features, types, merits and demerits; Public Sector - Role, Performance and Problems, Diversification and Industrial Combinations -Motives for Mergers and Acquisitions.

Module 2: Industrial Location and Problem of Regional Imbalance

Determinants of Industrial Location, Theories of Industrial Location - Weber's and Sargent Florence's Theories, Dispersion of Industries and the Problem of Regional Imbalance

Module 3: Industrial Productivity and Industrial Sickness

Concept and Measurement of Industrial Productivity, Factors Affecting Industrial Productivity, Industrial Sickness - Causes, Effects and Remedial Measures, Rationalisation - Concept, Aspects and Impact

Module 4: Industrial Development in India

New Industrial Policy, 1991; Disinvestment Policy; FIPB Revamp- Micro, Small and Medium Enterprises Development Act, 2006; National Manufacturing Policy, 2011,Recent Trends in India's Industrial Growth, Industrial Policy, 2012, Role of MNCs in the Indian Economy - Merits and Demerits, Issues in Industrial Proliferation and Environment Preservation; Pollution Control Policies.

<u>References</u>:

- 1. Agrawal A.N, Indian Economy, New Age International Publishers, New Delhi, 2011.
- 2. Barthwal R.R, Industrial Economics, New Age International Publishers, NewDelhi, 2007.
- 3. Cherunilam. F, Industrial Economics: Indian Perspective, Himalaya Publishing House, Mumbai, 1994.
- 4. Datt R. and Sundaram K.P.M, Indian Economy, S.Chand& Co., New Delhi, 2009.
- 5. Desai S.S.M. and Bhalerao N, Industrial Economy of India, Himalaya Publishing House, Mumbai, 2008.
- 6. Kuchhal S.C, Industrial Economy of India, Chaitanya Publishing House, Allahabad, 1980.

MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS: PAPER X

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOMSEAA504	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS :PAPER X	4	100

Preamble

A plethora of data has emerged at an exponential rate and it is the description, interpretation and understanding of these data and drawing of accurate conclusions that is imperative for a student of Economics. The aim of this paper is to provide students with the mathematical and statistical skills and understanding needed for 'knowing why' and 'when' to apply these techniques.

Module 1: Equations, Graphs and Derivatives

Microeconomic applications of equations and graphs - Linear and non-linear relationships in economic analysis– Market demand and supply models, taxes, elasticity Derivatives and their applications in various areas of economic analysis – Derivatives– Higher order derivatives– Increasing and decreasing functions; Necessary and sufficient conditions for maxima and minima– Optimisation of economic functions

Module 2: Linear Algebra

Matrices and basic operations on matrices– Rank of a matrix– Inverse of a matrix– Cramer"s rule– Input-Output Analysis and policy implications– Linear Programming Problem: Formulation and graphical solution.

Module 3: Descriptive Statistics and graphing techniques for presenting data

Concept of primary and secondary data along with tabulation and graphs – Measures of central tendency (only arithmetic-mean, median, and mode) – Absolute and relative

measures of dispersion (range, quartile deviation, mean deviation and standard deviation) with simple applications – Measures of skewness and kurtosis – Lorenz Curve. Commercial Statistics – Brokerage, Commission and Insurance.

Module 4: Elementary Probability Theory

Sample space and events– Mutually exclusive, exhaustive and complimentary events– Conditional probability– Binomial probability distribution– Nature and Properties of the Normal Probability Distribution; Standard Scores and the Normal Curve; The Standard Normal Curve: Finding Areas when the Score is Known, Finding Scores when the Area is Known.

References:

1.	Dowling Edward T: Introduction to Mathematical Economics, Schaum
	Outline Series in Economics, Tata McGraw -Hill, New Delhi, 2004.
2.	Dowling Edward T: Theory and Problems of Mathematical Methods for
	Business and Economics, McGraw-Hill, 1993.
3.	Gupta S.P.: Statistical Methods, S. Chand, New Delhi, 2014.
4.	Lerner Joel J and P.Zima: Theory and Problems of Business
	Mathematics, McGraw Hill, New York, 1986.
5.	Sancheti D.C. and V.K. Kapoor: Statistics-Theory, Methods and
	Applications, S. Chand, New Delhi, 2014.
6.	Chiang A. C.: Fundamental Methods of Mathematical Economics, 3rd
	edition. McGraw-Hill, 1984.

RESEARCH METHODOLOGY: PAPER X

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS	CREDITS	
ECORMB504	RESEARCH METHODOLOGY	4	100
	: PAPER X	4	100

Preamble:

This paper is designed with the view to introduce the concepts, principles and methods of economic research based on qualitative and quantitative data. The course will enable the students to get an insight into the applications of modern analytical tools and techniques related economic decision making. The student gets an opportunity to learn how to collect and analyze primary and secondary data. Practical sessions will strengthen the knowledge related to computer applications to research analysis.

Module 1: Introduction to Concept of Research:

Nature, Scope & Purpose of social research - Basic assumptions of research - Significance and objectivity in social sciences research - Types of research: pure & applied research; formulative or exploratory research; descriptive research, historical research, experimental research, survey research - Ethical issues and major difficulties relating to research .

Module 2: Elements of Research Methodology:

Steps in Research process: Identification, selection and formulation of research problem – sources of research problem – criteria of a good research problem - Review of literature - Formulation of hypothesis - Preparing Research Design: Definition, Concepts, and types– exploratory, descriptive and diagnostic, experimental and Analytical research designs – Collection and analysis of the data - Interpretation and report writing.

Use of web search in research process- introduction to Internet and WWW - Using search engine like Google, Yahoo etc. Use of advanced search techniques.

Module 3: Sources of Data for Research:

Types of data sources: Primary and Secondary - Primary data-Meaning and Collection methods - Observational method - Interview technique - Design of Schedule and Questionnaire - Survey method and Field Visits - Case Study as a method.

Major Sources of Secondary data: Meaning, advantages, Relevance, limitations and cautions of secondary data.

Sampling Technique: Census and sample survey- Essentials of a good Sampling -Advantages and limitations of sampling, Methods of sampling: Random sampling : Simple or Unrestricted Random Sampling- Mixed or Stratified Random Sampling, Systematic or Quasi Random sampling – Multistage or Cluster Random Sampling -Sequential Random Sampling, Non random sampling : Judgement or Purposive sampling–Convenience sampling accidental sampling – Quota sampling, Selecting an appropriate sampling technique- Sampling and Non-sampling errors - Sample size.

Module 4: Processing and Analysis of Data

Classification, Tabulation and Graphical presentation of socio-economic data - An introduction to Statistical Analytical Tools – Measures of Central Tendency – Measures of Variation: absolute and relative measures – Quartile deviation, standard deviation, coefficient of variation- Skewness: meaning and Measurement (Karl Pearson''s and Bowley''s methods) - Basics of Computer Applications in Data organization & Data Processing, Introduction to spreadsheet application, features and functions, Using formulas and functions, Data storing, Features for Statistical data analysis, Graphical

representation of data, Generating charts/ graph and other features. **References:**

- 1. Goode J. William & Hatt K. Paul, Methods in social Research, New York, McGraw-Hill, 1952.
- 2. Kothari, C.R., Research Methodoloy: An Introduction, Delhi, New Age, 2004.
- 3. Krishnaswami, O.R & M. Ranganatham ,Methodology of Research in Social Sciences, Himalaya Publishing House, Mumbai, 2011.
- 4. P. Saravanavel, Research Methodoloy, KitabMahal, Allahabad, 1987.
- 5. Gupta S. P., Statistical Methods, Sultan Chand and Sons, New Delhi, 2014 .
- 6. Rajaram V., Fundamentals of computers, Prentice Hall of India, New Delhi, 1996.

ECONOMIC HISTORY OF INDIA: 1857-1947: PAPER X

$\boldsymbol{SEMESTER}-\boldsymbol{V}$

COURSE CODE	PAPER TITLE	CREDITS	MADKC
GROUP - II	ELECTIVE PAPERS	CREDIIS	WIAKKS
ECOEHIC504	ECONOMIC HISTORY OF INDIA: 1857-1947 : PAPER X	4	100

Preamble:

This course analyses key aspects of Indian economic development during the second half of British colonial rule. It investigates the place of the Indian economy in the wider colonial context, and the mechanisms that linked economic development in India to the colonial rule.

Module1: Growth and Structural Change 1857-1947

The state of Indian Economy after 1857 under British Rule- Nature of Communities-Trade and Tariff Policy- Foreign Investment and Exchange Rate Policy, Saving and Investment- Public Finance -Balance of Payments- Great Depression and the Indian Economy.

Module 2: Agriculture and the Commons

Trends in Production and Income-Resources, Regional dimensions of agriculture- land, labour and credit markets- forests and forest-indigenous inhabitants -village commons and pastures-land use patterns-Jhum Cultivation- Waste lands.

Module 3: Industry

Long term patterns of small scale industrialization and its interpretation- handloom, weaving and other industries- labour and capital in traditional small scale industry-modern small scale industry- statistical outline of large scale industry- stages of industrialization and major industries- labour, finance, entrepreneurship and management in large scale industry.

Module 4: Infrastructure, Fiscal and Monetary systems:

Impetus- Irrigation- Railways- Roads and Inland Waterways- Ports- Post and Telegraph-Power- Legal- systems Economic policy and policy making-Trade policy- Fiscal systems- Monetary system- prices.

- 1. Tirthankar Roy, The Economic History of India 1857-1947, Oxford University Press, 2011.
- 2. S.Sivasubramonian, National Income of India in the Twentieth Century, Oxford University Press, 2000.
- 3. SumitGuha (ed.), Growth, Stagnation or Decline?, Delhi , Oxford University Press, 1993.

- 4. A.K. Banerji, India"s Balance of Payments, Bombay: Asia Publishing House, 1962.
- 5. George Blyn, Agricultural Trends in India, 1891-1947: Output, Availability and Productivity, Philadelphia: University of Pennsylvania press, 1966
- 6. Alice Thorner, The Secular Trend in the Indian Economy,1881-1951,Economic Weekly, vol.14,1962.

INTRODUCTION TO ECONOMETRICS: PAPER XI

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOIEA505	INTRODUCTION TO ECONOMETRICS : PAPER XI	4	100

Preamble:

The objective of this course is to impart a basic understanding of econometrics. At the same time, it will enhance the student's ability to apply the theoretical techniques to the problems of the real world. Topics like forecasting have been introduced to impart this practical orientation.

Module 1: Idea of a random variable:

Concept of a random variable: Discrete and continuous - Expected values of a random variable - Variance of a random variable - Discrete random variables: Bernoulli, Binomial, Poisson - Continuous random variables: The normal distribution.

Module 2: Jointly distributed Random variables:

Joint and marginal distributions for bivariate random variables - Conditional probability-Conditional mean and variance – Covariance - Correlation and Partial correlation -Central limit theorem (without proof).

Module 3: Statistical Inference:

Point and interval estimation - The Z distribution - The Null and Alternate hypotheses and significance testing for mean using Z distribution when population variance is known - The chi-square distribution and testing for sample variance with known population variance - The F distribution and comparing sample variances - The t distribution and hypothesis tests when population variance in unknown.

Module 4: Regression Analysis:

Two variable regression model - The concept of the PRF - Classical assumptions of regression - Derivation of the OLS estimators and their variance - Properties of OLS estimators under classical assumptions, Gauss-Markov Theorem (without proof) - Tests

of Hypothesis, confidence intervals for OLS estimators - Measures of goodness of fit: R square and its limitations, adjusted R square and its Limitations.

References:

- 1. Damodar N. Gujarati, Basic Econometrics, McGraw-Hill, Delhi, 2003.
- 2. Kapoor V. K., Operations Research Problems & Solutions, Sultan Chand & sons, Delhi, 2011.
- 3. Murray R. Spigel Schaum's Outline of Theory and Problems of Statistics, McGraw-Hill, 1988.
- 4. Jeffrey M. Wooldridge, Econometrics, Cengage Learning, India Edition, 2009.
- 5. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan, 2011.
- 6. Stock J. Watson, Introduction to Econometrics, Prentice Hall, New York, 2003.

MATHEMATICAL METHODS IN ECONOMICS: PAPER XI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOMMEB505	MATHEMATICAL METHODS IN ECONOMICS : PAPER XI	4	100

SEMESTER V

Preamble:

The objective of this paper is to prepare the students the basic mathematics that enables the study of economic theory based on microeconomic theory, macroeconomic theory, statistics and econometrics. In this course, particular economic models are not dealt as the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general.

Module 1: Functions of one real variable

Graphs; elementary types of functions: quadratic, polynomial, power, exponential, logarithmic; sequences and series: convergence, algebraic properties and applications; continuous functions: characterizations, properties with respect to various operations and applications; differentiable functions: characterizations, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

Module 2: Single-variable optimization

Geometric properties of functions: convex functions, their characterizations and applications; local and global optima: geometric characterizations, characterizations using calculus and applications.

Module 3: Integration of functions and Differential Equations

Areas under curves; indefinite integrals; the definite integral, First Order Differential Equations.

Module 4: Mathematical Methods and Models

Game Theory, Input Output Model, Linear Programming, Auto Correlation, Multicollinearity, Hetroscadasticity.

References:

- 1. K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia, Delhi, 2002.
- 2. Damodar N. Gujrati, Basic Econometrics, McGraw-Hill, Delhi, 2003.
- 3. Chinag A. C.: Fundamental Methods of Mathematical Economics, McGraw-Hill, Delhi,1984.
- 4. R. G. D. Allan, Mathematical Analysis for Economists, Macmillan and Co., 1962.
- 5. Dowling Edward T: Introduction to Mathematical Economics, Schaum Outline Series in Economics, Tata McGraw -Hill, New Delhi, 2004.
- 6. Dowling Edward T: Theory and Problems of Mathematical Methods for Business and Economics, McGraw –Hill, 1993.

ENVIRONMENTAL ECONOMICS: PAPER XI

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOENVC505	ENVIRONMENTAL ECONOMICS: PAPER XI	4	100

Preamble:

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management. Economic implications of environmental policy are addressed as well as valuation of environmental improvements.

Module1: Introduction to Environmental Economics:

Introduction to environmental development and environmental economics, Rio-Declaration on environmental development, Agenda 21 programme of action for sustainable development, Social and economic dimensions, Conservation and management of resources for development.

Module 2: The design and implementation of Environmental Policy:

Overview - Criteria for evaluating environmental policies; Standards, Pigovian taxes and effluent fees, tradable permits, choice between taxes and quotas, implementation of environmental policy.

Module 3: Measuring benefits of environmental improvements:

Economic value of Environment- Use and Non-use values-Measurement method:-market based and non-market based methods, contingent valuation, travel cost method, hedonic price method, risk assessment and perceptions.

Module 4: Environmental problems:

The global environment- Trans-boundary environmental problems, economics of climate change, International environmental Agreements - , sustainable development: Concepts and measures.

References:

- 1. Barry C. Fields: Environmental Economics : An Introduction, McGraw Hill International Edition, 1997.
- 2. Charles Kolstad : Environmental Economics, Oxford University Press, New York, 2000.
- 3. Kaltschmitt, Martin, Streicher, Wolfgang, Wiese, Andreas, Renewable Energy: Technology, Economics and Environment, Springer, Germany, 2007.
- 4. Hanley Nick, Shogren Jason and White Ben: Introduction to Environmental Economics, Oxford University Press, 2001.
- 5. Smith Stephen: Environmental Economics: A very Short Introduction, 1st Edition, Oxford University Press, New York, 2011.
- United Nations Sustainable Development, UN Conference on Environment & Development, Rio de Janerio, Brazil, Agenda 21, https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf, 1992.

HISTORY OF ECONOMIC THOUGHT: PAPER XII SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MADES
GROUP - II	ELECTIVE PAPERS		MARKS
ECOHET506	HISTORY OF ECONOMIC	2	80
	THOUGHT: PAPER XII	3	80

Preamble:

This course provides basic understanding about the celebrated economists and their contributions starting from the classical period. It throws light on the contributions of Nobel Laureates of recent period too.

Module 1: Classical Period

Adam Smith - division of labour, theory of values, capital accumulation, distribution, David Ricardio- Value, theory of rent, distribution. Karl Marx - dynamics of social changes, theory of values, surplus value, profit and crisis of capitalism and Contemporary Relevance.

Module 2: Marginalist : Marshall To Schumpeter

Role of time in price determination, economics methods, ideas of consumer's surplus, representative firm, external and internal economies, quasi-rent, nature of profit; Pigou : welfare economics: Schumpeter: role of entrepreneur and innovation.

Module 3: Keynesian Ideas:

Liquidity Preference Theory and Liquidity trap, Consumption Function, MPC,

Multiplier & Accelerator principles and their interaction, wage rigidities, underemployment equilibrium, role of fiscal policy: deficit spending and public works, multiplier principles, cyclical behaviour of the economy.

Module 4: Post- Keynesian Developments:

Hayek – Supply side economics: Arthur Laffer, Evans – Monetarism: Milton Friedman"s Don Patinkin – An overview of the new classical economics: Robert Lucas. Nobel Prize Winners in Economics: A. K. Sen (1998), Joseph Stiglitz (2001), Paul Krugman (2008), Jean Tirole (2014), Angus Deaton (2015), Richard Thaler (2017).

Reference:

- 1. Gide, O. and G. Rist, A History of Economic Doctrine, George Harrop Co., London, 1956.
- 2. Roll, E, A History of Economic Thought, Faber Landon, 1973.
- 3. Dasgupta A. K, Epochs of Economic Theory Oxford University Press. New Delhi, 1985.
- 4. Schumpeter, J.A, Ten Great Economist, Oxford University Press, New York, 1951.
- 5. Ghosh and Ghosh: Concise History of Economic Thought, Himalaya Publishers.
- 6. Puttaswamaiah K, Nobel Economists Lives and Contributions, Indus Public Co., New Delhi, 1995.

TYBA (SEMESTER –VI)

COURSE CODE	REVISED PAPER		CREDIT	MARK S			
	GROUP-I : COMPULSORY PAPERS						
ECOMA601	XIII	MACRO ECONOMICS- III	4	100			
ECOINT602	XIV	INERNATIONAL ECONOMICS	4	100			
	GI	ROUP-II : ELECTIVE PAPERS					
ECOIFSA603	XV	INDIAN FINANCIAL SYSTEM	3	80			
		OR					
		ECONOMICS OF					
ECOEACB603	XV	AGRICULTURE &	3	80			
		COOPERATION					
		OR					
ECOILEC603	XV	INDUSTRIAL AND LABOUR	3	80			
ECOILEC005	Δ¥Υ	ECONOMICS	5	00			
		1	L				

		MATHEMATICAL &		
ECOMSEA604	XVI	STATISTICAL TECHNIQUES	4	100
		FOR ECONOMIC ANALYSIS		
		OR		
ECORMB604	XVI	RESEARCH METHODOLOY	4	100
		OR		
ECOIETC604	XVI	INDIAN ECONOMIC THOUGHT	4	100
ECOTPEA605	XVII	THEORY AND PRACTICE OF ECONOMETRICS	4	100
		OR		
ECOAEB605	XVII	APPLIED ECONOMETRICS	4	100
	<u> </u>	OR		

ECODTEC605	XVII	DEVELOPMENT THEORY AND EXPERIENCE	4	100
ECOITPP606	XVIII	INTERNATIONAL TRADE,	3	80
LCOIIII000	ΑΫΠ	POLICY AND PRACTICE	5	00

MACROECONOMICS III: PAPER XIII

SEMESTER –VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP -I	COMPULSORY PAPERS		
ECOMA601	MACROECONOMICS III: PAPER XIII	4	100

Preamble:

This course introduces the students to formal modelling of a macroeconomic theory with analytical tools. It focuses on goods market with fixed exchange rate, the money market, uncovered interest rate parity and the benefits and costs of fixed and flexible exchange rates.

Module 1: The Goods Market in the Open Economy:

Trade Balance and its implications for GDP calculations – Export and Import Functions – The Real Exchange Rate and why it matters –Why equilibrium GDP is consistent with a trade imbalance? – Fiscal and Exchange Rate Policy with a Fixed Exchange Rate.

Module 2: Money/Financial Markets and Mundell-Fleming Model:

The LM equation for the open economy –Uncovered Interest Parity and its implications for exchange rate determination – The combined IS/LM/UIP model.

Fiscal and Monetary Policy under Fixed and Flexible Exchange Rates– The Mundell-Fleming trilemma.

Module 3: Exchange Rate Regimes & Exchange Rate Crises:

The choice of regime – Fixed or Flexible – The spectrum of arrangements from Hard Peg at one end to Fully Floating at the other; Why the Balance of Payments must always balance under Floating Exchange Rates but need not balance under a Fixed or Managed Exchange Rate regime.

Exchange Rate crises – The relation between Exchange Rate crises and other kinds of

crises (banking crises, financial crises, etc.).

Module 4: International Monetary History, 1900-present:

The Gold Standard – The Inter-War Period and the Great Depression – 1944, Bretton Woods System and its collapse ; Fixing in Europe via ERM, and the Dollar Standard elsewhere.

The Maastricht Treaty and preparations for the Euro; The Global Financial Crisis and its consequences for the Euro; The Euro Crisis, Asia Infrastructure Investment Bank (AIIB), New Development Bank (NDB).

References:

- 1. Blanchard, Oliver, Macroeconomics, Pearson education, New Delhi, India, 2008.
- 2. Dornbusch R S, Fischer and R Startz; Macroeconomics, 8e Tata Mc Grow Hill, New Delhi, 2004.
- 3. Froyen, R. T.; Macroeconomics : Theory and Policy, Pearson Education Asia, Delhi, 2001.
- 4. Mankiw, Gregory; Macroeconomics, 6e, Worth Publishers, New York, 2003.
- 5. Salvatore, D.; International Economics, Printice Hall, New York, 1997.
- 6. Robert C Feenstra & Alan M Taylor, International Trade, Worth Publishers, 2014.

INTERNATIONAL ECONOMICS: PAPER XIV

SEMESTER -VI

COURSE CODE	PAPER TITLE	CREDITS	MADES
GROUP - I	COMPULSORY PAPERS		MARKS
ECOINT602	INTERNATIONAL ECONOMICS: PAPER XIV	4	100

Preamble:

This course develops a systematic exposition of models which explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It then builds on the models of open economy macroeconomics focussing on national policies as well as international monetary systems. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years.

Module 1: Introduction

Importance of the study of International Economics - An overview of world trade-Distinction between domestic & international Trade -Concepts of Cost Difference , Adam Smith"s Theory of International Trade, The Ricardian Theory.

Module 2: Modern Theories of International Trade

Heckshcher- Ohlin Theory of International Trade, Factor Abundance: Two Criteria, Leontief Paradox, Haberler"s theory of Opportunity Cost, Law of reciprocal demand and offer curves, Role of Factor Accumulation, Stolper-Samuelson theorem.

Module 3: Importance of Trade and Recent trends:

Monopolistic competition and trade - firm heterogeneity, FDI: The concept and role, FDI Inflows- FDI Outflows, and the global supply chain, Business Process Outsourcing.

Module 4: Trade Policy and Regionalism

Instruments of trade policy; Why countries cooperate? -GATT, GATS, Regional Trade Agreements - controversies in trade policy (labour standards, IPR and environment) -ASEAN, SAARC, SAFTA, Protectionism.

<u>References</u>:

- 1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, International Economics: Theory and Policy, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012.
- 2. Dominick Salvatore, International Economics: Trade and Finance, JohnWiley International Student Edition, 10th edition, 2011.
- 3. Gordon Hanson, "The Rise of Middle Kingdoms: Emerging Economies in Global Trade", Journal of Economic Perspectives, Spring 2012.
- 4. Melitz M. and Trefler D., "Gains from Trade When Firms Matter", Journal of Economic Perspectives, Spring 2012.
- 5. Kindleberger Charles P, International Economics, Homewood, USA, 1978
- 6. Bo Sodersten and Geofrey Reed, International Economics, Palgrave Macmillan, 1994.

INDIAN FINANCIAL SYSTEM: PAPER XV

SEMESTER – VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOIFSA603	INDIAN FINANCIAL SYSTEM : PAPER- XV	3	80
	rarek- av		

Preamble:

The basic purpose of this paper is to acquaint students with various components of the Indian financial system, its working and the trends that have taken place over the years especially since financial sector reforms.

Module 1: Indian Financial System: Structure, Trends and Turns

Meaning and components of the Financial System - Financial System and Economic Development - Indicators of Financial Development: FR, FIR, NIR and IR – Overview of financial sector reforms since 1990s – Trends and turns in Indian financial sector: 1950-2017.

Module 2: Banking in India since 1990s.

Developments in Commercial banking sector since 1990s – Management of Non-Performing Assets (NPAs); Capital Adequacy Norms - Basel Accord III - Monetary policy of the RBI –

Changes in RBI monetary policy since 1990s - Monetary Policy Committee (MPC), Payment Banks, Mudra Bank- Transmission Channels of Monetary policy.

Module 3: Money and Capital Markets in India:

Money Market: Components of organized money market – Reforms in the money market - Features of Indian Money Market.

Capital Market: Structure of the Indian Capital Market – Recent Developments in the Capital Market – Role of SEBI - Interlink between Money Market and Capital Market - Overview of Debt Market in India – Islamic Banking, Merchant Banking and Investment Banking.

Module 4: Non-Banking sector of the Financial System:

Non-Bank Finance Companies (NBFCs) in India and their progress - Developments in India"s Insurance sector – Progress of Mutual Funds industry in India - Credit Rating Agencies in India.

References:

- 1. Pathak, Bharati, The Indian Financial System –Markets, Institutions, and Services, Pearson Education, New Delhi, 2008.
- 2. Bhole, L. M, Financial Institutions and Markets, Growth and Innovation, Tata McGraw-Hill, New Delhi, 2008.
- 3. Khan, M.Y, Financial Services, Tata McGraw Hill, New Delhi, 2007.
- 4. Reserve Bank of India (various issues) Report on Currency and Finance, RBI, Mumbai.
- Rakesh Mohan &Partha Ray, Indian Financial Sector: Structure, Trends & Turns; IMF Working Paper (WP/17/7). <u>https://www.imf.org</u>> Issues > 2017/01/20
- 6. Dutta Abhijit, Indian Financial System, Excel Books, Delhi, 2012.

ECONOMICS OF AGRICULTURE AND COOPERATION : PAPER XV

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOEACB603	ECONOMICS OF AGRICULTURE	3	80
ECOEACB603	AND COOPERATION :PAPER XV	3	00

Preamble:

The paper is designed to provide various aspects related to the principles of cooperation and cooperative organizations in the globalized economy. The essentials of cooperative finance are dealt in with reference to the latest trends.

Module 1: Co-operation:

Meaning and features of Co-operation - Principles of Co-operation (Manchester-1995) – Role of Co-operation in Economic development - Globalization and Co-operation-Importance and Benefits of Co-operation, Use of Big data Artificial Intelligence (AI) in Indian Agriculture.

Module 2: Co-operative Finance in India:

Co-Operative Finance: Need, Structure, Progress and Problems - National Co-operative Development Corporation (N.C.D.C.), Aadhar as KYC Norm for Agricultural Finance - Farmers service societies and urban Co-operative banks.

Module 3: Agricultural Co-operatives:

Role and Types of Agro-Industries - Problems and Measures of Agro-Industries -

Sugarand Dairy Co-operatives - Food and Fruits Processing Industry - Co-Operative Farming.

Farming.

<u>Module 4</u>: Co-operative Organizations in India:

Consumer Co-operatives - Co-Operative Marketing - Housing Co-operative societies -

Labour Co-operative societies - Agricultural Marketing societies-Leadership in

Cooperative development.

<u>References</u>:

- 1. R. D. Bedi, Theory, History and Practice of Co-Operation, International Publishing House, Meerut(U.P.), 1983.
- 2. Mathur B. S, Co-Operation in India, Sahitya Bhavan, Agra, 2000.
- 3. John Matthai, Agricultural Co-Operation in India , Reliance Publishing House, New Delhi, 1925.
- 4. Krishnaswami, Fundamentals of Co-Operation, S. Chand and Company Ltd, New Delhi, 1985.
- 5. Hajela T.N, principles, problem and practice of Co-operation, Agarwal publication, New

Delhi, 2000.

6. Government of Maharashtra - Co-operative movement at a Glance (latest annual report).

INDUSTRIAL AND LABOUR ECONOMICS: PAPER XV

SEMESTER – VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOILEC603	INDUSTIRAL AND LABOUR ECONOMICS :PAPER XV	3	80

Preamble:

Issues pertaining to the labour market, wage policy, trade unions and amicable solutions to industrial disputes have become vital for developing countries, especially for India, where the bulk of the labour force is employed in the unorganised sector, and the organized sector is witnessing a phenomenon of 'jobless' growth. This paper intends to provide knowledge of the same and also discusses the importance of labour welfare and social security measures for the growing labour force in India.

Module 1 : Introduction – Indian Labour Market

Characteristics of the Indian Labour Market - Child Labour and Female Labour – Problems and Measures- Globalisation and Indian Labour Market -Labour Market Reforms – Exit Policy and Need for Safety Nets - Second National Commission on Labour.

Module 2 : Trade Unionism

Definition and Functions of Trade Unions- Historical Evolution of Trade Unions in India and Their Present Status - Problems of Trade Unions in India - Role of Outside Leadership

Module 3 : Industrial Relations

Causes of Industrial Disputes and Their Settlement Mechanism - Collective Bargaining – Concept, Features, Importance and Pre-requisites for Successful Collective Bargaining -Collective Bargaining in India - Workers" Participation in Management –Concept, objectives and Forms of Workers" Participation in India.

Module 4 : Labour Welfare and Social Security

Concept, Theories and Principles of Labour Welfare - Agencies for Labour Welfare -Role of the Labour Welfare Officer - Social Security – Concept; Social Assistance and Social Insurance - Social Security Measures in India - International Labour Organization and Its Impact on Indian Labour Legislations.

References:

- 1. Datt R. and Sundaram K.P.M, Indian Economy, S.Chand & Co., New Delhi, 2009.
- 2. Mamoria C.B. and Mamoria S, Dynamics of Industrial Relations, Himalaya Publishing House, Mumbai, 2002.
- 3. Mishra S.K. and Puri V.K, Indian Economy, Himalaya Publishing House, Mumbai, 2002.
- 4. Monappa A, Industrial Relations, Tata McGraw Hill Publishing Company Ltd., New Delhi, 2006
- 5. Ratna Sen, Industrial Relations in India Shifting Paradigms, Macmillan, New Delhi, 2005.
- 6. Singh J.K, Labour Economics Principles, Problems and Practices, Deep andDeep Publications Pvt. Ltd., New Delhi, 1998.

MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS: PAPER –XVI

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOMSEA604	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS :PAPER- XVI	4	100

Preamble:

This paper proposes to equip the students with analyzing skills with sound footing of relevant mathematical and statistical techniques. Economic analysis and interpretation of data cannot be carried out in the absence of knowledge of these techniques narrated here.

Module1: Techniques and applications of partial derivatives

Functions of several variables and partial derivatives - Second order partial derivatives -Optimisation of multivariable functions - Constrained optimisation with Lagrange multiplier and its economic interpretation - Marginal productivity, Income and price elasticity of demand - Homogeneous production functions and returns to scale - Cobb-Douglas production function

Module 2: Integral Calculus:

Integration and Definite integral; area under the curve - Economic applications - Present value of cash flows(present value of a sum to be received in future and present value of a stream of future income) - Consumer"s and Producer"s Surplus- Learning curve.

Module 3: Correlation and Regression:

The meaning and significance of Correlation; Scatter plot of Bivariate Distributions; Correlation and Causation - Karl Pearson's coefficient of correlation: Spearman's rank correlation coefficient - Simple regression analysis- Method of Least Squares and Regression Lines, Regression Coefficients, Relationship between correlation coefficients and regression coefficients.

Module 4: Index Numbers and Time Series:

Simple and composite index numbers- Construction, uses and problems of index numbers- Laspeyre"s, Paasche"s and Fisher"s Index numbers- Cost of living index numbers-real income – wholesale price index number- Splicing of index numbers, Components of time series, Estimation and forecasting of trend by the Least Squares Method.

References:

- 1. Dowling Edward T: Introduction to Mathematical Economics, Schaum"sOutline Series in Economics, Tata McGraw Hill, New Delhi, 2004.
- 2. Lerner Joel J and P. Zima: Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986.
- 3. Dowling Edward T: Theory and Problems of Mathematical methods for Business and Economics, McGraw –Hill, 1993
- 4. Gupta S.P.: Statistical Methods, S. Chand, New Delhi.
- 5. Sancheti D.C. and V.K. Kapoor: Statistics-Theory, Methods and Applications, S. Chand, New Delhi, 2014.
- 6. Chiang A.C: Fundamental Methods of Mathematical Economics, 3rd ed., McGraw-Hill, 1984.

RESEARCH METHODOLOGY: PAPER XVI

SEMESTER -VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		MAKKS
ECORMB604	RESEARCH METHODOLOGY	4	100
ECORNIDUU4	:PAPER XVI	-	_ 3 0

Preamble:

This paper is designed with a goal to strengthen the critical thinking and listening skills in conducting economic research and to device research outcomes in an impeccable way. The entire course is based on the broad social sciences spectrum.

<u>Module 1</u>: Statistical applications in research:

Methods of studying Correlation- measurement of simple correlation: graphic method: scatter diagram - coefficient of correlation - Karl Pearson and rank correlation interpretation of $r = \pm 1$

Linear Regression analysis: meaning, regression lines, regression coefficients, regression equations, relationship between correlation and regression.

Analysis of Time Series – components –trend analysis- moving averages (3, 4 and 5 yearly)- method of least square.

Module 2: Index numbers:

Meaning – classification – problems encountered while constructing index numbers- uses and limitation of index numbers, Methods of constructing index numbers: Simple index: i) aggregate method ii) simple average of relatives method, Weighted index: Laspeyer"s, Paache"s and Fisher"s index – weighted average of relatives method, Chain based index – concepts of Base shifting, splicing, and deflating, Consumer price index: meaning, need and construction – methods: aggregate expenditure method and family budget method.

Module 3: Hypothesis formulation and Hypothesis Testing:

Definition and functions of hypothesis –Criteria of workable hypothesis – forms and sources of hypothesis- Concepts in Testing of Hypothesis: Universe / Population, parameter and statistic, Null and Alternative Hypotheses, Levels of Significance, critical region, Type I and Type II errors - Point and Interval Estimates.

Module 4: Research Report Writing:

Types of Research Report: Technical, Popular, Interim, Summary, Article- Format of a Research Report- Principles of writing the Research Report: Organization and Style - Contents-Styles of reporting- Steps in drafting Reports- Editing the final draft-Evaluating the final draft -Organization of the Research Report: Preliminaries, Contents of Report, Structuring the Report: Chapter format- Pagination- Identification- Using quotations- Presenting footnotes –abbreviations- Presentation of tables and figures- Referencing-Documentation-Use and format of appendices- Indexing - Bibliography, Appendices.

<u>References</u>:

- 1. Goode J. William & Hatt K. Paul, Methods in social Research, New York, McGraw-Hill, 1952.
- 2. Kothari, C.R (2004) Research Methodology: An Introduction, Delhi, New Age, 2004.

- 3. Krishnaswami, O.R &, M. Ranganathan , Methodology of Research in Social Sciences, Himalaya Publishing House, Mumbai, 2011.
- 4. Kumar, Renjith (2009) Research Methodology: A Step by Step Guide for Research, Delhi, Pearson Education, 2009.
- 5. P.Saravanavel Research Methodology, KitabMahal, Allahabad, 1987.
- 6. Gupta S P Statistical Methods Sultan Chand and Sons, New Delhi, 1987.

INDIAN ECONOMIC THOUGHT: PAPER XVI

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		MAKKS
ECOIETC604	INDIAN ECONOMIC THOUGHT : PAPER XVI	4	100

Preamble:

The history of Indian economic thought provides rich insights into both economic issues and the workings of the Indian mind. It will give the student an introduction to major Indian thinkers and their ideas on Indian economic policy.

Module 1: The Modernists

Naoroji :- Drain theory, criticism and long run relevance, Ranade"s views on railway investment and the methodology of Indian economics, Gokhale:-Gokhale and the economics of education, the rupee ratio debate , Dr. Ambedkar"s contribution to the rupee debate.

Module 2: Agriculture, Poverty and Famines

Why do famines occur? Famine policy, criticism of famine policy, Ranade's views on Poverty and Industrialisation, agrarian policy, contribution of Dr.B.R.Ambedkar.

Module 3: Economic Policy after Independence

Nehruvian economics – Mahalonobis model and planning, industrial stagnation, industry and trade, agriculture and the wage goods model, reappraisal of Nehru"s economics

Module 4: Economic Thought in Contemporary India

Measurement of poverty, liberalisation, privatisation and globalisation, Human development and AmartyaSen^{*}'s contribution, JagadishBhagawati^{*}'s contribution.

References:

- 1. Jadhav Narendra, Ambedkar : An Economist Extraordinaire , Konark Publishers, New Delhi, 2015.
- 2. Dasgupta A.K.(1993) : A History of Indian Economic Thought, Routledge, 1993.
- 3. Balkrishnan P., The Recovery of India: Economic Growth in the Nehru Era, Economic and Political Weekly, Vol. 42, No. 45/46 (Nov. 10 23, 2007), pp. 52-66, 2007.
- 4. A.Sen: Development as capabilities Expansion, http://morgana.unimore.it/Picchio_ Antonella / Sviluppo%20umano/svilupp%20umano/Sen%20development.pdf
- A.Pangariya: Why Growth Matters: How India's Growth Acceleration has Reduced Poverty,http://www.cde.org.za/wp-content/uploads/2013/09/Prof% 20Arvind% 20 Panagariya Why% 20growth% 20matters_% 20How% 20Indias% 20growth% 20 acceleration% 20has% 20reduced% 20poverty.pdf
- 6. Deaton Angus(2013) : What is Going on in India, https://scholar.princeton.edu/sites/ default/ files/deaton/files/deaton_book_review_sen_dreze_etc_lancet_2013_0.pdf

THEORY AND PRACTICE OF ECONOMETRICS: PAPER XVII

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOTPEA605	THEORY AND PRACTICE OF ECONOMETRICS : PAPER XVII	4	100

Preamble:

The paper is aims to help students understand the art of model building. It focuses on building the appropriate model and testing it statistically and to apply it to the practical problems in forecasting and analysis.

Module 1: Econometric Model Specification:

Identification: Structural and reduced form - Omitted Variables Bias- Errors in

measurement- Endogeneity and Bias.

Module 2: Failure of Classical Assumptions

Multi-collinearity and its implications - Auto-correlation: Consequences and Durbin-

Watson test- Heteroskedasticity: Consequences and the Goldfeld -Quandt test.

Module 3: Forecasting:

Forecasting with a) moving averages b) linear trend c) exponential trend- CAGR-Forecasting with linear regression- Classical time series decomposition- Measures of forecast performance: Mean Square Error and Root Mean Square Error - Limitations of econometric forecasts.

Module 4: Linear Programming:

Linear programming - Dual of a linear programming problem - Simplex method -

Transportation.

<u>References</u>:

- 1. Damodar N. Gujarati, Basic Econometrics, McGraw-Hill, Delhi, 2003.
- 2. Kapoor V. k. (2011), Operations Research Problems & Solutions, Sultan Chand & sons.
- 3. Lipschutz (Schaum Series), Theory and Problems of Statistics.
- 4. Wooldridge Jeffery M., Introductory Econometrics: A Modern Approach. 6th edition, Cengage Learning, USA, 2016.
- 5. Stock James H. and Watson Mark W., Introduction to Econometrics, Updated 3rd Edition, Global Edition, Pearson Education Limited, 2015.
- 6. Makridakis Spyros and Steven C Wheelright, Forecasting Methods and Applications, Willey Publications, 2008.

APPLIED ECONOMETRICS: PAPER XVI

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOAEB605	APPLIED ECONOMETRICS: PAPER XVI	4	100

Preamble:

The aim of this course is to provide a foundation in applied econometric analysis and to develop skills required for empirical research in economics. Topics include specification and selection of regression models, dynamic econometric models, advanced methods in regression analysis and panel data models. Since the emphasis is on application of methods, this course requires understanding of econometric software and computing skills.

Module 1: Violations of Assumptions in the Linear Regression model:

Heteroscedasticity, implications, testing and remedy, autocorrelation, implications,

testing and remedy, multicollinearity

Module 2: Regression Diagnostics and Specification:

Misspecification; functional forms; model selection, endogeneity and instrumental variables

Module 3: Advanced Topics in Regression Analysis:

Dynamic Econometric Models: distributed lag models; autoregressive models;

simultaneous equation models.

Module 4: Introduction to Panel Data and Research softwares.

What is a Panel data? Difference with Time Series Data- Multivariate data, Regression with Panel data, General Introduction to Research Softwares like R, Eviews and SPSS.

Readings:

- 1. Jeffrey M. Wooldridge, Econometrics, Cengage Learning, India Edition, 2009.
- 2. Dimitrios Asteriou and Stephen Hall, Applied Econometrics: A Modern Approach, Palgrave Macmillan, 2007.
- 3. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan, 2011.
- 4. Kleiber C and Zeilis A, Applied Econometrics with R, Springer, Use R1, 2008.
- 5. Baltagi B H, Econometric Analysis of Panel data, Wiley Publications, 2013.
- 6. Walters Enders, Applied Econometric Time Series, Wiley Publications, USA, 2014.

DEVELOPMENT THEORY AND EXPERIENCE: PAPER XVII

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECODTEC605	DEVELOPMENT THEORY AND EXPERIENCE : PAPER XVII	4	100

Preamble:

This is the second paper of economic development sequence. The course begins with demographic concepts and their evolution during the process of development. Then it focuses on the theory migration and discusses the link between migration and development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The course ends with the issues related to environment and development.

Module I: Demography and Development:

Demographic concepts; birth and death rates, age structure, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality, fertility choices and human capital accumulation.

Module II: Structural Transformation:

The Lewis model –Clark-Fisher model of structural change, Urbanization: Trends and Projections with reference to India, Urbanization and Development, Causes of urbanization, Urban informal sector, Policies for the urban informal sector, Migration and development, Economic theory of rural-urban migration: Harris-Todaro migration model

Module III: Land, Labor and Credit Markets:

Role of Agriculture in Economic Development, Market Failure and Agriculture, The distribution of land ownership; Land reform and its effects on productivity; contractual relationships between tenants and landlords; Land Acquisition; Nutrition and Labour Productivity; Rural Credit Market; Microfinance; Inter-linkages between Rural Factor Markets.

Module IV: The Environment and Development:

The core of environmental problems- Rural poverty and environmental destructionindustrialization and environmental pollution - Economic models of environmental issues: privately owned resources, common property resources, public goods: regional environmental degradation and the free rider problem, limitations of pubic goods

framework.

References:

- 1. Debraj Ray, Development Economics, Oxford University Press, 2009.
- 2. Partha Dasgupta, Economics: A Very Short Introduction, Oxford University Press, 2007.
- 3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty, Oxford University Press,2006.
- 4. Amartya Sen, Development as Freedom, Oxford University Press, 2000.
- 5. Daron Acemoglu and James Robinson, Economic Origins of Dictatorship and Democracy, Cambridge University Press,2006.
- 6. Michael Todaro and Stephen Smith : Economic Development,11th edition, Pearson

INTERNATIONAL TRADE, POLICY AND PRACTICE : PAPER XVIII

SEMESTER VI

COURSE CODE	PAPER TITLE	CDEDITS	MARKS
GROUP - II	ELECTIVE PAPERS	CREDITS	MAKKS
ECOITPP606	INTERNATIONAL TRADE, POLICY AND PRACTICE : PAPER- XVIII	3	80

Preamble:

This course is designed for addressing changing phase of International Trade Policy and Practice. The main purpose of this course is to expose students to current trends in International developments.

Module 1 :Introduction

Inter regional and international trade, Role of Dynamic factors i.e. change in Tastes,

Technology and Role of Factor Accumulation.

Foreign Exchange Rate: Concepts - Short and Forward rates - Foreign Exchange rate determination – Fixed and flexible exchange rate – Interrelationship between exchange rates and Interest rates.

Exchange Rate system in India, managed floating, Current and Capital Account

Convertibility and their impact, FEMA.

Module 2 : Emerging new International Economic Order

GATT, Uruguay Round, WTO, WTO Agreement, Dispute settlement Mechanism, Impact of WTO on Emerging Economies and India, Doha Round and implications of its failure-Emergence of Regional Free Trade agreements (FTA), Bilateral Investment Treaty (BIT), Double Taxation Avoidance Agreement (DTAA).

Module 3 :International Financial Institutions and International Debt Problem.

IMF, World Bank, Asian Development Bank (ADB) –New Development Bank (NDB), Asia Infrastructure Investment Bank (AIIB) and their role with special reference to India. South East Asian Crisis and Lessons for India, Global Economic Crisis, Global Financial Crisis of 2008, International Debt Problem – Emerging Global Financial Architecture.

Module 4: Role of Foreign Capital Flow

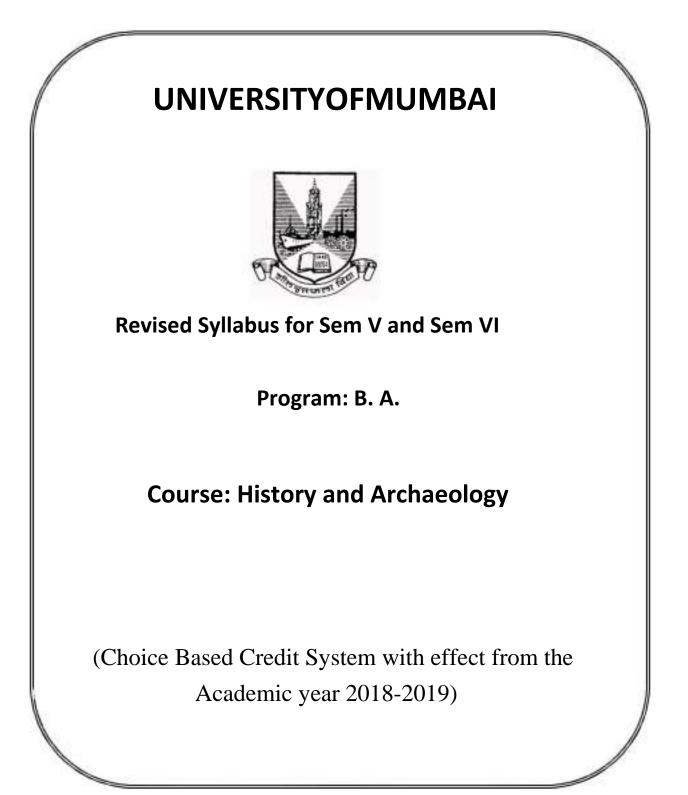
Factors determining Foreign Investment, Foreign Institutional Investment (FII), Qualified Foreign Investment (QFI), Foreign Portfolio Investment (FPI), Role of FDI in Economic Development- Factors influencing FDI inflows- Green Field and Brown field FDI in India, Foreign Investment and Role of MNCs in India.

References:

- 1. Robert J Carbaugh, International Economics, South-Western Cengage Learning, USA, 2017.
- 2. Paul R Krugman, Maurice Obstfeld and Melitz Mark, International Economics: Theory and Policy, Princeton University, USA, 2015.
- 3. Dennis R Appleyard, Alfred J Field, International Economics, McGraw-Hill, USA, 2013.
- 4. Robert J Carbaugh, International Economics(With Xtra! and Info Trac), South Western College Pub, 2003.
- 5. Kindleberger Charles P., International Economics, 3rd edition, R. D. Irwin, Homewood, IL, 1963.
- 6. Bo Sodersten and Geofrey Reed, International Economics, 3rd Edition, Palgrave Macmillan; (May 15, 1994)

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AC / /2018 Item no.



Revised Syallbus

Semester V and Semester VI Programme: B.A. Course: History and Archaeology

(Choice Based Credit System with effect from the Academic year 2018-2019)

As per University rules and guidelines for Faculty of Humanaities

Faculty of Humanities TYBA (Choice Based Credit System, CBCS) Semester V and Semester VI Guidelines With Effect From 2018-2019

Syllabus Structure:

- 1. In TYBA (CBCS) in Sem V and Sem VI, the Core Courses will be Core Courses IV, V, VII and VIII.
- The Elective Courses will be Elective Courses VI and IX which will be partially Project Based Courses. The Boards of Studies may offer choices in the Elective Courses VI and IX.
- 3. In Sem V and Sem VI, each Course namely Core Courses IV, V, VII and VIII and Elective Courses VI and IX will carry 4 Credits per Course per Semester.

Evaluation:

- 1. **Core Courses**: The Core Courses IV, V, VII and VIII will be theory based Core Courses. The University of Mumbai will conduct the Sem V and Sem VI examinations of 100 marks per Core Course. In Sem V and Sem VI for all the above Core Courses, the student will have to secure a minimum of 40% marks in aggregate per Core Course.
- 2. Elective Courses: The Elective Courses VI and IX will be Electives and Choices of Electives may be offered by the various Board of Studies. The University of Mumbai will conduct the Sem V and Sem VI examination for Elective Courses VI and IX of 80 marks per Elective Course. The Elective Courses namely Elective Courses VI and IX will be partially Project Based Courses. In Sem V and VI, for Elective Course VI and for Elective Course IX, the Colleges will conduct the evaluation of a Project of 20 marks

each and will send the marks to the University of Mumbai as per University of Mumbai guidelines.

- 3. The total marks of the Elective Course VI and Elective Course IX will be 100 marks each that is 80 marks for Theory Examination conducted by University of Mumbai and 20 marks for Project evaluated by the concerned college Faculty in the subject.
- 4. In Sem V and Sem VI, the student will have to submit a Project for Elective Course VI and Elective Course IX in the College before appearing for the University Examination. The last date of submission of the Project will be officially declared by the College.
- 5. In Sem V and Sem VI, the Project topic will be based on the Syllabus of the respective Elective Courses that is Elective Course VI and Elective Course IX. The students will be given the choice of choosing the topic of the project in consultation with the Faculty Member teaching the respective Elective Course. The list of students along with the topics chosen by the students will be displayed by the College in the beginning of the Semester.
- 6. The Project work will be carried out by the student with the guidance of the concerned Faculty Member who will be allotted to the student as the Guide for the Project.
- 7. In Sem V and Sem VI, for Elective Courses VI and IX, the student will have to secure a minimum of 40% marks in aggregate and a minimum of 40% in each component of assessment i.e. 08 out of 20 marks in Internal Evaluation of Project in Elective Course VI and Elective Course IX and 32 out of 80 marks in University Examination of Elective Course VI and Elective Course IX.

Note: All other rules regarding Standard of Passing, ATKT, etc., will be as per those decided by the Faculty of Humanities passed by the Academic Council from time to time.

Faculty of Humanities TYBA (Choice Based Credit System, CBCS) Semester V and Semester VI Question Paper Pattern for T.Y.B.A (CBCS) for Core Courses IV,V,VII and VIII As per University rules and guidelines With Effect From 2018-2019	
	(Time: 3 Hours)
Note: 1. Attempt all questions2. All questions carry equal marks	(Total = 100 marks)
Q.1 (Based on Module I) a. or	(20 marks)
b. Q.2 (Based on Module II) a. or	(20 marks)
b. Q.3 (Based on Module III) a. or	(20 marks)
b. Q.4 (Based on Module IV) a. or	(20 marks)
b. Q.5 Attempt any two short notes. (Based on Module I, II, III and IV) a.	(20 marks)
b. с. d.	

[The Question paper Pattern for the Revised Syallbus for Semester V and Semester VI, Programme: B.A; Course: History and Archaeology (Choice Based Credit System with effect from the Academic year 2018-2019) will be as per University rules and guidelines for the Faculty of Humanaities].

Faculty of Humanities
TYBA
(Choice Based Credit System, CBCS)
Semester V and Semester VI
Question Paper Pattern for T.Y.B.A (CBCS)
for Elective Courses VI and IX
As per University rules and guidelines
With Effect From 2018-2019

	(Time: 2 & 1/2 Hours)
Note: 1. Attempt all questions2. All questions carry equal marks	(Total = 80 marks)
Q.1 (Based on Module I) a.	(20 marks)
or b.	
Q.2 (Based on Module II) a.	(20 marks)
or b.	
Q.3 (Based on Module III) a.	(20 marks)
or b.	
Q.4 (Based on Module IV) a.	(20 marks)
or b.	

[The Question paper Pattern for the Revised Syallbus for Semester V and Semester VI, Programme: B.A; Course: History and Archaeology (Choice Based Credit System with effect from the Academic year 2018-2019) will be as per University rules and guidelines for the Faculty of Humanaities].

SYLLABUS

SEMESTER – V		
Course	Title of the Course	Credits
Core Course IV	History of Medieval India (1000 CE – 1526 CE)	4 Credits
Core Course V	History of Modern Maharashtra (1818 CE-1960 CE)	4 Credits
Elective Course VI. A (With Project)	Introduction to Archaeology	4 Credits
Elective Course VI B (With Project)	Media and Communication	4 Credits
Core Course VII	History of the Marathas (1630 CE -1707 CE)	4 Credits
Core Course VIII	History of Contemporary World (1945 CE -2000 CE)	4 Credits
Elective Course IX A (With Project)	Research Methodology and Sources of History	4 Credits
Elective Course IX B (With Project)	Introduction to Heritage Tourism	4 Credits
		Total 24 Credits

SEMESTER – VI			
Course	Title of the Course	Credits	
Core Course IV	History of Medieval India (1526 CE – 1707 CE)	4 Credits	
Core Course V	History of Contemporary India (1947 CE- 2000 CE) 4 Credits	
Elective Course VI A (With Project)	Introduction to Museology and Archival Science	4 Credits	
Elective Course VI B (With Project)	Media and Communication	4 Credits	
Core Course VII	History of the Marathas (1707 CE - 1818 CE)	4 Credits	
Core Course VIII	History of Asia (1945 CE -2000 CE)	4 Credits	
Elective Course IX A (With Project)	Research Methodology and Sources of History	4 Credits	
Elective Course IX B (With Project)	Heritage Tourism in Maharashtra	4 Credits	
		Total 24 Credits	

T.Y.B.A. History

SEMESTER -V

Core Course IV- History of Medieval India (1000 CE-1526CE)

Objectives:

- 1. To acquaint the students with the history of early Medieval India that laid the foundation of the Sultanate in India.
- 2. To study the contribution of Vijayanagar and Bahamani kingdoms to Medieval Indian History.
- 3. To examine the administrative, socio-economic and cultural aspects of Medieval India.

Module I: Foundation, Expansion and Decline of Delhi Sultanate

- (a) Socio-economic and political conditions on the eve of the Turkish Invasion
- (b) Rise and Decline of Slave dynasty, Khilji Dynasty
- (c) Tughlaq, Sayyid and Lodi Dynasty

Module II: Administrative Structure of the Sultanate

- (a) Central Administration and Iqta system
- (b) Administrative and Military Reforms of Ala-ud-din Khilji
- (c) Reforms of Firozshah Tughlaq and Mohammed bin Tughlaq

Module III: Emergence of Vijaynagar and Bahamani Kingdoms

- (a) Rise, Growth and Decline of Vijaynagar and Bahamani Kingdoms
- (b) Administration, Socio-Economic and Cultural conditions of Vijayanagar Empire
- (c) Administration, Socio-Economic and Cultural conditions of Bahamani Kingdom

Module IV: Society, Economy, Religion and Culture of Delhi Sultanate

- (a) Socio-economic and religious life
- (b) Education and Literature
- (c) Art and Architecture

References:

Banerjee A. C. New History of Medieval India, S. Chand & Company, New Delhi, 1990.
Bhattacharya N. N., Medieval Bhakti Movement in India, South Asia Books, Columbai, 1990.
Burton Stein, New Cambridge History of India: Vijayanagara, Cambridge University Press, New Delhi, 1993.

Burton, Stein: *Peasant State and Society in Medieval South India*; Oxford Paperback, New Delhi 1980.

Chitanis K. N., *Socio-Economic History of Medieval India*, Atlantic Publishers & Distributors, New Delhi 1990.

Iswari Prasad, History of Medieval India, The Indian Press Ltd, Allahabad, 1952.

Lane Pool, Stanley, Life and Culture in Medieval India, Kamal Prakashan, Indore, 1978.

Mahajan V.D., History of Medieval India, S. Chand & Company, New Delhi, 1992.

Mahalingam T. V., *Administration and Social Life under Vijaynagar*; University of Madras, 1975.

Pande A. B., *Society and Government in Medieval India*, Central Book Depot, Allahabad, 1965. Pande, Susmita, Birth of Bhakti in Indian Religion and Art, Books & Books, New Delhi, 1982.

Qureshi I. H., the Administration of Sultanate of Delhi, (IInd ed.), The Hague, Karachi, 1958.

Ranade A. K., *Socio-Economic Life of Maharashtra between 1100-1600 A.D.*, Serials Publication, New Delhi, 2009.

Rizvi S.A.A., *A History of Sufism in India*, Vol. I., Munshiram Manoharlal, New Delhi, 1978. Shrivastava A.L., *The Sultanate of Delhi (711 A.D – 1526)*, 5th ed, Shiv Lal Agrawala, Agra, 1966.

Shrivastava M.P., *Society and Culture in Medieval India* (1206 A.D. 17007 A. D., Chugh Publishers, Allahabad, 1975.

Singh Upinder, *A History of Ancient and Early Medieval India*: From the Stone Age to the 12 th Century, Pearson Longman, New Delhi, 2009.

Sreenivasa Murty H.V., Ramkrishna R. *History of Karnataka*, S. Chand & Company, New Delhi, 1992.

Marathi Books

Acharya Dhananjay, *Madhyakalin Bharat (1000-1707)* Shri Sainath Prakashan, Nagpur, 2008. Chaubal J.S., *Ase Hote Mughal*, Maharashtra Rajya Sahity Sanskruti Mandal Mumbai, 1992. Kathare Anil, *Madhyayugin Bharat*-1000 -1707, Prashant Publication, Jalgaon, 2013. Kolarkar S.G., *Madhyakalin Bharat (2106-1707)*, Mangesh Prakashan, Nagpur, 1992. Mate M. S. *Madhyayugin Maharashtra- Samajik Aani Sanskritik Jivan(1300-1650)*, Maharashtra Rajya Sahitya Aani Sanskriti Mandal, Mumbai, 2002. Sakshena B.P., *Dilli va Shahajahancha Itihas* (Kunde B.G. Bhashantarit),1989. Sardesai G. S., *Marathi Riyasat*, Popular Prakashan, Mumbai, 2012. Sardesai G. S., *Musalmani Riyasat*, Bhag 1 Ani 2, Popular Prakashan, Mumbai 1993. Sarkar Jadunath, *Mughal Samrajyacha Rhas*, Bhag 3, Maharashtra Rajya Sanskritik Mandal, Mumbai, 1982.

T.Y.B.A. History

SEMESTER -V

Core Course V- History of Modern Maharashtra (1818 CE-1960 CE)

Objectives:

- 1. To acquaint students with regional history.
- 2. To understand political and socio-economic developments during the 19th and 20th centuries.
- 3. To create understanding of the movement that led to the formation of Maharashtra.

Module I: Beginning of the British Rule

- (a) Socio-Economic conditions of Maharashtra in 19th Century
- (b) Administration and Judiciary
- (c) Tribal and Peasant Uprisings

Module II: Socio- Economic Awakening

- (a) Mahatma Jotirao Phule Satya Shodhak Samaj and Universal Humanism
- (b) Prarthana Samaj
- (c) Contribution of thinkers of Maharashtra to Economic Nationalism

Module III: Political Developments in Maharashtra (1885-1960)

- (a) Moderates, Extremists and Revolutionaries in Maharashtra
- (b) Response to Gandhian Movements in Maharashtra
- (c) Samyukta Maharashtra Movement

Module IV: Emergence of New Forces

- (a) Contribution of Reformers in Education
- (b) Contribution of Reformers towards Emancipation of Women
- (c) Contribution of Reformers towards Upliftment of Depressed Classes: V. R. Shinde, Rajarshi Shahu Maharaj and Dr. B.R. Ambedkar

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T.Y.B.A. History

SEMESTER -V

Core Course VI A – Introduction to Archaeology

Objectives:

- 1. To understand the basic facets of Archaeology.
- 2. To evaluate the importance of Epigraphy.
- 3. To study the importance of Numismatics as an important source of history.

Module I: Aims and Methods of Archaeology

- (a) Definition, Aims and Development of Archaeology in India
- (b) Archaeology and History; Archaeology and Other Sciences
- (c) Field Archaeology: Methods of Exploration, Excavation and Dating Antiquities; Significance of Archaeology

Module II: Pre-Historic, Proto-Historic and Early Historical Periods

- (a) Palaeolithic and Mesolithic Periods
- (b) Neolithic and Chalcolithic Periods
- (c) Megalithic and Early Historical Periods

Module III: Epigraphy

- (a) Definition and History of Indian Epigraphy
- (b) Types of Inscriptions and their significance
- (c) Evolution of Brahmi and Kharosthi Scripts; Edicts of Ashoka

Module IV: Numismatics

- (a) Definition and History of Indian Numismatics
- (b) Ancient Indian Coinage: Punch-Marked, Satavahana, Western Kshatrapas, Kushana and Gupta Coins
- (c) Contribution of Numismatics to Indian History

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SEMESTER -V

Elective Course: Paper VI B – Media and Communication

Objectives:

- 1. To inform students about the Fundamentals of Communication.
- 2. To introduce students to Oral Traditions in Communication and the field of Journalism.
- 3. To familiarize students with the various types of Audio-Visual Media.

Module I: Fundamentals of Communication

- (a) Definition, Evolution and Significance of Communication
- (b) Process, Types, Importance and Need of Communication
- (c) Barriers to Communication

Module II: Oral Traditions in Communication

- (a) Folk Theatre Importance, Marathi Theatre
- (b) Major Dance Forms Folk and Classical
- (c) Folk Expression Songs, Stories and Puppetry

Module III: Journalism

- (a) Definition, Evolution and Types of Journalism
- (b) Role and Functions of Reporters, Sub-Editor and Editor
- (c) Freedom of Press Importance, Ethics and Current Trends

Module IV: Audio-Visual Media

- (a) Photography Types, Scope and Limitations
- (b) Cinema Growth, Development and Technical Aspects
- (c) Types of Films and Global Indian Cinema

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SEMESTER -V

Core Course VII- History of the Marathas (1630 CE – 1707CE)

Objectives:

- 1. To introduce the students to the regional history of Maharashtra.
- 2. To familiarize students with the literary sources of the history of the Marathas.
- 3. To help students to understand the forces leading to the establishment of Maratha power under Chhatrapati Shivaji Maharaj.

Module I: Introduction to Maratha History

- (a) Marathi, Persian and European Sources
- (b) Deccan in the 17th century Geo-Political and Economic conditions
- (c) Socio-Cultural conditions; Maharashtra Dharma

Module II: Establishment of Swarajya

- (a) Shivaji's relations with Bijapur
- (b) Shivaji's relations with the Mughals
- (c) Shivaji's relations with the Europeans

Module III: Period of Consolidation and Crisis

- (a) Coronation and its significance; Shivaji's Karnatak Campaign
- (b) Sambhaji, Rajaram and Tarabai
- (c) Civil War : Tarabai and Shahu

Module IV: Administration during the Royal Period

- (a) Civil Administration
- (b) Revenue and Judicial Administration
- (c) Military Administration

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SEMESTER -V

Core Course VIII: History of Contemporary World (1945 CE – 2000 CE)

Objectives:

- 1. To trace some of the major events of post-World War II period.
- 2. To understand the significance of these events.
- 3. To comprehend the ways in which events of the latter half of the twentieth century have influenced the present.

Module I: Cold War (1945-1985)

- (a) Meaning, Causes of Cold War and Security Pacts
- (b) Conflicts in Cold War: Germany, Korea and Cuba
- (c) Economic Revival of Western Europe; Soviet Union's Relations with Eastern Europe

Module II: Europe, U.S.S.R and U.S.A. (1985-2000)

- (a) Disintegration of U.S.S.R
- (b) Re-drawing of political borders of Germany, Yugoslavia and Czechoslovakia; Emergence of the European Union (EU) in Western Europe
- (c) U.S.A as the dominant world power

Module III: Movements for Equal Rights and Challenging the Bipolar World (1945-2000)

- (a) Campaigns within and outside South Africa against Apartheid
- (b) Civil Rights Movement in U.S.A
- (c) Non-Aligned Movement

Module IV: Major Trends

- (a) Globalisation
- (b) Sustainable Development
- (c) Women's Liberation Movement

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SEMESTER -V

Elective Course IX A - Research Methodology and Sources of History

Objectives:

- 1. To teach students basics of research methodology in history with a view to promote historical research.
- 2. To understand the various kinds of sources of history and its interpretation.
- 3. To acquaint students with the new trends and approaches in history writing.

Module I: History: Definition and Scope

- (a) History: Meaning, Scope and Nature
- (b) Importance of History
- (c) History and Auxiliary Sciences

Module II: Sources of History

- (a) Sources: Nature and Types
- (b) Authenticity and Credibility of Sources
- (c) Importance of Archival Sources

Module III: Research Methods in History

- (a) Methods of Data Collection
- (b) Interpretation and Generalisation of Sources
- (c) Footnotes and Bibliography

Module IV: Sources for Writing Indian History

- (a) Sources for Ancient Indian History
- (b) Sources for Medieval Indian and Maratha History
- (c) Sources for Modern and Contemporary Indian History

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SEMESTER -V

Elective Course IX B - Introduction to Heritage Tourism

Objectives:

- 1. To develop an understanding of Heritage Tourism amongst students.
- 2. To introduce the students to new trends in Heritage Tourism.
- 3. To prepare the students for careers in Tourism industry.

Module I -Understanding Heritage Tourism

- (a) Meaning and Historical Perspective of Tourism
- (b) Concept, Scope and Significance of Heritage Tourism
- (c) National Policies to promote Heritage Tourism and World Heritage Sites in India

Module II - Forms of Heritage Tourism in India

- (a) Natural: Beaches and Sanctuaries
- (b) Built Heritage: Forts, Monuments and Public Buildings
- (c) Cultural: Pilgrimage Sites, Fairs and Festivals

Module III - New Trends in Heritage Tourism

- (a) Entertainment: Performing Arts and Cinema
- (b) Eco-tourism and Adventure Tourism
- (c) Public Private Partnership in Heritage Tourism

Module IV - Heritage Management

- (a) Heritage Legislation
- (b) Role of Tourism Industry
- (c) Role of Museums and Heritage Conservation Societies

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SEMESTER -VI

Core Course: IV- History of Medieval India (1526 CE-1707CE)

Objectives:

- 1. To acquaint the students with the history of India since the emergence of the Mughal rule.
- 2. To understand administration of the Mughal Empire.
- 3. To study the rise of the Maratha Power.

Module I: Foundation, Expansion and Decline of the Mughal Rule

- (a) India on the eve of Mughal Rule; Invasion of Babur
- (b) Humayun, Shershah and Akbar
- (c) Jahangir, Shahjahan and Aurangzeb

Module II: Administrative Structure of the Mughals

- (a) Central and Provincial Administration
- (b) Mansabdari System
- (c) Revenue and Judicial system

Module III: Rise of the Maratha Power

- (a) Shivaji and Foundation of Swarajya
- (b) Administration of Shivaji
- (c) Sambhaji, Rajaram and Tarabai

Module IV: Society and Economy, Religion and Culture of the Mughal Rule

- (a) Society and Economy
- (b) Religion, Education and Literature
- (c) Art and Architecture

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SEMESTER -VI

Core Course V – History of Contemporary India (1947 CE- 2000 CE)

Objectives:

- 1. To understand the process of making the Constitution and the Integration and Reorganization of Indian States.
- 2. To acquaint the students with the political developments in India after Independence.
- 3. To comprehend the socio-economic changes and progress in science and technology in India.

Module I: The Nehru Era (1947 CE – 1964 CE)

- (a) Features of Indian Constitution
- (b) Integration and Reorganization of Indian States
- (c) Socio- Economic Reforms and Foreign Policy

Module II: Political, Social and Economic Developments (1964 CE – 1984 CE)

- (a) Political Developments after Nehru Era; Green Revolution.
- (b) Abolition of Privy Purses and Titles; Nationalization of Banks; The Emergency
- (c) Janata Government; Return of Congress to power ; Foreign Policy

Module III: Political, Social and Economic Developments (1984 CE – 2000 CE)

- (a) Political Developments
- (b) Relations with Neighboring Countries
- (c) Liberalization, Privatization and Globalization

Module IV: Emerging Trends

- (a) Communalism and Separatist Movements
- (b) Women Empowerment and Policy of Reservation
- (c) Science, Technology and Education

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SEMESTER -VI

Elective Course VI A - Introduction to Museology and Archival Science

Objectives:

- 1. To inform the students about the role of Museums in the preservation of Heritage.
- 2. To understand the importance of Archival Science in the study of History.
- 3. To encourage students to pursue careers in various Museums and Archives in India and abroad.

Module I: Museology

- (a) Definition of Museology, Museum Movement in India
- (b) Role of the Curator
- (c) Types of Museums

Module II: Museums

- (a) Methods of Collection and Conservation of Objects in Museums
- (b) Preservation Techniques and Types of Exhibitions
- (c) Changing Role of Museums: In-house and Out-reach activities of Museums

Module III: Archival Science

- (a) Meaning, Scope, Objectives and Classes of Archives
- (b) Importance of Archives: Value of Records as Sources of History
- (c) Classification of Records

Module IV: Management of Archives

- (a) Appraisal and Retention of Records
- (b) Conservation and Preservation of Records
- (c) Digital Archives

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SEMESTER -VI

Elective Course VI B - Media and Communication

Objectives:

- 1. To acquaint students with the various types of Media and Communication.
- 2. To inform students of the developments in Information Technology.
- 3. To understand the impact of Media on Society.

Module I: Radio and Television

- (a) Radio History and Current Trends
- (b) Television History and Current Trends
- (c) Careers in Radio and Television

Module II: Advertising and Public Relations

- (a) Definition, Functions and Responsibilities of Public Relations Officer
- (b) Advertising Definitions and Types
- (c) Careers and Opportunities in Advertising and Public Relations

Module III: Revolution in Information Technology

- (a) Social Media
- (b) Electronic Gadgets Uses and Misuses
- (c) Cyber Crimes and Cyber Laws

Module IV: Impact of Media

- (a) Impact on Society Children, Women, Youth
- (b) Challenges Privatization, Global Competition, Moral Issues, Public Censorship
- (c) Media and Global Issues Human Rights, Environment

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SEMESTER -VI

Core Course VII: History of the Marathas (1707 CE – 1818 CE)

Objectives:

- 1. To enable the students to understand the processes that led to the expansion of the Maratha Power.
- 2. To appreciate the contribution of the Marathas in the national politics of the 18th century.
- 3. To develop an understanding of the society and culture in Maharashtra in the 18th century.

Module I: Expansion of the Maratha Power

- (a) Rise of the Peshwas: Balaji Vishwanath
- (b) Peshwa Bajirao I
- (c) Maratha Confederacy

Module II: Consolidation of the Maratha Power

- (a) Peshwa Balaji Bajirao (Nanasaheb)
- (b) Third Battle of Panipat: causes and consequences
- (c) Defeat of the Marathas and significance of the Third Battle of Panipat

Module III: Post Panipat Revival and Downfall

- (a) Peshwa Madhavrao I
- (b) Barbhai Council
- (c) Downfall of the Maratha Power

Module IV: Administrative and Socio-Cultural Developments

- (a) Peshwa Administration: Civil, Revenue and Military
- (b) Society under the Peshwas Religion, Caste and Position of Women
- (c) Cultural Developments: Literature, Art and Architecture

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SEMESTER -VI

Core Course VIII - History of Asia (1945 CE-2000 CE)

Objectives:

1.To acquaint the students with some of the major changes that occurred in Asia after World War II.

2.To understand the ways in which Asian nations resisted and defied the control of the West.

3.To comprehend some of the trends that emerged in Asia.

Module I: Transformation of China

- (a) Domestic Policy in People's Republic of China under Mao Zedong
- (b) Economic Progress in China under Deng Xiaoping
- (c) Foreign Policy of China with USSR

Module II: Reconstruction of Japan

- (a) American Occupation of Japan
- (b) Economic Miracle in Japan
- (c) Foreign Policy of Japan with USA

Module III: South East Asia

- (a) Cold War and Vietnam
- (b) Guided Democracy in Indonesia
- (c) Association of South East Asian Nations (ASEAN)

Module IV: Conflicts in West Asia

- (a) Arab- Israel Conflict (1948-2000)
- (b) Iranian Revolution of 1979
- (c) Oil Politics and OPEC

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T.Y.B.A. History

SEMESTER -VI

Elective Course IX A - Research Methodology and Sources of History

Objectives:

- 1. To teach students basics of research methodology in history with a view to promote historical research.
- 2. To understand the various kinds of sources of history and its interpretation.
- 3. To acquaint students with the new trends and approaches in history writing.

Madule I: Historical Research: Methods and Presentation

- (a) Steps in Historical Research
- (b) Methods of Critical Enquiry
- (c) Presentation of Historical Research

Madule II: New Trends in History

- (a) Local History
- (b) Oral History
- (c) Digital and E-Sources

Madule III: Approaches to History

- (a) Subaltern
- (b) Feminist
- (c) Post-Modern

Madule IV: Indian Historiography

- (a) Imperialist
- (b) Nationalist
- (c) Marxist

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SEMESTER -VI

Elective Course IX B - Heritage Tourism in Maharashtra

Objectives:

- 1. To introduce students to the Cultural Heritage of Maharashtra
- 2. To understand various resources of Heritage Tourism in Maharashtra
- 3. To acquaint the students with the relevance and scope of Heritage Tourism

Module I: Understanding Heritage Tourism of Maharashtra

- (a) Government Policies and Role of Government Agencies
- (b) Heritage Sites and Precincts
- (c) Careers in Heritage Tourism

Module II: Natural Heritage

- (a) Biodiversity of Sahyadri Range
- (b) National Parks
- (c) Beaches and Hill Stations

Module III: Architectural Heritage

- (a) Caves
- (b) Forts
- (c) Monuments and Public Buildings

Module IV: Cultural Heritage

- (a) Pilgrimage Sites
- (b) Fairs and Festivals
- (c) Folk and Tribal Culture

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Revised Syllabus and Question Paper Pattern of Courses

of

Bachelor of Management Studies (BMS) Programme at Third Year Semester V and VI

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year- 2018-2019) Board of Studies-in-Business Management, University of Mumbai

Board of Studies-in-Business Management, University of Mumbai 1 | P a g e

Bachelor of Management Studies (BMS) Programme Under Choice Based Credit, Grading and Semester System

TYBMS

	(To be implemented from Academic Year- 2018-2019)				
No. of Courses	Semester V	Credits	No. of Courses	Semester VI	Credits
1	Elective Courses (EC)		1	Elective Courses (EC)	
1,2,3 &	*Any four courses from the	12	1,2,3 &	**Any four courses from the	12
4	following list of the courses		4	following list of the courses	
2	Core Course (CC)		2	Core Course (CC)	
5	Logistics & Supply Chain	04	5	Operation Research	04
	Management				
3	Ability Enhancement Course		3	Ability Enhancement Course	
	(AEC)			(AEC)	
6	Corporate Communication &	04	6	Project Work	04
	Public Relations				
	Total Credits	20		Total Credits	20

✓ Note: Project work is considered as a special course involving application of knowledge in solving/analysing/exploring a real life situation/ difficult problem. Project work would be of 04 credits. A project work may be undertaken in any area of Elective Courses/ study area selected

*List of group of Elective Courses(EC) for Semester V (Any Four)		** List of group of Elective Courses(EC) for Semester VI (Any Four)		
Group A: Finance Electives				
1 Investment Analysis & Portfolio Management	1	International Finance		
2 Commodity & Derivatives Market	2	Innovative Financial Services		
3 Wealth Management	3	Project Management		
4 Financial Accounting	4	Strategic Financial Management		
5 Risk Management	5	Financing Rural Development		
6 Direct Taxes	6	Indirect Taxes		
Group B:Mark	etin	g Electives		
1 Services Marketing	1	Brand Management		
2 E-Commerce & Digital Marketing	2	Retail Management		
3 Sales & Distribution Management	3	International Marketing		
4 Customer Relationship Management	4	Media Planning & Management		
5 Industrial Marketing	5	Sports Marketing		
6 Strategic Marketing Management	6	Marketing of Non Profit Organisation		
Group C: Human	Resc	ource Electives		
1 Finance for HR Professionals & Compensation Management	1	HRM in Global Perspective		
2 Strategic Human Resource Management & HR Policies	2	Organisational Development		
3 Performance Management & Career Planning	3	HRM in Service Sector Management		
4 Industrial Relations	4	Workforce Diversity		
5 Talent & Competency Management	5	Human Resource Accounting & Audit		
6 Stress Management	6	Indian Ethos in Management		
Note: Group selected in Semester III will continue i	n Se	mester V &Semester VI		
Board of Studies-in-Business Manag	eme	ent, University of Mumbai 2 Page		

Bachelor of Management Studies (BMS) Programme

Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2018-2019)

Semester V

No. of Courses	Semester V	Credits	
1	Elective Courses (EC)		
1,2,3 & 4	*Any four courses from the following list of the courses	12	
2	Core Course (CC)		
5	Logistics & Supply Chain Management	04	
3	Ability Enhancement Course (AEC)		
6	Corporate Communication & Public Relations	04	
	Total Credits		

Group A: Finance Electives		
1	Investment Analysis & Portfolio Management	
2	Commodity & Derivatives Market	
3	Wealth Management	
4	Financial Accounting	
5	Risk Management	
6	Direct Taxes	
	Group B:Marketing Electives	
1	Services Marketing	
2	E-Commerce & Digital Marketing	
3	Sales & Distribution Management	
4	Customer Relationship Management	
5	Industrial Marketing	
6	Strategic Marketing Management	
	Group C: Human Resource Electives	
1	Finance for HR Professionals & Compensation Management	
2	Strategic Human Resource Management & HR Policies	
3	Performance Management & Career Planning	
4	Industrial Relations	
5	Talent & Competency Management	
6	Stress Management	

Board of Studies-in-Business Management, University of Mumbai 3 | P a g e

Elective Courses (EC) Group A: Finance Electives

1. Investment Analysis and Portfolio Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Investment Environment	15
2	Risk - Return Relationship	
3	Portfolio Management and Security Analysis	15
4	4 Theories, Capital Asset Pricing Model and Portfolio Performance Measurement	
Total		60

SN	Objectives	
1	To acquaint the learners with various concepts of finance	
2	To understand the terms which are often confronted while reading newspaper, magazines etc for better correlation with the practical world	
3	To understand various models and techniques of security and portfolio analysis	

SN	Modules/ Units	
1	Introduction to Investment Environment	
	 a) Introduction to Investment Environment Introduction, Investment Process, Criteria for Investment, Types of Investors, Investment V/s Speculation V/s Gambling, Investment Avenues, Factors Influencing Selection of Investment Alternatives b) Capital Market in India Introduction, Concepts of Investment Banks its Role and Functions, Stock Market Index, The NASDAQ, SDL, NSDL, Benefits of Depository Settlement, Online Share Trading and its Advantages, Concepts of Small cap, Large cap, Midcap and Penny stocks 	
2	Risk - Return Relationship	
	 a) Meaning, Types of Risk- Systematic and Unsystematic risk, Measurement of Beta, Standard Deviation, Variance, Reduction of Risk through Diversification. Practical Problems on Calculation of Standard Deviation, Variance and Beta. 	
3	Portfolio Management and Security Analysis	
	 a) Portfolio Management: Meaning and Concept, Portfolio Management Process, Objectives, Basic Principles, Factors affecting Investment Decisions in Portfolio Management, Portfolio Strategy Mix. 	
	 b) Security Analysis: Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis, Technical Analysis - Basic Principles of Technical Analysis., Uses of Charts: Line Chart, Bar Chart, Candlestick Chart, Mathematical Indicators: Moving Averages, Oscillators. 	
4	Theories, Capital Asset Pricing Model and Portfolio Performance Measurement	
	 a) Theories: Dow Jones Theory, Elloit Wave Theory, Efficient Market Theory b) Capital Asset Pricing Model: Assumptions of CAPM, CAPM Equation, Capital Market Line, Security Market Line c) Portfolio Performance Measurement: 	
	 Meaning of Portfolio Evaluation, Sharpe's Ratio (Basic Problems), Treynor's Ratio (Basic Problems), Jensen's Differential Returns (Basic Problems) 	

Elective Courses (EC) Group A: Finance Electives

2. Commodity and Derivatives Market

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Commodities Market and Derivatives Market	
2	Futures and Hedging	
3	Options and Option Pricing Models	15
4	Trading, Clearing & Settlement In Derivatives Market and Types of Risk	15
Total		60

SN	Objectives	
1	To understand the concepts related to Commodities and Derivatives market	
2	To study the various aspects related to options and futures	
3	To acquaint learners with the trading, clearing and settlement mechanism in derivates market.	

SN	Modules/ Units	
1	Introduction to Commodities Market and Derivatives Market	
	a)	Introduction to Commodities Market :
		• Meaning, History & Origin, Types of Commodities Traded, Structure of
		Commodities Market in India, Participants in Commodities Market, Trading in
		Commodities in India(Cash & Derivative Segment), Commodity Exchanges in India & Abroad, Reasons for Investing in Commodities
	b)	Introduction to Derivatives Market:
		• Meaning, History & Origin, Elements of a Derivative Contract, Factors Driving
		Growth of Derivatives Market, Types of Derivatives, Types of Underlying
		Assets, Participants in Derivatives Market, Advantages & Disadvantages of
		Trading in Derivatives Market, Current Volumes of Derivative Trade in India,
		Difference between Forwards & Futures.
2	Fut	ures and Hedging
	a)	Futures:
		• Futures Contract Specification, Terminologies, Concept of Convergence,
		Relationship between Futures Price & Expected Spot Price, Basis & Basis Risk, Pricing of Futures Contract, Cost of Carry Model
	b)	Hedging:
	-,	 Speculation & Arbitrage using Futures, Long Hedge – Short Hedge, Cash &
		Carry Arbitrage, Reverse Cash & Carry Arbitrage, Payoff Charts & Diagrams for
		Futures Contract, Perfect & Imperfect Hedge
3	Opt	tions and Option Pricing Models
	a)	Options:
		• Options Contract Specifications, Terminologies, Call Option, Put Option,
		Difference between Futures & Options, Trading of Options, Valuation of
		Options Contract, Factors affecting Option Premium, Payoff Charts & Diagrams for Options Contract, Basic Understanding of Option Strategies
	b)	Options Pricing Models:
	-,	 Binomial Option Pricing Model, Black - Scholes Option Pricing Model
4	Tra	ding, Clearing & Settlement In Derivatives Market and Types of Risk
	a)	Trading, Clearing & Settlement In Derivatives Market:
		• Meaning and Concept, SEBI Guidelines, Trading Mechanism – Types of Orders,
		Clearing Mechanism – NSCCL – its Objectives & Functions, Settlement
		Mechanism – Types of Settlement
	b)	Types of Risk:
		• Value at Risk, Methods of calculating VaR, Risk Management Measures, Types
		of Margins, SPAN Margin

Elective Courses (EC) Group A: Finance Electives

3. Wealth Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	1 Introduction	
2	2 Insurance Planning and Investment Planning	
3	3 Financial Mathematics/ Tax and Estate Planning	
4	4 Retirement Planning/ Income Streams & Tax Savings Schemes	
Total		60

SN	Objectives	
1	To provide an overview of various aspects related to wealth management	
2	To study the relevance and importance of Insurance in wealth management	
3	To acquaint the learners with issues related to taxation in wealth management	
4	To understand various components of retirement planning	

SN	Modules/ Units
1	Introduction
	 a) Introduction To Wealth Management: Meaning of WM, Scope of WM, Components of WM, Process of WM, WM Needs & Expectation of Clients,Code of Ethics for Wealth Manager b) Personal Financial Statement Analysis: Financial Literacy, Financial Goals and Planning, Cash Flow Analysis, Building Financial Plans, Life Cycle Management.
	 c) Economic Environment Analysis: Interest Rate, Yield Curves, Real Return, Key Indicators-Leading, Lagging, Concurrent
2	Insurance Planning and Investment Planning
	 a) Insurance Planning: Meaning, Basic Principles of Insurance, Functions and Characteristics of Insurance, Rights and Responsibilities of Insurer and Insured, Types of life Insurance Policies, Types of General Insurance Policies, Health Insurance – Mediclaim – Calculation of Human Life Value - Belth Method/CPT b) Investment Planning: Types of Investment Risk, Risk Profiling of Investors & Asset Allocation (Life
	 Types of Investment Risk, Risk Profiling of Investors & Asset Allocation (Life Cycle Model), Asset Allocation Strategies(Strategic, Tactical, Life-Cycle based), Goal-based Financial Planning, Active & Passive Investment Strategies
3	Financial Mathematics/ Tax and Estate Planning
	 a) Financial Mathematics: Calculation of Returns (CAGR ,Post-tax Returns etc.), Total Assets, Net Worth Calculations, Financial Ratios b) Tax and Estate Planning:
	 Tax Planning Concepts, Assessment Year, Financial Year, Income Tax Slabs, TDS, Advance Tax, LTCG, STCG, Carry Forward & Set-off, Estate Planning Concepts –Types of Will – Requirements of a Valid Will– Trust – Deductions - Exemptions
4	Retirement Planning/ Income Streams & Tax Savings Schemes
	 a) Retirement Planning: Understanding of different Salary Components, Introduction to Retirement Planning, Purpose & Need, Life Cycle Planning, Financial Objectives in Retirement Planning, Wealth Creation (Factors and Principles), Retirement (Evaluation & Planning), Pre & Post-Retirement Strategies - Tax Treatment
	 b) Income Streams & Tax Savings Schemes: Pension Schemes, Annuities- Types of Annuities, Various Income Tax Savings Schemes

Elective Courses (EC) Group A: Finance Electives

4. Financial Accounting

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Preparation of Final Accounts of Companies	15
2	Underwriting of Shares & Debentures	12
3	Accounting of Transactions of Foreign Currency	15
4	Investment Accounting (w.r.t. Accounting Standard- 13)	10
5	Ethical Behaviour and Implications for Accountants	08
Total		60

SN	Objectives
01	To acquaint the learners in preparation of final accounts of companies
02	To study provisions relating to underwriting of shares and debentures
03	To study accounting of foreign currency and investment
04	To understand the need of ethical behaviour in accountancy

Sr. No.	Modules / Units
1	Preparation of Final Accounts of Companies
	Relevant provisions of Companies Act related to preparation of Final Accounts (excluding cash flow statement) Preparation of financial statements as per Companies Act (excluding cash flow statement) AS 1 in relation to final accounts of companies (disclosure of accounting policies)
2	Underwriting of Shares & Debentures
	Introduction, Underwriting, Underwriting Commission Provision of Companies Act with respect to Payment of underwriting commission Underwriters, Sub-Underwriters, Brokers and Manager to Issues Types of underwriting, Abatement Clause Marked, Unmarked and Firm-underwriting applications, Liability of the underwriters in respect of underwriting contract- Practical problems
3	Accounting of Transactions of Foreign Currency
	In relation to purchase and sale of goods, services, assets, loan and credit transactions. Computation and treatment of exchange rate differences.
4	Investment Accounting (w.r.t. Accounting Standard-13)
	For shares (variable income bearing securities) For Debentures/Preference shares (fixed income bearing securities) Accounting for transactions of purchase and sale of investments with ex and cum interest prices and finding cost of investment sold and carrying cost as per weighted average method (Excl. brokerage). Columnar format for investment account.
5	Ethical Behaviour and Implications for Accountants
	Introduction, Meaning of ethical behavior Financial Reports – link between law, corporate governance, corporate social responsibility and ethics. Need of ethical behavior in accounting profession . Implications of ethical values for the principles versus rule based approaches to accounting standards The principal based approach and ethics The accounting standard setting process and ethics The IFAC Code of Ethics for Professional Accountants Contents of Research Report in Ethical Practices Implications of unethical behavior for financial reports
	Company Codes of Ethics The increasing role of Whistle – Blowing

Elective Courses (EC) Group A: Finance Electives

5. Risk Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction, Risk Measurement and Control	15
2	Risk Avoidance and ERM	15
3	Risk Governance and Assurance	15
4	Risk Management in Insurance	15
	Total	60

SN	Objectives
1	To familiarize the student with the fundamental aspects of risk management and control
2	To give a comprehensive overview of risk governance and assurance with special reference to insurance sector
3	To introduce the basic concepts, functions, process, techniques of risk management

SN		Modules/ Units
1	Int	roduction, Risk Measurement and Control
	a)	Introduction, Risk Measurement and Control
		• Definition, Risk Process, Risk Organization, Key Risks -Interest, Market, Credit,
		Currency, Liquidity, Legal, Operational
		• Risk Management V/s Risk Measurement - Managing Risk, Diversification,
		Investment Strategies and Introduction to Quantitative Risk Measurement and
		its Limitations
		• Principals of Risk - Alpha, Beta, R squared, Standard Deviation, Risk Exposure
		Analysis, Risk Immunization, Risk and Summary Measures –Simulation Method,
		Duration Analysis, Linear and other Statistical Techniques for Internal Control
2	Ris	k Avoidance and ERM
	a)	Risk Hedging Instruments and Mechanism:
		• Forwards, Futures, Options, Swaps and Arbitrage Techniques, Risk Return
		Trade off, Markowitz Risk Return Model, Arbitrage Theory, System Audit
	b	Significance in Risk Mitigation
	(C	Enterprise Risk Management:
		Risk Management V/s Enterprise Risk Management, Integrated Enterprise Risk Management ERM Framework ERM Process ERM Matrix SWOT Analysis
		Management, ERM Framework, ERM Process, ERM Matrix, SWOT Analysis, Sample Risk Register
2		
3		sk Governance and Assurance
	a)	Risk Governance:
		 Importance and Scope of Risk Governance, Risk and Three Lines of Defense, Risk Management and Corporate Governance
	b)	Risk Assurance:
	2,	 Purpose and Sources of Risk Assurance, Nature of Risk Assurance, Reports and
		Challenges of Risk
	c)	Risk and Stakeholders Expectations:
		 Identifying the Range of Stakeholders and Responding to Stakeholders
		Expectations
4	Ris	k Management in Insurance
	a)	Insurance Industry:
		• Global Perspective, Regulatory Framework in India, IRDA - Reforms, Powers,
		Functions and Duties. Role and Importance of Actuary
	b)	Players of Insurance Business:
		• Life and Non- Life Insurance, Reinsurance, Bancassurance, Alternative Risk
		Trance, Insurance Securitization, Pricing of Insurance products, Expected Claim
		Costs, Risk Classification
	c)	Claim Management:
		General Guidelines, Life Insurance, Maturity, Death, Fire, Marine, Motor
		Insurance and Calculation of Discounted Expected Claim Cost and Fair Premium

Elective Courses (EC) Group A: Finance Electives

6. Direct Taxes

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Definitions and Residential Status	10
2	Heads of Income – I	15
3	Heads of Income - II	15
4	Deductions under Chapter VI A	10
5	Computation of Taxable Income of Individuals	10
	Total	60

SN	Objectives
01	To understand the provisions of determining residential status of individual
02	To study various heads of income
03	To study deductions from total income
04	To compute taxable income of Individuals

Sr. No.	Modules / Units
1	Definitions and Residential Status
	Basic Terms (S. 2,3,4) Assessee, Assessment, Assessment Year, Annual Value, Business, Capital Assets, Income, Previous Year, Person, Transfer. Determination of Residential Status of Individual, Scope of Total Income (S.5)
2	Heads of Income – I
	Salary (S.15-17) Income from House Property (S. 22-27) Profit & Gain from Business and Profession(S. 28, 30,31,32, 35, 35D,36,37, 40, 40A and 43B)
3	Heads of Income – II
	Capital Gain (S. 45, 48, 49, 50 and 54) Income from other sources (S.56- 59) Exclusions from Total Income (S.10) (Exclusions related to specified heads to be covered with relevant heads of income)
4	Deductions under Chapter VI A
	Deductions from Total Income S. 80C, 80CCC, 80D, 80DD, 80E, 80U, 80TTA
5	Computation of Taxable Income of Individuals.
	Computation of Total Income and Taxable Income of Individuals

Note: The Syllabus is restricted to study of particular sections, specifically mentioned rules and notifications only.

- 1. All modules / units include Computational problems / Case Study.
- 2. The Law In force on 1st April immediately preceding the commencement of Academic year will be applicable for ensuing Examinations.

Elective Courses (EC) Group B: Marketing Electives

1. Service Marketing

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction of Services Marketing	15
2	Key Elements of Services Marketing Mix	15
3	Managing Quality Aspects of Services Marketing	15
4	Marketing of Services	15
	Total	60

SN	Objectives
1	To understand distinctive features of services and key elements in services marketing
2	To provide insight into ways to improve service quality and productivity
3	To understand marketing of different services in Indian context

SN	Modules/ Units
1	Introduction of Services Marketing
	 Services Marketing Concept, Distinctive Characteristics of Services, Services Marketing Triangle, Purchase Process for Services, Marketing Challenges of Services Role of Services in Modern Economy, Services Marketing Environment Goods vs Services Marketing, Goods Services Continuum Consumer Behaviour, Positioning a Service in the Market Place Variations in Customer Involvement, Impact of Service Recovery Efforts on Consumer Loyalty Type of Contact: High Contact Services and Low Contact Services Sensitivity to Customers' Reluctance to Change
2	Key Elements of Services Marketing Mix
	 The Service Product, Pricing Mix, Promotion & Communication Mix, Place/Distribution of Service, People, Physical Evidence, Process-Service Mapping- Flowcharting Branding of Services – Problems and Solutions Options for Service Delivery
3	Managing Quality Aspects of Services Marketing
	 Improving Service Quality and Productivity Service Quality – GAP Model, Benchmarking, Measuring Service Quality -Zone of Tolerance and Improving Service Quality The SERVQUAL Model Defining Productivity – Improving Productivity Demand and Capacity Alignment
4	Marketing of Services
	 International and Global Strategies in Services Marketing: Services in the Global Economy- Moving from Domestic to Transnational Marketing Factors Favouring Transnational Strategy Elements of Transnational Strategy Recent Trends in Marketing Of Services in: Tourism, Hospitality, Healthcare, Banking, Insurance, Education, IT and Entertainment Industry Ethics in Services Marketing: Meaning, Importance, Unethical Practices in Service Sector

Elective Courses (EC) Group B: Marketing Electives

2. E-Commerce and Digital Marketing

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to E-commerce	15
2	E-Business & Applications	15
3	Payment, Security, Privacy & Legal Issues in E-Commerce	15
4	Digital Marketing	15
	Total	60

SN	Objectives
1	To understand increasing significance of E-Commerce and its applications in
-	Business and Various Sectors
2	To provide an insight on Digital Marketing activities on various Social Media
2	platforms and its emerging significance in Business
2	To understand Latest Trends and Practices in E-Commerce and Digital
3	Marketing, along with its Challenges and Opportunities for an Organisation

SN	Modules/ Units	
1	Introduction to E-commerce	
	 Ecommerce- Meaning, Features of E-commerce, Categories of E-commerce, Advantages &Limitations of E-Commerce, Traditional Commerce &E-Commerce Ecommerce Environmental Factors: Economic, Technological, Legal, Cultural & Social Factors Responsible for Growth of E-Commerce, Issues in Implementing E- Commerce, Myths of E-Commerce Impact of E-Commerce on Business, Ecommerce in India Trends in E-Commerce in Various Sectors: Retail, Banking, Tourism, Government, Education Meaning of M-Commerce, Benefits of M-Commerce, Trends in M-Commerce 	
2	E-Business & Applications	
	 E-Business: Meaning, Launching an E-Business, Different phases of Launching an E-Business Important Concepts in E-Business: Data Warehouse, Customer Relationship Management, Supply Chain Management, Enterprise Resource Planning Bricks and Clicks business models in E-Business: Brick and Mortar, Pure Online, Bricks and Clicks, Advantages of Bricks & Clicks Business Model, Superiority of Bricks and Clicks E-Business Applications: E-Procurement, E-Communication, E-Delivery, E-Auction, E-Trading. Electronic Data Interchange (EDI) in E-Business: Meaning of EDI, Benefits of EDI, Drawbacks of EDI, Applications of EDI. Website : Design and Development of Website, Advantages of Website, Principles of Web Design, Life Cycle Approach for Building a Website, Different Ways of Building a Website 	
3	Payment, Security, Privacy &Legal Issues in E-Commerce	
	 Issues Relating to Privacy and Security in E-Business Electronic Payment Systems: Features, Different Payment Systems :Debit Card, Credit Card ,Smart Card, E-cash, E-Cheque, E-wallet, Electronic Fund Transfer. Payment Gateway: Introduction, Payment Gateway Process, Payment Gateway Types, Advantages and Disadvantages of Payment Gateway. Types of Transaction Security E-Commerce Laws: Need for E-Commerce laws, E-Commerce laws in India, Legal Issues in E-commerce in India, IT Act 2000 	

SN	Modules/ Units
4	Digital Marketing
	 Introduction to Digital Marketing, Advantages and Limitations of Digital Marketing. Various Activities of Digital Marketing: Search Engine Optimization, Search Engine Marketing, Content Marketing & Content Influencer Marketing, Campaign Marketing, Email Marketing, Display Advertising, Blog Marketing, Viral Marketing, Podcasts & Vodcasts. Digital Marketing on various Social Media platforms. Online Advertisement, Online Marketing Research, Online PR Web Analytics Promoting Web Traffic Latest developments and Strategies in Digital Marketing.

Elective Courses (EC) Group B: Marketing Electives

3. Sales and Distribution Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction	15
2	Market Analysis and Selling	15
3	Distribution Channel Management	15
4	Performance Evaluation, Ethics and Trends	15
	Total	60

SN	Objectives
1	To develop understanding of the sales & distribution processes in organizations
2	To get familiarized with concepts, approaches and the practical aspects of the key decision making variables in sales management and distribution channel management

SN	Modules/ Units
1	Introduction
	a) Sales Management:
	 Meaning, Role of Sales Department, Evolution of Sales Management
	 Interface of Sales with Other Management Functions
	Qualities of a Sales Manager
	Sales Management: Meaning, Developments in Sales Management-
	Effectiveness to Efficiency, Multidisciplinary Approach, Internal Marketing,
	Increased Use of Internet, CRM, Professionalism in Selling.
	• Structure of Sales Organization – Functional, Product Based, Market Based,
	Territory Based, Combination or Hybrid Structure
	b) Distribution Management:
	 Meaning, Importance, Role of Distribution, Role of Intermediaries, Evolution of Distribution Channels.
	c) Integration of Marketing, Sales and Distribution
2	Market Analysis and Selling
	a) Market Analysis:
	Market Analysis and Sales Forecasting, Methods of Sales Forecasting
	Types of Sales Quotas – Value Quota, Volume Quota, Activity Quota, Combination Quota
	Combination Quota
	Factors Determining Fixation of Sales Quota Accigning Territories to Salespeenle
	 Assigning Territories to Salespeople b) Selling:
	 Process of Selling, Methods of Closing a Sale, Reasons for Unsuccessful Closing
	 Theories of Selling – Stimulus Response Theory, Product Orientation Theory,
	Need Satisfaction Theory
	 Selling Skills – Communication Skill, Listening Skill, Trust Building Skill,
	Negotiation Skill, Problem Solving Skill, Conflict Management Skill
	 Selling Strategies – Softsell Vs. Hardsell Strategy, Client Centered Strategy,
	Product-Price Strategy, Win-Win Strategy, Negotiation Strategy
	Difference Between Consumer Selling and Organizational Selling
	Difference Between National Selling and International Selling

3	 Distribution Channel Management Management of Distribution Channel – Meaning & Need Channel Partners- Wholesalers, Distributors and Retailers & their Functions in Distribution Channel, Difference Between a Distributor and a Wholesaler Choice of Distribution System – Intensive, Selective, Exclusive
	Channel Partners- Wholesalers, Distributors and Retailers & their Functions in Distribution Channel, Difference Between a Distributor and a Wholesaler
	 Factors Affecting Distribution Strategy – Locational Demand, Product Characteristics, Pricing Policy, Speed or Efficiency, Distribution Cost Factors Affecting Effective Management Of Distribution Channels Channel Design Channel Policy Channel Conflicts: Meaning, Types – Vertical, Horizontal, Multichannel, Reasons for Channel Conflict Resolution of Conflicts: Methods – Kenneth Thomas's Five Styles of Conflict Resolution Motivating Channel Members Selecting Channel Partners Evaluating Channels Channel Control
4	Performance Evaluation, Ethics and Trends
	 a) Evaluation & Control of Sales Performance: Sales Performance – Meaning Methods of Supervision and Control of Sales Force Sales Performance Evaluation Criteria- Key Result Areas (KRAs) Sales Performance Review Sales Management Audit b) Measuring Distribution Channel Performance: Evaluating Channels- Effectiveness, Efficiency and Equity
	 Control of Channel – Instruments of Control – Contract or Agreement, Budgets and Reports, Distribution Audit c) Ethics in Sales Management d) New Trends in Sales and Distribution Management

Elective Courses (EC) Group B: Marketing Electives

4. Customer Relationship Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Customer Relationship Management	15
2	CRM Marketing Initiatives, Customer Service and Data Management	15
3	CRM Strategy, Planning, Implementation and Evaluation	15
4	CRM New Horizons	15
	Total	60

SN	Objectives
1	To understand concept of Customer Relationship Management (CRM) and
1	implementation of Customer Relationship Management
2	To provide insight into CRM marketing initiatives, customer service and
2	designing CRM strategy
2	To understand new trends in CRM, challenges and opportunities for
3	organizations

SN	Modules/ Units	
1	Introduction to Customer Relationship Management	
	 Concept, Evolution of Customer Relationships: Customers as strangers, acquaintances, friends and partners Objectives, Benefits of CRM to Customers and Organisations, Customer Profitability Segments, Components of CRM: Information, Process, Technology and People, Barriers to CRM Relationship Marketing and CRM: Relationship Development Strategies: Organizational Pervasive Approach, Managing Customer Emotions, Brand Building through Relationship Marketing, Service Level Agreements, Relationship Challenges 	
2	CRM Marketing Initiatives, Customer Service and Data Management	
	 CRM Marketing Initiatives: Cross-Selling and Up-Selling, Customer Retention, Behaviour Prediction, Customer Profitability and Value Modeling, Channel Optimization, Personalization and Event-Based Marketing CRM and Customer Service: Call Center and Customer Care: Call Routing, Contact Center Sales-Support, Web Based Self Service, Customer Satisfaction Measurement, Call-Scripting, Cyber Agents and Workforce Management CRM and Data Management: Types of Data: Reference Data, Transactional Data, Warehouse Data and Business View Data, Identifying Data Quality Issues, Planning and Getting Information Quality, Using Tools to Manage Data, Types of Data Analysis: Online Analytical Processing (OLAP), Clickstream Analysis, Personalisation and Collaborative Filtering, Data Reporting 	
3	CRM Strategy, Planning, Implementation and Evaluation	
	 Understanding Customers: Customer Value, Customer Care, Company Profit Chain: Satisfaction, Loyalty, Retention and Profits Objectives of CRM Strategy, The CRM Strategy Cycle: Acquisition, Retention and Win Back, Complexities of CRM Strategy Planning and Implementation of CRM: Business to Business CRM, Sales and CRM, Sales Force Automation, Sales Process/ Activity Management, Sales Territory Management, Contact Management, Lead Management, Configuration Support, Knowledge Management CRM Implementation: Steps- Business Planning, Architecture and Design, Technology Selection, Development, Delivery and Measurement CRM Evaluation: Basic Measures: Service Quality, Customer Satisfaction and Loyalty, Company 3E Measures: Efficiency, Effectiveness and Employee Change 	

4	CRM New Horizons
	e-CRM: Concept, Different Levels of E- CRM, Privacy in E-CRM:
	Software App for Customer Service:
	 Activity Management, Agent Management, Case Assignment, Contract Management, Customer Self Service, Email Response Management, Escalation, Inbound Communication Management, Invoicing, Outbound Communication Management, Queuing and Routing, Scheduling
	Social Networking and CRM
	Mobile-CRM
	CRM Trends, Challenges and Opportunities
	Ethical Issues in CRM

Elective Courses (EC) Group B: Marketing Electives

5. Industrial Marketing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Industrial Marketing -An Introduction, Marketing Environment and Buying Behaviour	15
2	Industrial Marketing Research and Segmentation, Targeting and Positioning in Industrial Market	15
3	Industrial Marketing Mix	15
4	Emerging Trends in Industrial Marketing	15
Total		

SN	Objectives
01	To understand basics of industrial marketing, Marketing Environment, Segmenting Targeting Positioning, channel strategy, marketing communication and pricing
02	To provide knowledge of industrial market structure and how they function
03	To provide understanding of the various attributes and models applicable in Industrial Marketing
04	To acquaint the students with trends in Industrial Marketing

Sr. No.	Modules / Units		
1	Industrial Marketing -An Introduction, Marketing Environment and Buying Behaviour		
-	 Introduction to Industrial Marketing: Introduction, Definition, Features, Industrial versus Consumer marketing, Classification of Industrial products and Services 		
	 Industrial Marketing Environment: Technological; Customer; Competitive, Legal and Economic Environment; Responsibility of industrial Marketing Manager in planning, Coordination, Execution and control 		
	 Industrial Buying and Buying Behaviour: Procurement function; Purchase policy; Organization buying processes, Profile of Business buyers: Buying Centres; Buying Centres Roles; Buying Centre Members, Vender Analysis: Criteria for evaluating potential vendor; Vender Pating, Madela of industrial buying Pakewing. 		
	Vendor Rating, Models of industrial buying Behaviour Industrial Marketing Research and Segmentation, Targeting and Positioning in Industrial		
2	Market		
	 Industrial Marketing Research: Introduction, Classification of Industrial Marketing Research, Industrial Marketing Research Process, Role and Scope of Industrial Marketing Research, Advantages and limitations of Industrial Marketing Research, Role of Industrial Marketing Research in Marketing Information System and Decision Support System. Segmentation, Targeting and Positioning in Industrial Market: Introduction to segmentation; Criteria for market segmentation; Basis of Market segmentation, choosing the market segmentation, Target Market: Concept, Approaches to Target Market, Positioning: Concept, Objectives of positioning, Positioning of Products and services; Effective Positioning; positioning process. 		
3	Industrial Marketing Mix		
	 Industrial Products and New Product Development: Introduction to Industrial Products; Product Policy; Product Classification; Introduction to new product development; New industrial products; stages in New product development. Industrial Pricing: Introduction to industrial Pricing; Factors influencing industrial pricing decision; Types of pricing; Leasing; Bidding; Negotiation Industrial Marketing Communication: Advertising, Personal selling and Sales promotion: Role of advertising in B2B Market; various media options; Advertising on the internet; Using Advertising Agencies for industrial Marketers; Personal Selling in industrial Marketing; Different steps in Personal Selling; Sales promotion in industrial marketing. Marketing Channels and Physical Distribution of Industrial Products: Industrial marketing channels; Indirect and direct marketing channels; Importance of marketing channels; Factors affecting selection of Marketing Channels; Process of designing the channel structure: Analyzing the channel objectives, constraints, channel tasks, channel alternatives and selecting the channel 		
4	Emerging Trends in Industrial Marketing		
	 Business Networks : Business Networks in Industrial marketing, Relationship in Business networks , Technology and Business networks E-Procurement in Industrial Market: Meaning , Importance of E-procurement , Implementation of E-procurement E-Commerce: Definition of E-Commerce, Advantages and disadvantages of B2B E-Commerce, Role of E-Commerce in the context B2B marketer, Forms of B2B E-Commerce, Electronic Data Interchange; E-payments; E-security 		

Elective Courses (EC) Group B: Marketing Electives

6. Strategic Marketing Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Strategic Marketing Management	15
2	Segmenting, Targeting, Positioning and Creation of Value in the context of Strategic Marketing	15
3	Strategic Decisions in Product, Services and Branding	15
4	Strategic Decisions in Pricing, Promotion and Distribution and strategic growth management	15
	Total	60

SN	Objectives
01	To understand marketing strategies and their impact on business models
02	To learn strategic marketing tactics related to product, price, service, brand, positioning, incentives and communication for business growth.
03	To learn the various marketing strategies adopted by Companies to create a competitive advantage

Sr. No.	Modules / Units	
1	Introduction to Strategic Marketing Management	
	• Marketing: Nature of Marketing, marketing as an art, science and business discipline,	
	marketing as a value creation process	
	• Strategic decisions: Nature of strategy, the marketing strategy interface, difference between marketing planning and strategic planning	
	• Identifying the market : The five C framework-customer, company, collaborator, competitor, context	
	• The 7 tactics of Marketing mix : Product, service, brand, price ,incentives, communication and distribution	
	 Business Model and Strategic Marketing Planning: Meaning, Role of Business models in marketing management, Strategies for developing a business models: top-down business model generation, bottom up business model generation, The G-STIC frame work for marketing planning: Goal-Strategy-Tactics-Implementation-control 	
	Segmenting, Targeting, Positioning and Creation of Value in the context of Strategic	
2	Marketing:	
	• Segmentation: Essence of segmentation, Factors to be considered while segmenting, key	
	segmenting principles- relevance, similarity, exclusivity	
	• Identifying Target Customers: Factors to be considered while targeting, targeting strategies-One for all strategy, one for each strategy, Strategic Targeting criteria: target	
	attractiveness, target compatibility	
	Essential strategic assets for target compatibility: business infrastructure, collaborator networks, human capital, intellectual property, strong brands, established customer base, synergistic offerings, access to scarce resources and capital.	
	 Creating Customer Value through Positioning: Role of strategic positioning, strategic positioning options: The quality option, value option, the pioneer, a narrow product focutarget segment focus; strategies for creating superior customer value. 	
	Creating Company Value: Understanding Company Value: Monetary, functional and	
	psychological value; strategically managing profitsincreasing sales revenue-through volume, optimizing price, lowering costs	
	Creating Collaborator Value: Meaning of collaborators, collaboration as business process,	
	advantages and drawbacks of collaboration, levels of strategic collaboration: explicit, implicit; alternatives to collaboration: horizontal and vertical integration, managing collaborator relations; gaining collaborator power: offering differentiation; collaborator size, strategic importance, switching costs	

3	Strategic Decisions in Product, Services and Branding
	 Managing Product and Services: factors affecting product and service decisions performance, consistency, reliability, durability, compatibility, ease of use, technologica design, degree of customization, physical aspects, style, packaging. Managing New Products: Forecasting new product demand using Primary Data an secondary data: offering specific forecasting, forecasting by analogy, category base forecasting. New product adoption: Understanding new product adoption, factors influencin diffusion of new offering, new product development process, managing risk in new products- market risk and technological risk, Moore's Model of adoption of new technologies, managing product life cycle at various stages, extending Product lifecycle. Managing Product Lines: Managing vertical, upscale, downscale, horizontal product-Lin Extensions, Managing Product Line Cannibalization, Managing Product lines to gain an
	 defend market position-The Fighting Brand Strategy, The sandwich strategy, The Good better-best strategy Brand Tactics: Brand: Meaning, brand identity, brand as value creation process bran hierarchy-Individual and umbrella branding, brand extension: vertical and horizonta brand equity and brand power, measuring brand equity-cost based approach, market based approach and financial based approach.
4	Strategic Decisions in Pricing, Promotion and Distribution and strategic growth managemen
	 psychological pricing effects: reference price effects, price quantity effects, price tie effects, price ending effects, product line effects; Understanding competitive pricing and price wars: factors affecting price wars, Approach for developing a strategic response to competitors price cut, Other pricing strategies-captive pricing, cross price elasticity deceptive pricing, everyday low pricing, experience curve pricing, loss leader pricing horizontal price fixing, price signalling. B) Managing Promotions and incentives: Promotion mix strategy, Factors affecting strategic decisions in promotion mix, Promotion expenditure strategy, Methods to determine promotion expenditure-Breakdown Method, Buildup Method, Push and Puparentions
	promotions. Managing incentives as a value creation process, Goals of using customer incentives Monetary incentives for customers, Non monetary incentives for customers. Collaborator incentives meaning, monetary incentives-slotting allowance, stockin allowance, cooperative advertising allowance, market development allowance, displa
	 allowance, spiffs C) Managing distribution: Distribution as value creation process, distribution channed design process- Channel structure: Direct, indirect and hybrid channel; channed coordination- common ownership, contractual relationship, implicit channed coordination; channel type, channel coverage, channel exclusivity
	 D) Strategic Growth Management: Gaining market position: strategies to gain market position: steal share strategy, market growth strategy, market innovation strategy. Pioneering new markets: Meaning, Types of Pioneers: technology, product, busines model, markets; benefits and drawbacks of being a Pioneer. Defending market position: Strategies to defend market position- ignoring competitors

> Elective Courses (EC) Group C: Human Resource Electives

1. Finance for HR Professionals and Compensation Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Compensation Plans and HR Professionals	15
2	Incentives and Wages	15
3	Compensation to Special Groups and Recent Trends	15
4	Legal and Ethical issues in Compensation	15
	Total	60

Objectives

SN	Objectives
1	To orient HR professionals with financial concepts to enable them to make prudent HR decisions
2	To understand the various compensation plans
3	To study the issues related to compensation management and understand the legal framework of compensation management

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SN	Modules/ Units	
1	Compensation Plans and HR Professionals	
	 Meaning, Objectives of Compensation Plans, Role of HR Professionals in Compensation Plans, Types of Compensation: Financial and non-financial, Factors Influencing Compensation Compensation Tools: Job based and Skill based, Models: Distributive Justice Model and Labour Market Model, Dimensions of Compensation 3 Ps Compensation Concept, Benefits of Compensation: Personal, Health and Safety, Welfare, Social Security Pay Structure: Meaning, Features, Factors, Designing the Compensation System, Compensation Scenario in India. 	
2	Incentives and Wages	
	 Incentive Plans – Meaning and Types: Piecework, Team, Incentives for Managers and Executives, Salespeople, Merit pay, Scanlon Pay, Profit Sharing Plan, ESOP, Gain Sharing, Earning at Risk plan, Technology and Incentives. Prerequisites of an Effective Incentive System Wage Differentials: Concepts, Factors contributing to Wage Differentials, Types of Wage Differentials, Importance of Wage Differentials, Elements of a Good Wage Plan. Theories of Wages: Subsistence Theory, Wage Fund Theory, Marginal Productivity Theory, Residual Claimant Theory, Bargaining Theory. 	
3	Compensation to Special Groups and Recent Trends	
	 Compensation for Special Groups: Team Based pay, Remunerating Professionals, Contract Employees, Corporate Directors, CEOs, Expatriates and Executives. Human Resource Accounting – Meaning, Features, Objectives and Methods Recent Trends: Golden Parachutes, e-Compensation, Salary Progression Curve, Competency and Skill based, Broad banding and New Pay, Cafeteria approach – Features, Advantages and Disadvantages. 	
4	Legal and Ethical issues in Compensation	
	 Legal Framework of Compensation in India: Wage Policy in India, Payment of Bonus Act 1965, Equal Remuneration Act 1976, Payment of Wages Act 1936, Payment of Gratuity Act 1972, Employee Compensation Act 1923, Employees Provident Funds and Miscellaneous Provision Act 1952. Pay Commissions, Wage Boards, Adjudication, Legal considerations, COBRA requirement, Pay Restructuring in Mergers and Acquisitions, Current Issues and Challenges in Compensation Management, Ethics in Compensation Management. 	

Elective Courses (EC) Group C: Human Resource Electives

2. Strategic Human Resource Management and HR Policies

Modules at a Glance

SN	Modules	No. of Lectures
1	SHRM - An Overview	15
2	HR Strategies	15
3	HR Policies	15
4	Recent Trends in SHRM	15
	Total	60

Objectives

SN	Objectives
1	To understand human resource management from a strategic perspective
2	To link the HRM functions to corporate strategies in order to understand HR as a strategic resource
3	To understand the relationship between strategic human resource management and organizational performance
4	To apply the theories and concepts relevant to strategic human resource management in contemporary organizations
5	To understand the purpose and process of developing Human Resource Policies

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SN	Modules/ Units	
1	SHRM - An Overview	
	 Strategic Human Resource Management (SHRM) – Meaning, Features, Evolution, Objectives, Advantages, Barriers to SHRM, SHRM v/s Traditional HRM, Steps in SHRM, Roles in SHRM - Top Management, Front-line Management, HR, Changing Role of HR Professionals, Models of SHRM – High Performance Working Model, High Commitment Management Model, High Involvement Management Model HR Environment –Environmental trends and HR Challenges Linking SHRM and Business Performance 	
2	HR Strategies	
	 Developing HR Strategies to Support Organisational Strategies, Resourcing Strategy – Meaning and Objectives, Strategic HR Planning – Meaning, Advantages Interaction between Strategic Planning and HRP, Managing HR Surplus and Shortages, Strategic Recruitment and Selection – Meaning and Need, Strategic Human Resource Development – Meaning, Advantages and Process, Strategic Compensation as a Competitive Advantage, Rewards Strategies – Meaning Importance, Employee Relations Strategy, Retention Strategies, Strategies for Enhancing Employee Work Performance 	
3	HR Policies	
	 Human Resource Policies – Meaning, Features, Purpose of HR Policies, Process on Developing HR Policies, Factors affecting HR Policies, Areas of HR Policies in Organisation, Requisites of a Sound HR Policies – Recruitment, Selection, Training and Development, Performance Appraisal, Compensation, Promotion Outsourcing, Retrenchment, Barriers to Effective Implementation of HR Policies and Ways to Overcome These Barriers, Need for Reviewing and Updating HI Policies, Importance of Strategic HR Policies to Maintain Workplace Harmony 	
4	Recent Trends in SHRM	
	 i.e. Mentoring Employee Engagement – Meaning, Factors Influencing Employee Engagement, Strategies for Enhancing Employee Engagement Contemporary Approaches to HR Evaluation – Balance Score Card, HR Score Card, Benchmarking and Business Excellence Model Competency based HRM – Meaning, Types of Competencies, Benefits of Competencies for Effective Execution of HRM Functions. Human Capital Management –Meaning and Role New Approaches to Recruitment – Employer Branding, Special Event Recruiting, Contest Recruitment, e - Recruitment 	
	 Strategic International Human Resource Management – Meaning and Features, International SHRM Strategic Issues, Approaches to Strategic International HRM. 	

Elective Courses (EC) Group C: Human Resource Electives

3. Performance Management and Career Planning

Modules at a Glance

SN	Modules	No. of Lectures
1	Performance Management – An Overview	15
2	Performance Management Process	15
3	Ethics, Under Performance and Key Issues in Performance Management	15
4	Career Planning and Development	15
	Total	60

SN	Objectives
1	To understand the concept of performance management in organizations
2	To review performance appraisal systems
3	To understand the significance of career planning and practices

SN	Modules/ Units		
1	Performance Management – An Overview		
	 Performance Management– Meaning, Features, Components of Performance Management, Evolution, Objectives, Need and Importance, Scope, Performance Management Process, Pre-Requisites of Performance Management, Linkage of Performance Management with other HR functions, Performance Management and Performance Appraisal, Performance Management Cycle Best Practices in Performance Management, Future of Performance Management. Role of Technology in Performance Management 		
2	Performance Management Process		
	 Performance Planning – Meaning, Objectives, Steps for Setting Performance Criteria, Performance Benchmarking Performance Managing – Meaning, Objectives, Process Performance Appraisal – Meaning, Approaches of Performance Appraisal – Trait Approach, Behaviour Approach, Result Approach Performance Monitoring–Meaning, Objectives and Process Performance Management Implementation – Strategies for Effective Implementation of Performance Management Linking Performance Management to Compensation 		
	Concept of High Performance Teams		
3	 Ethics, Under Performance and Key Issues in Performance Management Ethical Performance Management - Meaning, Principles, Significance of Ethics in Performance Management, Ethical Issues in Performance Management, Code of Ethics in Performance Management, Building Ethical Performance Culture, Future Implications of Ethics in Performance Management Under Performers and Approaches to Manage Under Performers, Retraining Key Issues and Challenges in Performance Management Potential Appraisal: Steps, Advantages and Limitations. Pay Criteria -Performance related pay, Competence related pay, Team based pay, Contribution related pay. 		
4	Career Planning and Development		
	 Career Planning - Meaning, Objectives, Benefits and Limitations, Steps in Career Planning, Factors affecting Individual Career Planning, Role of Mentor in Career Planning, Requisites of Effective Career Planning Career Development – Meaning, Role of employer and employee in Career Development, Career Development Initiatives Role of Technology in Career Planning and Development Career Models – Pyramidal Model, Obsolescence Model, Japanese Career Model New Organizational Structures and Changing Career Patterns 		

Elective Courses (EC) Group C: Human Resource Electives

4. Industrial Relations

Modules at a Glance

SN	Modules	No. of Lectures
1	Industrial Relations- An overview	15
2	Industrial Disputes	15
3	Trade Unions and Collective Bargaining	15
4	Industrial Relations Related Laws in India	15
	Total	60

SN	Objectives
1	To understand the concept of performance management in organizations
2	To review performance appraisal systems
3	To understand the significance of career planning and practices

SN	Modules/ Units			
1	Industrial Relations- An overview			
	 Meaning, Objectives, Characteristics of a good Industrial Relations System/Principles of a good IR/Essentials of good IR, Scope, Significance/Need and Importance of IR, Major Stakeholders of IR, Evolution of IR in India, Factors affecting IR, Role of State, Employers and Unions in IR, Changing Dimensions of IR in India, Impact of Liberalisation, Privatisation and Globalisation on Industrial Relations, Issues and Challenges of industrial relations in India 			
2	Industrial Disputes			
	a) Industrial Disputes:			
	 Meaning of Industrial Dispute, Causes, Forms/Types, Consequences/Effects, Methods of Settling Industrial Disputes (Arbitration, Joint Consultations, Works Committee, Conciliation, Adjudication etc) Concepts Related to Industrial Disputes (Relevant Examples): Strike, Layoff, 			
	Lockout, Retrenchment b) Employee Discipline:			
	 Meaning, Determinants, Causes of Indiscipline, Code of Discipline and its Enforcement. 			
	c) Grievance Handling:			
	Meaning of Grievances, Causes of Grievances, Guidelines for Grievance			
	Handling, Grievance Redressal Procedure in India.			
	d) Workers' Participation in Management:			
_	Meaning and Types with Respect to India			
3	Trade Unions and Collective Bargaining			
	 a) Trade Unions: Meaning, Features, Objectives, Role of Trade Unions, Functions/Activities, Types, Evolution of Trade Unions across Globe, Evolution of Trade Unions in India, Structure of Trade Unions in India, Recognition of Trade Unions, Rights and Privileges of Registered Trade Unions, Impact of Globalisation on Trade Unions in India, Central Organisations of Indian Trade Unions : INTUC, AITUC, HMS,UTUC, Problems of Trade Unions in India. 			
	b) Collective Bargaining:			
	 Meaning, Features, Importance, Scope, Collective Bargaining Process, Prerequisites of Collective Bargaining, Types of Collective Bargaining Contracts, Levels of Collective Bargaining, Growth of Collective Bargaining in India, Obstacles to Collective Bargaining in India. 			

SN	Modules/ Units
4	Industrial Relations Related Laws in India
	 Role of Judiciary in Industrial Relations: Labour Court, Industrial Tribunal, National Tribunal The Trade Unions Act, 1926; The Industrial Employment (Standing Orders) Act, 1946; The Industrial Disputes Act, 1947; The Factories' Act, 1948
	The Minimum Wages Act, 1948

Elective Courses (EC) Group C:Human Resource Electives

5. Talent & Competency Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Talent Management	15
2	Talent Management System	15
3	Contemporary Issues and Current Trends in Talent Management	15
4	Competency Management and Competency Mapping	15
Total		60

SN	Objectives
01	To understand key talent management & competency management concepts
02	To understand the concept and importance of competency mapping
03	To understand the role of talent management and competency management in building sustainable competitive advantage to an organization
04	To know the ethical and legal obligations associated with talent management

Sr. No.	Modules / Units		
1	Introduction to Talent Management		
	 Talent Management – Meaning, History, Scope of Talent Management, Need of Talent Management Benefits and Limitations of Talent Management Principles of Talent Management Source of Talent Management Talent Gap – Meaning, Strategies to Fill Gaps The Talent Value Chain Role of HR in Talent Management Role of Talent Management in building Sustainable Competitive Advantage to an Organization 		
2	Talent Management System		
3	 Talent Management System – Meaning, Key Elements of Talent Management System Critical Success Factors to Create Talent Management System Building Blocks for Talent Management - Introduction, Effective Talent Management System, Building Blocks of Effective Talent Management Syster Life Cycle of Talent Management - Meaning, Steps in Talent Management Process, Importance of Talent Management Process, Essentials of Talent Management Process Approaches to Talent Management Talent Management Strategy – Meaning, Developing a Talent Management Strategy, Mapping Business Strategies and Talent Management Strategies Talent Management and Succession Planning 		
	Ethical and Legal Obligations Associated with Talent Management Talent Management in India		
4	Talent Management in India Competency Mapping		
4	 Competency Management and Competency Mapping Concept of Competency and Competence, Competence v/s Competency Types of Competencies, Benefits and Limitations of implementing 		
	 competencies Iceberg Model of Competency Competency Management – Meaning, Features and Objectives Benefits and Challenges of Competency Management Competency Development – Meaning, Process Competency Mapping - Meaning, Features, Need and importance of competency mapping Methods of Competency Mapping, Steps in Competency Mapping 		

Elective Courses (EC) Group C:Human Resource Electives

6. Stress Management

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Understanding Stress	15
2	Managing Stress – I	15
3	Managing Stress – II	15
4	Stress Management Leading to Success	15
Total		60

SN	Objectives
01	To understand the nature and causes of stress in organizations
02	To familiarize the learners with the stress prevention mechanism
03	To understand the strategies that help cope with stress
04	To be able to apply stress management principles in order to achieve high levels of performance
05	To enable to learners to adopt effective strategies, plans and techniques to deal with stress

Sr. No.	Modules / Units	
1	Understanding Stress	
	Stress – concept, features, types of stress	
	Relation between Stressors and Stress	
	Potential Sources of Stress – Environmental, Organizational and Individual	
	 Consequences of Stress – Physiological, Psychological and Behavioural Symptoms 	
	 Stress at work place – Meaning, Reasons 	
	Impact of Stress on Performance	
	Work Stress Model	
	Burnout – Concept	
	Stress v/s Burnout	
2	Managing Stress – I	
	Pre-requisites of Stress-free Life	
	 Anxiety - Meaning, Mechanisms to cope up with anxiety 	
	Relaxation - Concept and Techniques	
	 Time Management - Meaning, Importance of Time Management 	
	Approaches to Time Management	
	 Stress Management - Concept, Benefits 	
	Managing Stress at Individual level	
	 Role of Organization in Managing Stress/ Stress Management Techniques 	
	Approaches to Manage Stress - Action oriented, Emotion oriented, Acceptance oriented.	
3	Managing Stress – II	
	• Models of Stress Management - Transactional Model, Health Realization/ Innate Health	
	Model	
	 General Adaption Syndrome (GAS) - Concept, Stages 	
	• Measurement of Stress Reaction - The Physiological Response, The Cognitive Response,	
	The Behavioural Response.	
	• Stress prevention mechanism - Stress management through mind control and purification	
	theory and practice of yoga education.	
	 Stress management interventions: primary, secondary, tertiary. 	
	Meditation – Meaning, Importance	
-	Role of Pranayama, Mantras, Nutrition, Music, Non-violence in stress control	
4	Stress Management Leading to Success	
	Eustress – Concept, Factors affecting Eustress	
	Stress Management Therapy - Concept, Benefits	
	Stress Counselling - Concept	
	Value education for stress management	
	Stress and New Technology	
	Stress Audit Process	
	Assessment of Stress - Tools and Methods	
	Future of Stress Management	

Core Course (CC) 5. Logistics and Supply Chain Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Overview of Logistics and Supply Chain Management	15
2	Elements of Logistics Mix	15
3	Inventory Management, Logistics Costing, Performance Management and Logistical Network Analysis	15
4	Recent Trends in Logistics and Supply Chain Management	15
	Total	60

SN	Objectives
1	To provide students with basic understanding of concepts of logistics and supply chain management
2	To introduce students to the key activities performed by the logistics function
3	To provide an insight in to the nature of supply chain, its functions and supply chain systems
4	To understand global trends in logistics and supply chain management

SN	Modules/ Units
1	Overview of Logistics and Supply Chain Management
	 a) Introduction to Logistics Management Meaning, Basic Concepts of Logistics- Logistical Performance Cycle, Inbound Logistics, Inprocess Logistics, Outbound Logistics, Logistical Competency, Integrated Logistics, Reverse Logistics and Green Logistics Objectives of Logistics, Importance of Logistics, Scope of Logistics, Logistical Functions/Logistic Mix, Changing Logistics Environment b) Introduction to Supply Chain Management
	 Meaning, Objectives, Functions, Participants of Supply Chain, Role of Logistics in Supply Chain, Comparison between Logistics and Supply Chain Management, Channel Management and Channel Integration
	 c) Customer Service: Key Element of Logistics Meaning of Customer Service, Objectives, Elements, Levels of customer service, Rights of Customers
	 d) Demand Forecasting Meaning, Objectives ,Approaches to Forecasting, Forecasting Methods, Forecasting Techniques, (Numerical on Simple Moving Average, Weighted Moving Average)
2	Elements of Logistics Mix
	 a) Transportation Introduction, Principles and Participants in Transportation, Transport Functionality, Factors Influencing Transportation Decisions, Modes of Transportation- Railways, Roadways, Airways, Waterways, Ropeways, Pipeline, Transportation Infrastructure, Intermodal Transportation
	 b) Warehousing Introduction, Warehouse Functionality, Benefits of Warehousing, Warehouse Operating Principles, Types of Warehouses, Warehousing Strategies, Factors affecting Warehousing
	 c) Materials Handling Meaning, Objectives, Principles of Materials Handling, Systems of Materials Handling, Equipments used for Materials Handling, Factors affecting Materials Handling Equipments d) Packaging
	 d) Packaging Introduction, Objectives of Packaging, Functions/Benefits of Packaging, Design Considerations in Packaging, Types of Packaging Material, Packaging Costs

SN	Modules/ Units
3	Inventory Management, Logistics Costing, Performance Management and Logistical Network Analysis
	a) Inventory Management
	Meaning, Objectives, Functions, Importance, Techniques of Inventory
	Management (Numericals - EOQ and Reorder levels)
	b) Logistics Costing
	Meaning, Total Cost Approach, Activity Based Costing, Mission Based Costing
	c) Performance Measurement in Supply Chain
	Meaning, Objectives of Performance Measurement, Types of Performance
	Measurement, Dimensions of Performance Measurement, Characteristics of
	Ideal Measurement System
	d) Logistical Network Analysis
	Meaning, Objectives, Importance, Scope, RORO/LASH
4	Recent Trends in Logistics and Supply Chain Management
	a) Information Technology in Logistics
	Introduction, Objectives, Role of Information Technology in Logistics and
	Supply Chain Management, Logistical Information System, Principles of
	Logistical Information System, Types of Logistical Information System,
	Logistical Information Functionality, Information Technology Infrastructure
	b) Modern Logistics Infrastructure
	Golden Quadrilateral, Logistics Parks, Deep Water Ports, Dedicated Freight
	Corridor, Inland Container Depots/Container Freight Stations, Maritime
	Logistics, Double Stack Containers/Unit Trains
	c) Logistics Outsourcing
	Meaning, Objectives, Benefits/Advantages of Outsourcing, Third Party
	Logistics Provider, Fourth Party Logistics Provider, Drawbacks of Outsourcing,
	Selection of Logistics Service Provider, Outsourcing-Value Proposition
	d) Logistics in the Global Environment
	Managing the Global Supply Chain, Impact of Globalization on Logistics and
	Supply Chain Management, Global Logistics Trends, Global Issues and
	Challenges in Logistics and Supply Chain Management

Ability Enhancement Courses (AEC) 6. Corporate Communication & Public Relations

Modules at a Glance

SN	Modules	No. of Lectures
1	Foundation of Corporate Communication	15
2	Understanding Public Relations	15
3	Functions of Corporate Communication and Public Relations	15
4	Emerging Technology in Corporate Communication and Public Relations	15
	Total	60

SN	Objectives
1	To provide the students with basic understanding of the concepts of corporate
-	communication and public relations
2	To introduce the various elements of corporate communication and consider
2	their roles in managing organizations
3	To examine how various elements of corporate communication must be
5	coordinated to communicate effectively
4	To develop critical understanding of the different practices associated with
4	corporate communication

SN	Modules/ Units
1	Foundation of Corporate Communication
	a) Corporate Communication: Scope and Relevance
	Introduction, Meaning, Scope, Corporate Communication in India, Need/ Delayance of Communication in Contemporary Concerns
	Relevance of Corporate Communication in Contemporary Scenario b) Keys concept in Corporate Communication
	Corporate Identity: Meaning and Features, Corporate Image: Meaning, Factors
	Influencing Corporate Image, Corporate Reputation: Meaning, Advantages of
	Good Corporate Reputation
	c) Ethics and Law in Corporate Communication
	Importance of Ethics in Corporate Communication, Corporate Communication
	and Professional Code of Ethics, Mass Media Laws: Defamation, Invasion of
•	Privacy, Copyright Act, Digital Piracy, RTI
2	Understanding Public Relations
	a) Fundamental of Public Relations:
	 Introduction, Meaning, Essentials of Public Relations, Objectives of Public Relations, Scope of Public Relations, Significance of Public Relations in Business
	b) Emergence of Public Relations:
	• Tracing Growth of Public Relations, Public Relations in India, Reasons for
	Emerging International Public Relations
	c) Public Relations Environment:
	Introduction, Social and Cultural Issues, Economic Issues, Political Issues, Legal
	d) Theories used in Public Relations:
-	Systems Theory, Situational Theory, Social Exchange Theory, Diffusion Theory
3	Functions of Corporate Communication and Public Relations
	 a) Media Relations: • Introduction, Importance of Media Relations, Sources of Media Information,
	Building Effective Media Relations, Principles of Good Media Relations
	b) Employee Communication:
	Introduction, Sources of Employee Communications, Organizing Employee
	Communications, Benefits of Good Employee Communications, Steps in
	Implementing An Effective Employee Communications Programme, Role of
	Management in Employee Communications
	c) Crisis Communication:
	Introduction, Impact of Crisis, Role of Communication in Crisis, Guidelines for
	Handling Crisis, Trust Building d) Financial Communication:
	 Introduction, Tracing the Growth of Financial Communication in India,
	Audiences for Financial Communication, Financial Advertising

SN	Modules/ Units
4	Emerging Technology in Corporate Communication and Public Relations
	a) Contribution of Technology to Corporate Communication
	• Introduction, Today's Communication Technology, Importance of Technology
	to Corporate Communication, Functions of Communication Technology in
	Corporate Communication, Types of Communication Technology, New Media:
	Web Conferencing, Really Simple Syndication (RSS)
	b) Information Technology in Corporate Communication
	• Introduction, E-media Relations, E-internal Communication, E-brand Identity and Company Reputation
	c) Corporate Blogging
	• Introduction, Defining Corporate Blogging, Characteristics of a Blog, Types of Corporate Blogs, Role of Corporate Blogs, Making a Business Blog

Reference Books
Investment Analysis & Portfolio Management
Kevin. S, Security Analysis and Portfolio Management
Donald Fischer & Ronald Jordon, Security Analysis & Portfolio Management
 Prasanna Chandra, Security Analysis & Portfolio Management
 Sudhindhra Bhatt, Security Analysis and Portfolio Management.
Commodity & Derivatives Market
 John C. Hull & Basu -Futures, options & other derivatives
 Robert McDonald, Derivatives market, Pearson education
 John Hull, Fundamentals of futures & options
Ankit Gala & Jitendra Gala, Guide to Indian Commodity market, Buzzingstock publishing house
• K.Sasidharan & Alex K. Mathews, Option trading – bull market strategies, McGraw Hill publication
Niti Chatnani, Commodity markets, McGraw Hill Publication
S.Kevin, Commodities & financial derivatives, PHI learning Pvt Itd
Suni K Parmeswaran, Futures & options, McGraw Hill
Wealth Management
 Harold Evensky, Wealth Management, McGraw Hill Publication
 NCFM, CFP, IIBF, etc, Wealth Management modules
Harold Evensky, The new wealth Management, CFA Institute Investment Series Publication
Financial Accounting
• Ashish K. Bhattacharyya – "Financial Accounting for Business Managers", Prentice Hall of India Pvt.
Ltd.
 Shashi K. Gupta – "Contemporary Issues in Accounting", Kalyani Publishers.
 R. Narayanaswamy – "Financial Accounting", Prentice Hall of India, New Delhi
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Sales & Distribution Management

- A. Nag, Sales And Distribution Management, Mcgraw Hill, 2013 Edition
- Richard R. Still, Edward W. Cundiff, Norman A.P. Govoni, Sales Management, Pearson Education, 5th Edition
- Krishna K. Havaldar, Vasant M. Cavale, Sales And Distribution Management Text & Cases, Mcgraw Hill Education, 2nd Edition, 2011
- Dr.Matin Khan, Sakes And Distribution Management, Excel Books, 1st Edition
- Kotler & Armstrong, Principles Of Marketing South Asian Perspective, Pearson Education, 13th Edition

Customer Relationship Management

- Baran Roger J. & Robert J. Galka (2014), Customer Relationship Management: The Foundation of Contemporary Marketing Strategy, Routledge Taylor & Francis Group.
- Anderrson Kristin and Carol Kerr (2002), Customer Relationship Management, Tata McGraw-Hill.
- Ed Peelen, Customer Relationship Management, Pearson Education
- Bhasin Jaspreet Kaur (2012), Customer Relationship Management, Dreamtech Press.
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- Valarie A Zeithmal, Mary Jo Bitner, Dwayne D Gremler and Ajay Pandit (2010), Services Marketing Integrating Customer Focus Across the Firm, Tata McGraw Hill.
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- Industrial Marketing by Hory, Sankar and Mukerjee by Excel Books (First Edition)
- Industrial Marketing: A Process of Creating and Maintaining Exchange by Krishnamacharyulu , Lalitha R, Publisher: Jaico Book House
- Industrial Marketing by Ghosh, Publisher: Oxford University Press
- Industrial Marketing by K. K. Havaldar, Publisher: Tata McGraw-Hill Publishing Company limited
- Industrial Marketing Management by Govindarajan, Publisher: Vikas Publishing House Pvt. Ltd.

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- Stress Management: An Integrated Approach to Therapy by Dorothy H.G. Cotton
- Stress Management by A. K. Rai
- Organizational Stress Management: A Strategic Approach By A. Weinberg, V. Sutherland, C. Cooper
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- Donald Waters, An Introduction to Supply Chain
- Martin Christopher, Logistics & Supply Chain Management Strategies for Reducing Cost & Improving Services
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- James L.Horton, Integrating Corporate Communication: The Cost Effective Use of Message & Medium
- Sandra Oliver, Handbook of Corporate Communication & Public Relations A Cross-Cultural Approach
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- Joseph Fernandez, Corporate Communications: A 21st Century Primer
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- Jaishri Jethwaney, Corporate Communication: Principles and Practice

Bachelor of Management Studies (BMS) Programme

Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2018-2019)

Semester VI

No. of Courses	Semester VI	Credits
1	Elective Courses (EC)	
1,2,3 & 4	**Any four courses from the following list of	12
	the courses	
2	Core Course (CC)	
5	Operation Research	04
3	Ability Enhancement Course (AEC)	
6	Project Work	04
	Total Credits	20

** List of group of Elective Courses(EC)for Semester VI (Any Four)		
	Group A: Finance Electives (Any four Courses)	
1	International Finance	
2	Innovative Financial Services	
3	Project Management	
4	Strategic Financial Management	
5	Financing Rural Development	
6	Indirect Taxes	
	Group B:Marketing Electives (Any four Courses)	
1	Brand Management	
2	Retail Management	
3	International Marketing	
4	Media Planning & Management	
5	Sports Marketing	
6	Marketing of Non Profit Organisation	
	Group C: Human Resource Electives (Any four Courses)	
1	HRM in Global Perspective	
2	Organisational Development	
3	HRM in Service Sector Management	
4	Workforce Diversity	
5	Human Resource Accounting & Audit	
6	Indian Ethos in Management	

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Elective Courses (EC) Group A: Finance Electives

1. International Finance

Modules at a Glance

SN	Modules	No. of Lectures
1	Fundamentals of International Finance	15
2	Foreign Exchange Markets, Exchange Rate Determination & Currency Derivatives	15
3	World Financial Markets & Institutions & Risks	15
4	Foreign Exchange Risk, Appraisal & Tax Management	15
	Total	60

Objectives

SN	Objectives
1	The objective of this course is to familiarize the student with the fundamental aspects of various issues associated with International Finance
2	The course aims to give a comprehensive overview of International Finance as a separate area in International Business
3	To introduce the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of International Finance in this Globalised Market

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SN		Modules/ Units
1	Fundamentals of International Finance	
	a)	Introduction to International Finance:
		• Meaning/ Importance of International Finance, Scope of International Finance, Globalization of the World Economy, Goals of International Finance, The Emerging Challenges in International Finance
	b)	Balance of Payment:
		• Introduction to Balance of Payment, Accounting Principles in Balance of Payment, Components of Balance of Payments, Balance of Payment Identity Indian Heritage in Business, Management, Production and Consumption.
	c)	International Monetary Systems:
		 Evolution of International Monetary System, Gold Standard System, Bretton Woods System, Flexible Exchange Rate Regimes – 1973 to Present, Current Exchange Rate Arrangements, European Monetary System, Fixed & Flexible Exchange Rate System
	d)	An introduction to Exchange Rates:
		 Foreign Bank Note Market, Spot Foreign Exchange Market
		Exchange Rate Quotations
		 Direct & Indirect Rates
		 Cross Currency Rates
		 Spread & Spread %
		Factors Affecting Exchange Rates
2	Fo	reign Exchange Markets, Exchange Rate Determination & Currency Derivatives
	a)	Foreign Exchange Markets:
		 Introduction to Foreign Exchange Markets, Structure of Foreign Exchange Markets, Types of Transactions & Settlement Date, Exchange Rate Quotations & Arbitrage, Forward Quotations (Annualized Forward Margin)
	b)	International Parity Relationships & Foreign Exchange Rate:
		• Interest Rate Parity, Purchasing Power Parity & Fishers Parity, Forecasting Exchange Rates (Efficient Market Approach, Fundamental Approach, Technical Approach, Performance of the Forecasters), Global Financial Markets & Interest Rates (Domestic & Offshore Markets, Money Market Instruments)
	c)	Currency & Interest Rate Futures:
		• Introduction to Currency Options (Option on Spot, Futures & Futures Style Options), Futures Contracts, Markets & the Trading Process, Hedging & Speculation with Interest Rate Futures, Currency Options in India

SN	Modules/ Units	
3	World Financial Markets & Institutions & Risks	
	a) Euro Currency Bond Markets:	
	 Introduction to Euro Currency Market, Origin of Euro Currency Market, Euro Bond Market (Deposit, Loan, Notes Market), Types of Euro Bonds, Innovation in the Euro Bond Markets, Competitive Advantages of Euro Banks, Control & Bogulation of Euro Bond Market 	
	Regulation of Euro Bond Market b) International Equity Markets & Investments:	
	Introduction to International Equity Market, International Equity Market	
	Benchmarks, Risk & Return from Foreign Equity Investments, Equity Financing in the International Markets, Depository Receipts – ADR,GDR,IDR	
	c) International Foreign Exchange Markets:	
	 Meaning of International Foreign Exchange Market, FERA v/s FEMA, Scope & Significance of Foreign Exchange Markets, Role of Forex Manager, FDI v/s FPI, Role of FEDAI in Foreign Exchange Market 	
	d) International Capital Budgeting:	
	 Meaning of Capital Budgeting, Capital Budgeting Decisions, Incremental Cash Flows, Cash Flows at Subsidiary and Parent Company, Repatriation of Profits, Capital Budgeting Techniques – NPV 	
4	Foreign Exchange Risk, Appraisal & Tax Management	
	 a) Foreign Exchange Risk Management: Introduction to Foreign Exchange Risk Management, Types of Risk, Trade & Exchange Risk, Portfolio Management in Foreign Assets, Arbitrage & Speculation 	
	b) International Tax Environment:	
	 Meaning of International Tax Environment, Objectives of Taxation, Types of Taxation, Benefits towards Parties doing Business Internationally, Tax Havens, Tax Liabilities 	
	c) International Project Appraisal:	
	 Meaning of Project Appraisal, Review of Net Present Value Approach (NPV), Option Approach to Project Appraisal, Project Appraisal in the International Context, Practice of Investment Appraisal 	

Elective Courses (EC) Group A: Finance Electives

2. Innovative Financial Services

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Traditional Financial Services	15
2	Issue Management and Securitization	15
3	Financial Services and its Mechanism	15
4	Consumer Finance and Credit Rating	15
	Total	60

SN	Objectives
1	To familiarize the learners with the fundamental aspects of various issues associated with various Financial Services
2	To give a comprehensive overview of emerging financial services in the light of globalization
3	To introduce the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of financial services

SN		Modules/ Units
1	Int	roduction to Traditional Financial Services
	a)	Financial Services:
		Concept, Objectives/Functions, Characteristics, Financial Service Market
		Financial Service Market Constituents, Growth of Financial Services in India
		Problems in Financial Services Sector, Banking and Non-Banking Companies
		Regulatory Framework
	b)	Factoring and Forfaiting:
		• Introduction, Types of Factoring, Theoretical Framework, Factoring Cost
		Advantages and Disadvantages of Factoring, Factoring in India, Factoring v/s
		Forfaiting, Working of Forfaiting, Benefits and Drawbacks of Forfaiting
	a	Practical Problems. Bill Discounting:
	c)	 Introduction, Framework, Bill Market Schemes, Factoring V/s Bill Discounting ir
		Receivable Management.
2	lcc	ue Management and Securitization
-		Issue Management and Intermediaries:
	~,	 Introduction, Merchant Bankers/ Lead Managers, Underwriters, Bankers to ar
		Issue, Brokers to an Issue
	b)	Stock Broking:
		• Introduction, Stock Brokers, SubBrokers, Foreign Brokers, Trading and
		Clearing/Self Clearing Members, Stock Trading (Cash and Normal) Derivative
		Trading
	c)	Securitization:
		• Definition, Securitization v/s Factoring, Features of Securitization, Pass Through
		Certificates, Securitization Mechanism, Special Purpose Vehicle, Securitisable
		Assets, Benefits of Securitization, New Guidelines on Securitization
3	Fir	ancial Services and its Mechanism
	a)	Lease and Hire-Purchase:
		• Meaning, Types of Lease - Finance Lease, Operating Lease, Advantages and
		Disadvantages of Leasing, Leasing in India, Legal Aspects of Leasing.
		Definition of Hire Purchase, Hire Purchase and Installment Sale Characteristics
		Hire Purchase and Leasing, Advantages of Hire Purchase, Problems of Hire
	ы	Purchase. Housing Finance:
	5,	 Introduction, Housing Finance Industry, Housing Finance Policy Aspect, Sources
		OF FUNDS, MARKEL OF HOUSINE FINANCE. HOUSINE FINANCE IN INDIA- MAIOR ISSUES
		of Funds, Market of Housing Finance, Housing Finance in India- Major Issues Housing Finance in India – Growth Factors, Housing Finance Institutions in
		Housing Finance in India – Growth Factors, Housing Finance In India- Major Issues India, National Housing Bank (NHB), Guidelines for Asset Liability Management

SN	Modules/ Units
	c) Venture Capital:
	Introduction, Features of Venture Capital, Types of Venture Capital Financing Stages,
	Disinvestment mechanisms, Venture Capital Investment process, Indian Scenario
4	Consumer Finance and Credit Rating
	a) Consumer Finance:
	• Introduction, Sources, Types of Products, Consumer Finance Practice in India,
	Mechanics of Consumer Finance, Terms, Pricing, Marketing and Insurance of
	Consumer Finance, Consumer Credit Scoring, Case for and against Consumer
	Finance
	b) Plastic Money:
	• Growth of Plastic Money Services in India, Types of Plastic Cards- Credit card-
	Debit Card- Smart card- Add-on Cards, Performance of Credit Cards and Debit
	Cards, Benefits of Credit Cards, Dangers of Debit Cards, Prevention of Frauds
	and Misuse, Consumer Protection. Indian Scenario.
	Smart Cards- Features, Types, Security Features and Financial Applications
	c) Credit Rating:
	Meaning, Origin, Features, Advantages of Rating, Regulatory Framework, Credit
	Rating Agencies, Credit Rating Process, Credit Rating Symbols. Credit Rating
	Agencies in India, Limitations of Rating

Elective Courses (EC) Group A: Finance Electives

3. Project Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Project Management & Project Initiation	15
2	Analyzing Project Feasibility	15
3	Budgeting, Cost & Risk Estimation in Project Management	15
4	New Dimensions in Project Management	15
	Total	60

SN	Objectives
1	The objective of this course is to familiarize the learners with the fundamental aspects of various issues associated with Project Management
2	To give a comprehensive overview of Project Management as a separate area of Management
3	To introduce the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of Project Management

SN		Modules/ Units
1	Introduction to Project Management & Project Initiation	
	a)	 Introduction to Project Management: Meaning/Definition of Project & Project Management, Classification of Projects, Why Project Management, Characteristics/Importance of Project Management, Need for Project Management (Objectives), History of Project Management
	b)	 Organizational Structure (Project Organization): Meaning/Definition of Organizational Structure, Organizational Work Flow, Developing Work Integration Positions, Types of Organizational Structure, Forms of Organization, Strategic Business Units (SBU) in Project Management.
	c)	 Project Initiation: Project Selection-Meaning of Project Selection, Importance of Project Selection, Criteria for Project Selection (Models), Types of Project Selection, Understanding Risk & Uncertainty in Project Selection Project Manager-Meaning of Project Manager, Role of Project Manager, Importance of Project Manager, Role of Consultants in Project Management, Selecting Criteria for Project Manager Project Planning-Importance of Project Planning, Functions of Project Planning, System Integration, Project Management Life Cycle, Conflicts & Negotiation Handling in Project Management, Planning Cycle & Master Production Scheduling
2	An	nalyzing Project Feasibility
	a)	 Project Feasibility Analysis: Meaning/Definition of Project Feasibility, Importance of Project Feasibility, Scope of Project Feasibility Types of Project Feasibility- Market Feasibility, Technical Feasibility, Financial Feasibility, Economic Viability, Operational Feasibility SWOT Applying (Environment Import Applying)
	b)	 SWOT Analysis (Environment Impact Assessment, Social Cost Benefit Analysis) Market Analysis: Meaning of Market Analysis, Demand Forecasting, Product Mix Analysis, Customer Demainment Analysis
	c)	 Customer Requirement Analysis Technical Analysis: Meaning of Technical Analysis, Use of Various Informational Tools for Analyzing, Advancement in the Era of E- Commerce in Project Management
	d)	 Operational Analysis: Meaning of Operation Management, Importance of Operation Management, Operation Strategy - Levels of Decisions, Production Planning & Control, Material Management - Work Study & Method Study, Lean Operations

SN	Modules/ Units
3	Budgeting, Cost & Risk Estimation in Project Management
	 a) Funds Estimation in Project: Means of Financing, Types of Financing, Sources of Finance, Government Assistance towards Project Management for Start ups, Cost Control (Operating Cycle, Budgets & Allocations), Determining Financial Needs for Projects, Impact of Leveraging on Cost of Finance
	 b) Risk Management in Projects: What is Risk, Types of Risk in Projects, Risk Management Process, Risk Analysis & Identification, Impact of Risk Handling Measures, Work break Down Structure, New Venture Valuation (Asset Based, Earnings Based, Discounted Cash flow Models) c) Cost Benefit Analysis in Projects Introduction to Cost Benefit Analysis, Efficient Investment Analysis, Cash - Flow Projections, Financial Criteria for Capital Allocation, Strategic Investment Decisions
4	New Dimensions in Project Management
	 a) Modern Development in Project Management: Introduction to Modern Development in Project Management, Project Management Maturity Model (PMMM), Continuous Improvement, Developing Effective Procedural Documentation, Capacity Planning b) Project Monitoring & Controlling: Introduction to Project Monitoring & Controlling, The Planning – Monitoring-Controlling Cycle, Computerized Project Management Information System (PMIS), Balance in Control System in Project Management, Project Auditing – Life Cycle
	 c) Project Termination & Solving Project Management Problems: Meaning of Project Termination, Reasons for Termination of Projects, Process for Terminating Projects, Strategy/ Ways to Solve Project Management Problems, Project Review & Administrative Aspects, Execution Tools for Closing of Projects

Elective Courses (EC) Group A: Finance Electives

4. Strategic Financial Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Dividend Decision and XBRL	15
2	Capital Budgeting and Capital Rationing	15
3	Shareholder Value and Corporate Governance/ Corporate Restructuring	15
4	Financial Management in Banking Sector and Working Capital Financing	15
	Total	60

SN	Objectives
1	To match the needs of current market scenario and upgrade the learner's
1	skills and knowledge for long term sustainability
	Changing scenario in Banking Sector and the inclination of learners towards
2	choosing banking as a career option has made study of financial management
	in banking sector inevitable
2	To acquaint learners with contemporary issues related to financial
3	management

SN	Modules/ Units	
1	Dividend Decision and XBRL	
	 a) Dividend Decision: Meaning and Forms of Dividend, Dividend-Modigliani and Miller's Approach, Walter Model, Gordon Model, Factors determining Dividend Policy, Types of Dividend Policy b) XBRL: Introduction, Advantages and Disadvantages, Features and Users 	
2	Capital Budgeting and Capital Rationing	
	 a) Capital Budgeting: Risk and Uncertainty in Capital Budgeting, Risk Adjusted Cut off Rate, Certainty Equivalent Method, Sensitivity Technique, Probability Technique, Standard Deviation Method, Co-efficient of Variation Method, Decision Tree Analysis, Construction of Decision Tree. b) Capital Rationing: Meaning, Advantages, Disadvantages, Practical Problems 	
3	Shareholder Value and Corporate Governance/Corporate Restructuring	
	 a) Shareholder Value and Corporate Governance: Financial Goals and Strategy, Shareholder Value Creation: EVA and MVA Approach, Theories of Corporate Governance, Practices of Corporate Governance in India b) Corporate Restructuring: Meaning, Types, Limitations of Merger, Amalgamation, Acquisition, Takeover, Determination of Firm's Value, Effect of Merger on EPS and MPS, Pre Merger 	
	and Post Merger Impact.	
4	Financial Management in Banking Sector and Working Capital Financing	
	 a) Financial Management in Banking Sector: An Introduction, Classification of Investments, NPA & their Provisioning, Classes of Advances, Capital Adequacy Norms, Rebate on Bill Discounting, Treatment of Interest on Advances b) Working Capital Financing: Maximum Permissible Bank Finance (Tandon Committee), Cost of issuing Commercial Paper and Trade Credit Matching Approach Aggressive 	
	Commercial Paper and Trade Credit, Matching Approach, Aggressive Approach, Conservative Approach	

Elective Courses (EC) Group A: Finance Electives

5. Financing Rural Development

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Rural Banking	10
2	MSME Finance 10	15
3		10
4		15
5	Risk Management in Rural Finance	10
Total		60

SN	Objectives
01	To acquaint the learners with the concept of rural banking
02	To give an overview of micro finance and MSME finance
03	To study the provisions of final accounts of the Banking Companies
04	To understand risk management in rural finance

Sr. No.	Modules / Units
1	Rural Banking
	Rural India – Demographic Features, Characteristics of Rural Society, Economic Features Infrastructure in Rural Areas, Agriculture Economy, Rural Issues and Rural Developmen Policies, Sources and Pattern of agriculture in India, Trends in Agricultural Finance. Institutional Framework – Regulation of Rural Financial Services, Rural Credit Institutions Financing Agriculture/ Allied Activities, Financing Rural Non Farm Sector, Priority Secto Lending, Rural Housing and Education Loans. Rural Banking – Financial Needs of the Poor, Role of Rural Banking, Transaction Costs, Risl Costs, Financing Poor as Bankable Opportunities Micro Credit and Self Help Groups.
2	Micro Finance
	 Introduction – Emergence of Microfinance, Definition, Meaning and Scope, Importance and Assumptions. Lessons from International Experience. Models – Models of Microfinance across the world, Portfolio Securitization, SHG-2, Nationa Rural Livelihood Mission, Impact of Microfinance, Impact Assessment and Monitoring Microfinance and Poverty Assessment Tools. Financial Products and Services – Objectives, Introduction, The role of MFI – Minimalist V/ Integrated, Financial services/ products, Non – Financial Services, Designing Microfinance Models, Liquidity Management, The Revenue Model of an MFI, Cost, Volume and Profit Analysis, Measuring Operating Efficiency and Productivity in MFI's, Factors affecting Operating Expenses, Operating Efficiency.
3	MSME Finance
	Institutional Framework – Central Government, NIMSME, Indian Institute of Entrepreneurship Guwahati, NIESBUD, NSIC, Organizations under the control of State Government, SIDBI CGTMSE, SMERA, SSI Association in India, Changing Role of MSME Associations, Policy Orientation & Resource Allocation. Financing Options & Modes – Financing MSME, Why lend to MSME Sector, Debt Finance Equity Finance, Options for Financing MSME's, Financial Products and their Access, Existing MSME Loan Products and their Nature, Common Guidelines for lending to MSME Sector Factoring, Credit Process, Credit Assessment, Costs and Risks specific to MSME Lending, Risk Rating, Monitoring and Review of Lending.
4	Final Accounts of the Banking Companies
	Legal Provision in Banking Regulation Act, 1949 relating to Accounts. Statutory reserves including Cash Reserve and Statutory Liquidity Ratio. Bill purchase and discounted, Rebate of Bill Discounted. Final Accounts in prescribed form Non – performing assets and Income from non – performing assets, Classification of Advances standard, sub – standard, doubtful and provisioning requirement.
5	Risk Management in Rural Finance
	An Introduction –Objectives, Introduction, Types of risks for MFI's, Risk Managemen Framework for MFI's Indicators of Credit Risk, Portfolio at Risk (PAR), Causes of high Credi Risk, Impact of Delinquencies, Managing Credit Risk, Transaction Risk, Process, System & Technology, Relationship and Portfolio Risk. Cash Planning and Co-ordination between Operation Manager and Finance Manager. Compliance to State Acts, Revised Guidelines on Priority Sector, Compliance to RBI Guidelines on NBFC – MFI's, Self Regulation.

Elective Courses (EC) Group A: Finance Electives

6.Indirect Taxes

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Indirect Taxation and GST	10
2	Concept of Supply	20
3	Registration and Computation of GST	20
4	Filing of Returns	10
	Total	60

SN	Objectives
01	To understand the basics of GST
02	To study the registration and computation of GST
03	To acquaint the students with filing of returns in GST

Sr. No.		Modules / Units
1	Int	roduction to Indirect Taxation and GST
		Basics for Taxation - Direct Taxes and Indirect Taxes – Difference, Advantages and
		Disadvantages, Sources and Authority of Taxes in India (Art 246 of the Indian Constitution)
	в.	Introduction to GST – Genesis of GST in India, Power to tax GST (Constitutional
		Provisions), Extent and Commencement, Meaning and Definition of GST, Benefits of GST,
		Conceptual Framework – CGST, IGST,SGST,UTGST, Imports of goods or services or both,
		Export of goods or services or both, Taxes subsumed and not subsumed under GST.
	с.	Definitions – Goods (2(52) of CGST Act), Services (2(102) of CGST Act), Money (2(75) of
		CGST Act), Securities (2(101) of SCRA Act,1956), India(2(56) of CGST Act), Persons (2(84)
		of CGST Act), Taxable Person (2(107) of CGST Act), Business (2(17) of CGST Act),
		Consideration(2(31) of CGST Act), E- Commerce Operator (2(45) of CGST Act),
		Supplier(2(105) of CGST Act),Recipient(2(93) of CGST Act)
	D.	Levy and Collection of GST – Levy and Collection of CGST, IGST, SGST,UTGST (Sec 9 of
		CGST Act), Composition Scheme under GST (Sec 10 of CGST Act), Power to Grant
		Exemption (Sec 11 of CGST Act)GST Rate Schedule for Goods and Services.
2		ncept of Supply
	Α.	Taxable Event Supply– Meaning and Scope of Supply (Section 7 Subsection 1, 2 and 3 of
		Act) Schedule I, Schedule II, Schedule III, Composite and Mixed Supplies (Sec 8 of CGST
		Act)
	В.	Place of Supply – Location of Supplier of Goods and Services, Place of Supply of Goods
		(Sec 10, 11,12 and 13 of IGST Act), Special Provision for Payment of Tax by a Supplier of
	_	Online Information Database Access Retrieval.
	С.	Time of Supply- Time of Supply (Sec 31 of CGST Act), Issue of Invoice by the Supplier (Sec
		31 (1) and Sec 31(2) of CGST Act), Continuous Supply of Goods and Services, Goods Sent on
	_	Approval (Sec 31(7) of CGST Act)
	D.	Value of Supply – Determination of Value of Supply (Sec 15 of CGST Act and CGST Rules
		2017), Input Tax Credit (Sec 2(62) of CGST Act) Capital Goods (Sec 2(19) of CGST Act), Input
		Sec 2(59) of CGST Act), Input Service (Sec 2(60) of CGST Act). Eligibility and Conditions for
-	D -	taking Input Tax Credit (Sec 16 of CGST Act)
3		gistration and Computation of GST Registration – Persons liable for Registration (Sec 22 of the Act), Persons not liable for
	Α.	Registration, Procedure for Registration (Sec 25 of the Act), Deemed Registration(Sec 26 of
		the Act), Special Provisions (Sec 27 of the Act), Amendment, Cancellation and Revocation
		of Registration (Sec 28, Sec 29 and Sec 31 of the Act)
	В.	Computation of GST – Computation of GST under Inter State and Intra State Supplies.
		Payment of Tax - Payment of Tax, Interest and other Amounts(Sec 49 of the Act), Interest
		on delayed Payment (Sec 50 of the Act), TDS (Sec 51 of the Act), TCS (Sec 52 of the Act)
4	Fili	ing of Returns
		Documentation- Tax Invoices (Sec 31 and 32 of the Act), Credit and Debit notes(Sec 34 of
		the Act), Electronic Way Bill
	в.	Returns – Types of Returns and Provisions relating to filing of Returns (Sec 37 to Sec 48 of
		the Act)
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Elective Courses (EC) Group B: Marketing Electives

1. Brand Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Brand Management	15
2	Planning and Implementing Brand Marketing Programs	15
3	Measuring and Interpreting Brand Performance	15
4	Growing and Sustaining Brand Equity	15
	Total	60

SN	Objectives
1	To understand the meaning and significance of Brand Management
2	To Know how to build, sustain and grow brands
3	To know the various sources of brand equity

SN	Modules/ Units			
1	Introduction to Brand Management			
	a) Introduction to Brand Management:			
	 Meaning of Brand, Branding, Brand Management, Importance of Branding to Consumers, Firms, Brands v/s Products, Scope of Branding, Branding Challenges and Opportunities, Strategic Brand Management Process, Customer Based Brand Equity model (CBBE), Sources of Brand Equity, Steps of Brand Building including Brand Building Blocks, Brand Positioning: Meaning, Importance, Basis 			
2	Planning and Implementing Brand Marketing Programs			
	a) Planning and Implementing Brand Marketing Programs:			
	• Brand Elements: Meaning, Criteria for choosing Brand Elements, Types of Brand Elements			
	 Integrating Marketing Programs and Activities 			
	 Personalising Marketing: Experiential Marketing, One to One Marketing Permission Marketing 			
	 Product Strategy: Perceived Quality and Relationship Marketing 			
	 Pricing Strategy: Setting Prices to Build Brand Equity 			
	 Channel Strategy: Direct, Indirect Channels 			
	 Promotion Strategy: Developing Integrated Marketing Communication Programs 			
	• Leveraging Secondary Brand Associations to Build Brand Equity: Companies, Countries, Channel of Distribution, Co-branding, Characters, Events.			
3	Measuring and Interpreting Brand Performance			
	a) The Brand Value Chain			
	b) Measuring Sources of Brand Equity:			
	Qualitative Research Techniques: Projective Techniques: Completion,			
	Comparison, Brand Personality and Values: The Big Five, Free Association			
	Quantitative Research Techniques: Brand Awareness: Recognition, Recall,			
	Brand Image, Brand Responses			
	c) Young and Rubicam's Brand Asset Valuator			
	d) Measuring Outcomes of Brand Equity			
	Comparative Methods: Brand based Comparative Approaches, Marketing			
	Based Comparative Approaches, Conjoint Analysis			
	 Holistic Methods: Residual Approaches, Valuation Approaches: Historical Perspectives and Interbrand's Brand Valuation Methodology 			

1 0	Growing and Sustaining Brand Equity		
а	a) Designing & Implementing Branding Strategies:		
	• Brand Architecture: Meaning of Brand Architecture, The Brand-Product Matri,		
	Breadth of a Branding Strategy, Depth of a Branding Strategy		
Brand Hierarchy: Meaning of Brand Hierarchy, Building Equity a			
	Hierarchy Levels		
	• Cause Marketing to Build Brand Equity: Meaning of Cause Marketing,		
	Advantages, Green Marketing		
b) Brand Extensions:		
	 Meaning, Advantages, Disadvantages, Brand Extension and Brand Equity 		
С	Managing Brands over Time:		
	 Reinforcing Brands, Revatilising Brands 		
d) Building Global Customer Based Brand Equity		

Elective Courses (EC) Group B: Marketing Electives

2. Retail Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Retail Management- An overview	15
2	Retail Consumer and Retail Strategy	15
3	Merchandise Management and Pricing	15
4	Managing and Sustaining Retail	15
	Total	60

SN	Objectives
1	To familiarize the students with retail management concepts and operations
2	To provide understanding of retail management and types of retailers
3	To develop an understanding of retail management terminology including merchandize management, store management and retail strategy.
4	To acquaint the students with legal and ethical aspects of retail management
5	To create awareness about emerging trends in retail management

SN	Modules/ Units			
1	Retail Management- An overview			
	 a) Retail Management: Introduction and Meaning, Significance, Factors Influencing Retail Management, Scope of Retail Management b) Retail Formates 			
	 b) Retail Formats: Concept of Organized Retailing: Factors Responsible for the Growth of Organized Retail in India, Multichannel Retailing: Meaning and Types, E-tailing: Meaning, Advantages and Limitations 			
	c) Emerging Trends in Retailing			
	 Impact of Globalization on Retailing 			
	 I.T in Retail: Importance, Advantages and Limitations, Applications of I.T. in Retail: EDI, Bar Coding, RFID Tags, Electronic Surveillance, Electronic Shelf Labels 			
	FDI in Retailing: Meaning, Need for FDI in Indian Retail Scenario			
	Franchising: Meaning, Types, Advantages and Limitations, Franchising in India			
	Green Retailing			
	Airport Retailing			
2	Retail Consumer and Retail Strategy			
	a) Retail Consumer/Shopper:			
	 Meaning of Retail Shopper, Factors Influencing Retail Shoppers, Changing Profile of Retail Shoppers, Market Research as a Tool for Understanding Retail Markets and Shoppers 			
	Markets and Shoppers b) CRM in Retail:			
	Meaning, Objectives			
	 Customer Retention Approaches: Frequent Shopper Programme, Special 			
	Customer Services, Personalization, Community			
	c) Retail Strategy:			
	 Meaning, Steps in Developing Retail Strategy, Retail Value Chain 			
	d) Store Location Selection:			
	 Meaning, Types of Retail Locations, Factors Influencing Store Location 			
	e) HRM in Retail:			
	 Meaning, Significance, Functions 			
	Organization Structure in Retail: Meaning, Factors Influencing Designing Organization Structure, Organization Structure for Small Stores/Single Stores/Independent Retailers and Retail Store Chain/Department Store			

SN		Modules/ Units	
3	Me	erchandise Management and Pricing	
	a)	Merchandise Management	
		• Concept, Types of Merchandise, Principles of Merchandising, Merchandise	
	Planning- Meaning and Process, Merchandise Category – Meaning, Importance, Components, Role of Category Captain, Merchandise Procurement/Sourcing- Meaning, Process, Sources for Merchandise		
	b)	Buying Function:	
		 Meaning, Buying Cycle, Factors Affecting Buying Functions, Functions of Buying 	
		for Different Types of Organizations Young and Rubicam's Brand Asset	
		Valuator- Independent Store, Retail Chain, Non-store Retailer	
	c)	Concept of Lifestyle Merchandising	
	d)	Private Label	
		 Meaning, Need and Importance, Private Labels in India 	
	e)	Retail Pricing	
		 Meaning, Considerations in Setting Retail Pricing 	
	Pricing Strategies:		
	High/ Low Pricing: Meaning, Benefits, Everyday Low Pricing: Meaning, Benefit Market Skimming, Market Penetration, Leader Pricing, Odd Pricing, Sing Pricing, Multiple Pricing, Anchor Pricing		
		 Variable Pricing and Price Discrimination- Meaning 	
		Types:	
		 Individualized Variable Pricing/First Degree Price 	
	 Self-Selected Variable Pricing/ Second Degree Price Discrimination Clearance and Promotional Markdowns, Coupons, Price Bundling, Multiple Unit Pricing 		
		 Variable Pricing by Market Segment/ Third Degree Price Discrimination 	
4	Ma	anaging and Sustaining Retail	
	a)	Retail Store Operations:	
		• Meaning, Responsibilities of Store Manager, The 5 S's of Retail Operations	
		(Systems, Standards, Stock, Space, Staff)	
	b)	Store Design and Layout:	
		 Store Design- Meaning, Objectives, Principles, Elements of Exterior and Interior Store Design, Store Atmospherics and Aesthetics 	
		• Store Layout- Meaning, Types: Grid, Racetrack, Free Form	
		• Signage and Graphics: Meaning, Significance, Concept of Digital Signage	
		 Feature Areas: Meaning, Types: Windows, Entrances, Freestanding Displays, End Caps, Promotional Aisles, Walls, Dressing Rooms, Cash Wraps 	

SN		Modules/ Units		
	c)	Visual Merchandising and Display:		
		• Visual Merchandising- Meaning, Significance, Tools Used for Visual		
		Merchandising		
		The Concept of Planogram		
	 Display- Meaning, Methods of Display, Errors in Creating Display 			
	d)	Mall Management		
		• Meaning and Components: Positioning, Zoning, Promotion and Marketing,		
		Facility Management, Finance Management		
	e)	Legal and Ethical Aspects of Retailing		
		 Licenses/Permissions Required to Start Retail Store in India 		
		Ethical Issues in Retailing		
	Ca	reer Options in Retailing		

Elective Courses (EC) Group B: Marketing Electives

3. International Marketing

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to International Marketing & Trade	15
2	International Marketing Environment and Marketing Research	15
3	International Marketing Mix	15
4	Developments in International Marketing	15
	Total	60

SN	Objectives
1	To understand International Marketing, its Advantages and Challenges.
2	To provide an insight on the dynamics of International Marketing Environment.
3	To understand the relevance of International Marketing Mix decisions and recent developments in Global Market

SN		Modules/ Units		
1	Int	troduction to International Marketing & Trade		
	a)	Introduction of International Marketing:		
		• Meaning, Features of International Marketing, Need and Drivers of		
		International Marketing, Process of International Marketing, Phases or		
	International Marketing, Benefits of International Marketing, Challenges of International Marketing, Difference between Domestic and International Marketing, Different Orientations of International Marketing : EPRG			
		Framework, Entering International Markets :Exporting, Licensing, Franchising		
		Mergers and Acquisition, Joint Ventures, Strategic Alliance, Wholly Owned		
		Subsidiaries, Contract Manufacturing and Turnkey Projects, Concept of		
		Globalization		
	b)	Introduction to International Trade:		
		Concept of International Trade, Barriers to Trade: Tariff and Non Tariff, Trading		
-	_	Blocs : SAARC, ASEAN, NAFTA, EU, OPEC		
2		ternational Marketing Environment and Marketing Research		
	a)	International Marketing Environment:		
		• Economic Environment : International Economic Institution (World Bank, IMF		
		IFC) ,International Economic Integration (Free Trade Agreement, Customs		
		Union, Common Market, Economic Union)		
		Political and Legal Environment: Political System (Democracy, Authoritarianism Communication) - Political Picks - Political Instability - Political Instability		
		Communism), Political Risk, Political Instability, Political Intervention. Lega		
		Systems (Common Law, Civil Law, Theocratic Law), Legal Differences, Ant Dumping Law and Import License.		
		 Cultural Environment : Concept , Elements of Culture (Language, Religion) 		
		Values and Attitude , Manners and Customs, Aesthetics and Education)		
	HOFSTEDE's Six Dimension of Culture , Cultural Values (Individualism v/s			
		Collectivism)		
	b)	Marketing Research:		
		• Introduction, Need for Conducting International Marketing Research		
		International Marketing Research Process, Scope of International Marketing		
		Research, IT in Marketing Research		
3	International Marketing Mix			
	a)	International Product Decision		
		• International Product Line Decisions, Product Standardization v/s Adaptation		
		Argument, International Product Life Cycle, Role of Packaging and Labelling ir		
		International Markets, Branding Decisions in International Markets		
	International Market Segmentation and Targeting, International Product			
	1	Positioning		

SN	Modules/ Units		
b)	International Pricing Decision:		
	Concept of International Pricing, Objectives of International Pricing, Factor		
	Affecting International Pricing		
	International Pricing Methods: Cost Based, Demand Based, Competition		
	Value Pricing, Target Return Pricing and Going Rate Pricing		
	• International Pricing Strategies : Skimming Pricing, Penetration Pricing		
	Predatory Pricing		
	• International Pricing Issues : Gray Market , Counter Trade, Dumping, Transfe		
	Pricing		
c)	International Distribution Decisions		
	Concept of International Distribution Channels, Types of International		
	Distribution Channels, Factors Influencing Selection of Internationa		
	Distribution Channel		
d)	International Promotion Decisions		
	 Concept of International Promotion Decision 		
	Planning International Promotional Campaigns: Steps - Determine the Targe		
	Audience, Determine Specific Campaigns, Determine Budget, Determin		
	Message, Determine Campaign Approach and Determine Campaig		
	Effectiveness		
	 Standardization V/S Adaptation of International Promotional Strategies 		
	International Promotional Tools/Elements		
4 D	evelopments in International Marketing		
a)	Introduction -Developing International Marketing Plan:		
	Preparing International Marketing Plan, Examining International Organisation		
	Design, Controlling International Marketing Operations, Devising Internationa		
	Marketing Plan		
b)	International strategies:		
	 Need for International Strategies, Types of International Strategies 		
c)	International Marketing of Services		
	Concept of International Service Marketing, Features of International Service		
	Marketing, Need of International Service Marketing, Drivers of Global Servic		
	Marketing, Advantages and Disadvantages of Global Service Marketing, Service		
	Culture		

Elective Courses (EC) Group B: Marketing Electives

4. Media Planning and Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Overview of Media and Media Planning	15
2	Media Mix & Media Strategy	15
3	Media Budgeting, Buying & Scheduling	15
4	Media Measurement, Evaluation	15
	Total	60

SN	Objectives
1	To understand Media Planning, Strategy and Management with reference to current business scenario.
2	To know the basic characteristics of all media to ensure most effective use of advertising budget.
3	To provide an insight on Media Planning, Budgeting, Scheduling and Evaluating the Different Media Buys.

SN		Modules/ Units		
1	Overview of Media and Media Planning			
	a)			
		 Meaning of Media & Features of Media, Meaning of Media Planning, Scope of Media planning, Media Planning Elements, Role of Media in Business, Media Planning Process, Impact of Marketing Objectives on Media Planning, Factors Influencing Media Planning Decisions, Role and Importance of Media in Consumer Buying Decision, Role of Media Planner, Challenges of Media Planning, Organization Structure of Media Company, Regulatory Framework and Legal Aspects in Media Planning 		
	(a	Media Research:		
		 Meaning, Role and Importance Sources of Media Research : Audit Bureau of Circulation, Press Audits, National Readership Survey/IRS, Businessmen's Readership Survey, TRP, National Television Study, ADMAR Satellite Cable Network Study, Reach and Coverage Study, CIB Listenership Survey 		
2	M	edia Mix and Media Strategy		
	a)	Media Mix:		
	b)	 Meaning, Need for Media Mix, Identifying Audience for Mass Media , Factors Affecting Media Mix Decision, Types of Media Mix Decisions: Broad Media Classes, Media Vehicles, Media Units, Deciding Ideal Media Mix Media Choices: 		
	~,	• Print Meaning- Factors Affecting Selection of Print Media Decisions , Types of Print Media, Advantages and Limitations		
		• Television - Meaning, Factors Affecting Selection of Television Media Decisions, Advantages and Limitations		
		• Radio- Meaning, Factors Affecting Selection of Radio Media Decision, Advantages and Limitations		
		• Out of Home (OOH)- Meaning, Types of OOH, Factors Affecting OOH Planning Decision, Advantages and Limitations		
	c)	Emerging Media:		
		 Online, Mobile, Gaming, In flight, In Store, Interactive Media 		
	d)	Media Strategy:		
		• Meaning, Need for Media Strategy, Situation Analysis for Media Strategy and its Components		
		• Steps in Formulating Media Strategies: Defining the Target Group, Market Prioritization, Media Weights, Media Mix, Media Scheduling.		

SN	Modules/ Units
3	Media Budgeting, Buying & Scheduling
	 a) Media Budget Meaning Factors to be considered while Framing a Budget: Advertising Task, Competitive Framework, Market Dominance, Market Coverage, Media Cost, Market Task, Pricing ,Frequency of Purchase Importance of Media Budget. Methods of Setting Media Budget - Status Quo, Inflation Adjusted, Advertising Sales, Case Rate & Advertising Margin Method, Share of Market, Yardstick Method, Effective Frequency & Peach Method & Margin Analysis POL Paced
	 Method, Effective Frequency & Reach Method & Margin Analysis ROI Based Approach, Experimental Approach, Break Even Planning. b) Media Buying: Meaning, Role of Media Buyer, Objectives of Media Buying, Buying Process: Buying Brief, Environmental Analysis, Science and Art of Buying, Benchmarking Buying Plan Presentation Deal Management and Post Buy Buying brief: Concept & Elements of Buying Brief, Art of Media Buying – Negotiation in Media Buying, Plan Presentation and Client Feedback
	 Criteria in Media Buying Media Scheduling Meaning, Importance Factors Affecting Scheduling: Sales Pattern, Purchase Cycle, Product Availability, Competitive Activity, Marketing Task, Budget Constraints, Target Group. Scheduling Patterns – Continuity, Flighting, Pulsing Scheduling Strategies for Creating Impact: Road Block , Day or Day part Emphasis, Multiple Spotting, Teasers

SN		Modules/ Units
4	Developments in International Marketing	
	a)	Media Measurement:
		• Basic Metrics: Reach, Cumulative/Frequency Reach, Discrete & Cumulative
		distribution, Average Opportunity to See (AOTS), Effective frequency/Reach
		• Television Metrics: Dairy v/s Peoplemeter, TRP, /TVR, Program Reach & Time
		Spent, Stickiness Index, Ad Viewership
		Radio Metrics: Arbitron Radio Rating
		• Print Metrics: Circulation, Average Issue Readership (AIR), Total or Claimed
		Reader, Sole or Solus reader.
		OOH Metrics: Traffic Audit Bureau (TAB)
	b)	Benchmarking Metrics:
		 Share, Profile, and Selectivity Index
	c)	Plan Metrics:
		 Gross Rating Points (GRP), Gross Impressions (GI), Share of Voice (SOV).
	d)	Evaluating Media Buys
		• Evaluating Television Media Buying: Dysfunctional Card Rate, Secondary and
		Effective Rate, Deal Composition, Cost Per Rating Point(CPRP), Reach Delivered
		by the Buy, Visibility Spots, Bonus Percentage, Upgrades and Spot Fixing,
		Sponsorships
		• Evaluating Print Media Buying: Discount on Rate Card, Negotiated Rate, Cost
		Per Thousand (CPT), Market Share Incentives, Readership v/s Circulation Track,
		Growth Incentives, Combination Rate Incentives, Full Page Discounts and Size
		Upgrades, Discount for Colour Ads, Date Flexibility Incentives, Positioning,
		Innovations.
		• Evaluating Other Media Buys: Radio Buys, Outdoor Buys, Cinema Buys,
		Internet Buys, and Mobile Buys

Elective Courses (EC) Group B: Marketing Electives

5. Sports Marketing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Sports Marketing: Introduction, Environment & Research	15
2	The Sports Product, Pricing Strategies & Sponsorship	15
3	Promotion & Distribution Strategies in Sports Marketing	15
4	Legal aspects & Marketing of Major Sport Events	15
	Total	

SN	Objectives
01	To equip the learner with an understanding of the business of sports marketing
02	To help the learner understand environmental factors influencing sports marketing
03	To help the learner understand components of marketing mix in the context of sports marketing
04	To understand legal aspects in sports marketing & franchising agreements

Sr. No.	Modules / Units
1	Sports Marketing: Introduction, Environment & Research
	Introduction to sports marketing: Sports marketing definition & characteristics, marketing myopia in sports, distinctive features of sports marketing, Model of sports Industry, Implementation of sports marketing programme Environment & Research in Sports Marketing: Environmental factors, individual factors, decision making for sports involvement, role of research in sports marketing: types of primary market research, common problems in sports marketing research
2	The sports Product, Pricing Strategies & Sponsorship
	The sports products: Core & extensions, key issues in sports products strategy, managing sports brands, brand equity: benefits & development, Sales: Definition, sales approaches used in sports, selling sports to the community Pricing strategies: The basics of pricing, core issues, factors affecting pricing Sponsorship: Definition, growth of sponsorship, evaluating and ensuring sponsorship effectiveness, selling the sponsorship, ethical issues in selling the sponsorships
3	Promotion & Distribution Strategies in Sports Marketing
	Promotional strategies: Promotional concepts & practice, components of promotion mix for sports marketing: Sales promotion, sponsorship, public relation, digital marketing & advertising. Media options in sports marketing, Distribution strategies: Placing core products & their extensions, the facility: marketing channels, the product-place matrix
4	Legal Aspects & Marketing of major Sport Events
	Cross impact among the 5Ps of sports marketing mix Legal aspects of sports marketing: Endorsement agreement, Player agreement, Franchise agreement & Sponsorship agreement Marketing of major sport events: Olympic Games, Commonwealth Games, ICC Cricket World Cup, Indian Premier League, FIFA Football World Cup, Wimbledon tennis tournament

Elective Courses (EC) Group B: Marketing Electives

6. Marketing of Non-Profit Organisation

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Introduction to Non-profit Organization	15
2	Segmenting Targeting Positioning, Product mix & Pricing mix in Non-profit organizations	15
3	Promotion mix, Place mix of non-profit organizations & advocacy of non-profit organizations	15
4	Corporate Social Responsibility, innovations & Ethics in non- profit organizations	15
Total		60

SN	Objectives
01	This course introduces students to the challenges of marketing in the non-profit sector.
02	To understand the role and application of marketing to promote social change and to achieve social goals for non-profits organizations including social and cause related marketing, fundraising
03	To apply marketing in a diverse range of non-profit environments including charities, social programs and ideas, health, education, arts, as well as goods and services
04	To understand the advocacy v/s lobbying and the concept of CSR and the policy framework of CSR under the Companies Act of 2013

Sr. No.	Modules / Units	
1	Introduction to Non-profit Organization	
	 a) Non-profit organization: Meaning of Non-Profit Organization, Features of non-profit organization, Characteristics of Non Profit marketing, Stakeholders in non-profit organization, Types of non-profit organization: Charities, newly emerging social enterprise sector, public sector, political parties and campaign organizations, classification of non-profit organizations, Social need: concept, social need as a basis for developing sustainable business model for a non-profit organization. b) Fundraising: meaning, common techniques to solicit funds, fund raising loyalty ladder, marketing and communication for fundraising 	
2	Segmenting Targeting Positioning, Product mix & Pricing mix in Non-profit organizations	
	 a) Segmentation, Targeting & Positioning of non-profit organizations: Strategic Marketing for Non-Profit Organization, Steps in Strategic Marketing of non-profit organization, Market Segmentation, Targeting & Positioning in non-profit organization b) Product mix & Pricing mix in non-profit organization: Budgeting, cost effective marketing mix, Cost Management, Product or offer in non-profit organization, level of offer in non-profit organization, Pricing Objectives in non-profit organizations, Pricing Strategies in non-profit organizations 	
3	Promotion mix, Place mix of non-profit organizations & advocacy of non-profit organizations	
	 a) Promotion Mix: Promotion of non-profit Organizations: Marketing Communication Strategies, Integrated Marketing Communication in nonprofit organizations, Image & reputation, Marketing Communication process, Marketing communication process, Role of Audience, message and vehicle in non-profit organization communication. Significance of place in non-profit organizations, Challenges for non-profit organizations in rural areas. b) Advocacy & Fund Raising in non-profit organization: Meaning, steps in building support for advocacy, advocacy tactics: lobbying, Coalition Building, outreach to media, educating policy makers on issues, educating public on policy issue, building relationship with policy maker. Distinctive characteristics of advocacy groups, Steps in crafting an advocacy plan, steps in engaging policy makers for lobbying, advocacy v/s lobbying, Evaluating advocacy. Fund Raising: meaning, Principles of fundraising, Fund raising cycle, The fund raising pyramid and donor life cycle. 	
4	Corporate Social Responsibility, innovations & Ethics in non-profit organizations	
	 a) Corporate social responsibility: CSR, Importance of CSR, history and evolution of CSR, Policy framework for CSR in India, Section 135 of Companies Act 2013, Role of CSR committee on Boards Code of Ethics in non-profit organization, hierarchy of ethical values in non-profit organization, careers in CSR. b) Trends and Innovations: Current trends, innovations and opportunities in CSR, Influence of non-profit organizations and their impact on corporate CSR, Challenges faced by non-profit organizations in India. c) Non-Governmental Organization (NGO): Meaning of Non-Government Organization (NGO), Difference between Voluntary Organization & NGO, Steps of Voluntarism, Types of NGO: advocacy of chosen cause, Small or Grassroot NGO, Mother NGO, National NGO, corporate NGO, Global NGO's 	

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Elective Courses (EC) Group C: Human Resource Electives

1. HRM in Global Perspective

Modules at a Glance

SN	Modules	No. of Lectures
1	International HRM – An Overview	15
2	Global HRM Functions	15
3	Managing Expatriation and Repatriation	15
4	International HRM Trends and Challenges	15
Total		60

Objectives

SN	Objectives
1	To introduce the students to the study and practice of IHRM
2	To understand the concepts, theoretical framework and issues of HRM in Global Perspective
3	To get insights of the concepts of Expatriates and Repatriates
4	To find out the impact of cross culture on Human Resource Management
5	To provide information about Global Workforce Management
6	To study International HRM Trends and Challenges

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SN	Modules/ Units	
1	International HRM – An Overview	
	 a) International HRM – An Overview: International HRM – An Overview: International HRM- Meaning and Features, Objectives, Evolution of IHRM, Reasons for Emergency of IHRM, Significance of IHRM in International Business, Scope/Functions Difference between International HRM and Domestic HRM Approaches to IHRM- Ethnocentric, Polycentric, Geocentric and Regiocentric Limitations to IHRM Qualities of Global Managers Organizational Dynamics and IHRM Components of IHRM- Cross Cultural Management and Comparative HRM Cross Cultural Management- Meaning, Features, Convergence of Cultures, Role of IHRM in Cross Culture Management, Problems of Cross Cultural Issues in Organizations, Importance of Cultural Sensitivity to International Managers Comparative HRM- Meaning, Importance, Difference between IHRM and Comparative HRM Managing Diversity in Workforce 	
2	Dealing with Cultural Shock Global HRM Functions	
	 a) Global HRM Functions: International Recruitment and Selection- Meaning- Sources of International Labour Market, Global Staffing, Selection Criteria, Managing Global Diverse Workforce International Compensation – Meaning, Objectives, Components of International Compensation Program, Approaches to International Compensation HRM Perspectives in Training and Development - Meaning, Advantages, Cross Cultural Training, Issues in Cross Cultural Training International Performance Management – Meaning, Factors Influencing Performance, Criterion used for Performance Appraisal of International Employees, Problems Faced in International Performance Management Motivation and Reward System- Meaning, Benchmarking Global Practices International Industrial Relations – Meaning, Key Issues in International 	

SN	Modules/ Units
3	Managing Expatriation and Repatriation
	 a) Managing Expatriation and Repatriation Concepts of PCNs (Parent-Country Nationals), TCNs(Third-Country Nationals) and HCNs(Host-Country Nationals) Expatriation- Meaning, Reasons for Expatriation, Factors in Selection of Expatriates, Advantages of Using Expatriates, Limitations of using Expatriates, Role of Family, the Role of Non-expatriates, Reasons for Expatriate Failure, Women and Expatriation, Requirements/Characteristics of Effective Expatriate Managers Repatriation- Meaning, Repatriation Process, Factors affecting Repatriation Process, Role of Repatriate, Challenges faced by Repatriates
4	International HRM Trends and Challenges
	 a) International HRM Trends and Challenges: Emerging Trends in IHRM Off Shoring – Meaning, Importance, Off Shoring and HRM in India International Business Ethics and IHRM – Meaning of Business Ethics, Global Values, International Corporate Code of Conduct, Criminalization of Bribery, Operationalizing Corporate Ethics of HR in Overall Corporate Ethics Programme Managing International Projects and Teams- Meaning, How Projects are Managed across the World and Challenges in Managing International Projects across the World HR in MNCs – Industrial Relations in MNCs Role of Technology on IHRM IHRM and Virtual Organization- Meaning and Features of Virtual Organization, Difference between Virtual Organization and Traditional Organization, Managing HR in Virtual Organization Growth in Strategic Alliances and Cross Border Mergers and Acquisitions-Impact on IHRM Knowledge Management and IHRM

Elective Courses (EC) Group C: Human Resource Electives

2. Organisational Development

Modules at a Glance

SN	Modules	No. of Lectures
1	International HRM – An Overview	15
2	Global HRM Functions	15
3	Managing Expatriation and Repatriation	15
4	International HRM Trends and Challenges	15
	Total	60

SN	Objectives
1	To understand the concept of Organisational Development and its Relevance in the organisation
2	To Study the Issues and Challenges of OD while undergoing Changes
3	To get an Understanding of Phases of OD Programme
4	To Study the OD Intervention to meet the Challenges faced in the Organisation
5	To get an Insight into Ethical Issues in OD

SN	Modules/ Units	
1	Organisational Development – An Overview	
	 a) Organisational Development – An Overview: Organisational Development – Meaning, Features, Evolution, Components, Objectives, Principles, Process, Importance Relevance of Organisational Development for Managers, OD- HRD Interface, Participation of Top Management in OD OD Practitioner – Meaning, Role of OD Practitioner, Competencies of an OD Practitioner Emerging Trends in OD OD in Global Setting 	
2	Organisational Diagnosis, Renewal and Change	
3	 a) Organisational Diagnosis, Renewal and Change: Organisational Diagnosis - Meaning, Need, Phases, Levels of Organisational Diagnosis, Techniques of Organisational Diagnosis, Tools used in Organisational Diagnosis Organizational Renewal, Re-energising, OD and Business Process Re-Engineering (BPR), OD and Leadership Development Organisational Change- Meaning, Organisational Life Cycle, Planned Change, Organizational Growth and its Implication for Change Change Agents- Meaning, Features, Types, Role, Skills required 	
	a) Managing Expatriation and Repatriation	
	 OD Interventions- Meaning, Features, Factors Affecting Success of Interventions, Steps in OD Interventions Types of Interventions- Human Resource Intervention, Structural Intervention, Strategic Interventions, Third Party Peace Making Intervention Techniques of OD Intervention : Traditional: Sensitive Training, Grid Training, Survey Feedback. Modern : Process Consultation, Third Party, Team Building, Transactional Analysis Evaluation of OD Interventions : Process, Types, Methods, Importance 	

SN	Modules/ Units
4	OD Effectiveness
	 a) OD Effectiveness: Issues Faced in OD- Issues Related to Client Relationship, Power-Individual skills and Attributes as a Source of Power, Power and Influence Tactics, Politics and OD Values in OD – Meaning, Professional Values, Value Conflict and Dilemma Ethics in OD – Meaning, Factors Influencing Ethical Judgement, Ethical Guidelines for OD Professionals Organisational Effectiveness- Meaning , Effectiveness v/s Efficiency, Approaches of Organisational Effectiveness : Goal Approach, System Resource
	Approach, Strategic Constituency Approach, Internal Process Approach; Parameters for Judging Organisational Effectiveness, Ways to Enhance Organisational Effectiveness

Elective Courses (EC) Group C: Human Resource Electives

3. HRM in Service Sector Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Service Sector Management- An Overview	15
2	Managing Human Element in Service Sector	15
3	Issues and Challenges of HR in Service Sector	15
4	HRP Evaluation, Attrition, Retention & Globalization	15
	Total	60

SN	Objectives
1	To understand the concept and growing importance of HRM in service sector
2	To understand how to manage human resources in service sector
3	To understand the significance of human element in creating customer satisfaction through service quality
4	To understand the Issues and Challenges of HR in various service sectors

Modules/ Units	
Service Sector Management- An Overview	
 a) Service Sector Management- An Overview: Services - Meaning, Features, Classification of Services: End User, Degree of Tangibility, People Based Services, Expertise Required, Orientation Towards Profit, By Location Service Sector Management – Meaning, Significance of Service Sector, Reasons for Growth in Service Sector Service Organization - Importance of Layout and Design of Service Organization, Servicescape Service Culture in Organization – Meaning, Developing Service Culture in Organization Relationship Marketing – Meaning, Need and Importance in Service Sector Organizations, Six Market Model Role of Service Employee Role of Customers in Service Process– Customers as Productive Resources, Customers as Contributors to Service Quality, Customers as Competitors Service Encounter and Moment of Truth –Meaning, Nature, Elements of 	
Service Encounter Managing Human Element in Service Sector	
 a) Managing Human Element in Service Sector: Human Element in Service Sector – Introduction, Role and Significance The Services Triangle Front Line Employees /Boundary Spanners- Meaning, Issues Faced by Front Line Employees: Person/ Role Conflicts, Organization/ Client Conflict, Interclient Conflict Emotional Labour – Meaning, Strategies for Managing Emotional Labour Recruitment in Service Sector- Recruiting Right People, Recruitment Procedures and Criteria, Challenges in Recruitment in Service Sector Selection of Employees in Service Sector – Interviewing Techniques: Abstract Questioning, Situational Vignette, Role Playing Develop People to Deliver Service Quality Compensating Employees in Service Sector Motivating Employees for Services 	

SN	Modules/ Units	
3	Issues and Challenges of HR in Service Sector	
	a) Issues and Challenges of HR in Service Sector:	
	• Quality Issues in Services: Meaning and Dimensions of Service Quality, The	
	Service – Gap Model, Reasons and Strategies to fill the Gaps	
	• Delivering Services through Agents and Brokers - Meaning, Advantages, Challenges, Strategies for Effective Service Delivery through Agents and Brokers	
	 HRM in Public Sector Organizations and Non – Profit Sector in India 	
	 Issues and Challenges of HR in Specific Services: 	
	 Business and Professional Services: Banking and Insurance, Legal, 	
	Accountancy	
	 Infrastructure: Roads, Railways, Power 	
	 Public Services: Police, Defense, Disaster Management 	
	 Trade Services: Wholesale and Retail, Advertising, Maintenance and Repairs 	
	 Personnel Services: Education, Health Care, Hotels 	
	Social and Charitable Services	
4	HRP Evaluation, Attrition, Retention & Globalization	
	a) HRP Evaluation, Attrition, Retention & Globalization:	
	Human Resource Planning Evaluation in Service Sector – Meaning, HRP	
	Evaluation Process, Purpose of HRP Evaluation in Service Sector, Issues	
	 Influencing HRP Evaluation in Service Sector Service Leadership – Meaning, Integrating Marketing Operation and Human 	
	Resources, Creating a Leading Service Organization, The Service – Profit Chain	
	Model	
	• Attrition in Service Sector – Meaning, Reasons for Attrition in Service Sector,	
	Cycle of Failure, Cycle of Mediocrity and Cycle of Success	
	• Retaining the Best People in Service Sector - Including Employees in	
	Company's Vision, Treat Employees as Customers, Measure and Reward String	
	Service Performers	
	Globalization of Services- Meaning, Reasons for Globalization of Services,	
	Impact of Globalization on Indian Service Sector. Organisational Effectiveness,	
	Ways to Enhance Organisational Effectiveness	

Elective Courses (EC) Group C:Human Resource Electives

4. Workforce Diversity

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Workforce Diversity - An Overview	15
2	Workforce Diversity and HRM Functions	15
3	Strategies to Manage Diversity	15
4	Issues in Managing Diversity and Recent Trends	15
Total		60

SN	Objectives
01	To understand the nature of workforce diversity
02	To familiarize the learners with the strategies to deal with work force diversity
03	To understand the impact of technology in managing workforce diversity
04	To be able to interlink between workforce diversity and HRM functions

Sr. No.	Modules / Units
1	Workforce Diversity - An Overview
	 Meaning of Workforce Workforce Diversity - Meaning, Features and Significance Dimensions of Workforce Diversity Advantages and Limitations of having a diverse workforce Positive and Negative effects of workforce diversity in workplace
2	Workforce Diversity and HRM Functions
	 Steps to Recruiting and Retaining a Diverse Workforce Workforce Diversity and HRM Functions – Diversity and Recruitment, Diversity and Supervision, Diversity and Training, Diversity and Compensation, Diversity and Performance Management, Diversity and Work life Balance Role of Recruiter in Hiring Diversified Workforce Workforce Diversity – Key to Organizational Performance Workforce Diversity as a Determinant of Sustainable Competitive Advantage
3	Strategies to Manage Diversity
	 Organizational Strategies for Managing Workforce Diversity –Workplace Inclusion Strategies through Corporate Leadership, Diversity Training and Mentoring Diversity Management Programmes - Concept Corporate Culture and Diversity at workplace Techniques of Managing Work Force Diversity Approaches to Diversity Management System
4	Issues in Managing Diversity and Recent Trends
	 Best Practices in Achieving Workforce Diversity Diversity and Multi-culturism Global workforce diversity management Recent Trends of Diversity Role of Technology in Handling Workforce Diversity Workforce Diversity Management for Creativity and Innovation Ethical and Legal Issues in Managing Diversity

Elective Courses (EC) Group C: Human Resource Electives

5. Human Resource Accounting & Auditing

Modules at a Glance

Sr. No.	Modules	No. of Lectures
1	Human Resource Accounting: An Overview	15
2	Methods and Human Resource Accounting Practices in India	15
3	Human Resource Audit: An Overview	15
4	HR Audit for Legal Compliance and Safe Business Practices	15
	Total	60

Objectives

SN	Objectives
01	To understand the value of human resource in organizations
02	To understand the importance of Human Resource Accounting at National and International level
03	To familiarize with the Human Resource Accounting Practices in India
04	To familiarize the learners with the process and approaches of Human Resources Accounting and Audit
05	To understand the significance of Human Resource Auditing as a Tool of Human Resource Valuation

Sr. No.	Modules / Units
1	Human Resource Accounting: An Overview
	Human Resource Accounting – Meaning, Need and Objectives of HR Accounting
	Historical Development of Human Resource Accounting,
	Cost of Human Resource - Acquisition Cost, Training and Development Cost and additional
	Cost
	 Benefits and Limitations of Human Resource Accounting
	Reporting of Human Resource Accounting at National Levels
	Disclosures at International Level
2	Methods and Human Resource Accounting Practices in India
	Methods of Human Resource Accounting:
	1. Cost of Production Approach - Concept
	i. Historical Cost Model – Meaning, Advantages and Limitations
	ii. Replacement Cost Model – Meaning, Advantages and Limitations
	iii. Opportunity Cost - – Meaning, Advantages and Limitations
	2. Capitalized Earnings Approach - Concept
	i. Economic Value Model - Meaning, Advantages and Limitations
	ii. Capitalization of Salary - Meaning, Advantages and Limitations
	Statutory Provisions governing HR accounts
_	Human Resource Accounting Practices in India
3	Human Resource Audit: An Overview
	Human Resource Audit - Meaning, Features, Objectives of HR Audit
	Benefits and limitations of HR Audit
	Need and Significance of HR Audit
	Process of HR Audit
	Approaches of HR Audit
	Principles of Effective HR Auditing
	Role of HR Auditor
	Methods of conducting HR Audit – Interview, Workshop, Observation, Questionnaire.
	Components of HR Audit
	• HR Audit and Workforce Issues : Workforce Communication and Employee Relations,
	Performance Management, Compensation System, Teambuilding System
4	 HR Audit for Legal Compliance and Safe Business Practices Areas covered by HR Audit - Pre-employment Requirements, Hiring Process, New-hire
	Orientation Process, Workplace Policies and Practices
	HR Audit as Intervention - Introduction, Effectiveness of Human Resource Development Audit as an Intervention
	Audit as an Intervention
	Human Resource Audit and Business Linkages
	Human Resource Auditing as a Tool of Human Resource Valuation: Introduction, Rationale
	of Human Resource Valuation and Auditing, Valuation of Human Resources, Issues in
	Human Capital Measurement and Reporting.

Elective Courses (EC) Group C: Human Resource Electives

6. Indian Ethos in Management

Modules at a Glance

SN	Modules	No. of Lectures
1	Indian Ethos – An Overview	15
2	Work Ethos and Values	15
3	Stress Management	15
4	Indian Systems of Learning	15
	Total	60

Objectives

SN	Objectives
1	To understand the concept of Indian Ethos in Management
2	To link the Traditional Management System to Modern Management System
3	To understand the Techniques of Stress Management
4	To understand the Evolution of Learning Systems in India

SN	Modules/ Units
1	Indian Ethos – An Overview
	 a) Indian Ethos Meaning, Features, Need, History, Relevance, Principles Practised by Indian Companies, Requisites, Elements, Role of Indian Ethos in Managerial Practices b) Management Lessons from Scriptures: Management Lessons from Vedas, Management Lessons from Mahabharata, Management Lessons from Bible, Management Lessons from Quran, Management Lessons from Kautilya's Arthashastra Indian Heritage in Business, Management, Production and Consumption. Ethics v/s Ethos Indian Management v/s Western Management
2	Work Ethos and Values
	 a) Work Ethos: Meaning, Levels, Dimensions, Steps, Factors Responsible for Poor Work Ethos b) Values: Meaning, Features, Values for Indian Managers, Relevance of Value Based Management in Global Change, Impact of Values on Stakeholders: Employees, Customers, Government, Competitors and Society. Values for Managers, Trans-Cultural Human Values in Management and Management Education, Secular v/s Spiritual Values in Management, Importance of Value System in Work Culture
3	Stress Management
	 a) Stress Management: Meaning, Types of Stress at Work, Causes of Stress, Consequences of Stress b) Stress Management Techniques: Meditation : Meaning, Techniques, Advantages, Mental Health and its Importance in Management, Brain Storming, Brain Stilling, Yoga: Meaning, Significance
	c) Leadership:
	 Meaning, Contemporary Approaches to Leadership, Joint Hindu Family Business – Leadership Qualities of Karta

SN	Modules/ Units
4	Indian Systems of Learning
	a) Learning: Meaning, Mechanisms
	Gurukul System of Learning : Meaning, Features, Advantages, Disadvantages
	Modern System of Learning: Meanings, Features, Advantages, Disadvantages
	Karma: Meaning, Importance of Karma to Managers, Nishkama Karma
	• Laws of Karma: The Great Law, Law of Creation, Law of Humility, Law of
	Growth, Law of Responsibility, Law of Connection
	Corporate Karma: Meaning, Methodology, Guidelines for good Corporate
	Karma
	Self-Management: Personal growth and Lessons from Ancient Indian Education
	System
	Personality Development: Meaning, Determinants, Indian Ethos and
	Personality Development

Core Course (CC)

5. Operations Research

Modules at a Glance

SN	Modules	No. of Lectures
1	Introduction to Operations Research and Linear Programming	15
2	Assignment and Transportation Models	15
3	Network Analysis	15
4	Job Sequencing and Theory of Games	15
	Total	60

Objectives

SN	Objectives
1	To help students to understand operations research methodologies
2	To help students to solve various problems practically
3	To make students proficient in case analysis and interpretation

SN	Modules/ Units
1	Introduction to Operations Research and Linear Programming
	 a) Introduction To Operations Research Operations Research - Definition, Characteristics of OR, OR Techniques, Areas of Application, Limitations of OR. b) Linear Programming Problems: Introduction and Formulation Introduction to Linear Programming Applications of LP Components of LP Requirements for Formulation of LP Problem Assumptions Underlying Linear Programming
	 Steps in Solving LP Problems LPP Formulation (Decision Variables, Objective Function, Constraints, Non Negativity Constraints)
	 c) Linear Programming Problems: Graphical Method Maximization & Minimization Type Problems. (Max. Z & Min. Z) Two Decision Variables and Maximum Three Constraints Problem Constraints can be "less than or equal to", "greater than or equal to" or a combination of both the types i.e. mixed constraints. Concepts: Feasible Region of Solution, Unbounded Solution, Redundant Constraint, Infeasible Solution, Alternative Optima. d) Linear Programming Problems: Simplex Method Only Maximization Type Problems. (Only Max. Z). No Minimization problems. (No Min. Z) Numericals on Degeneracy in Maximization Simplex Problems. Two or Three Decision Variables and Maximum Three Constraints Problem. (Up to Maximum Two Iterations) All Constraints to be "less than or equal to" Constraints. ("Greater than or Equal to" Constraints not included.) Concepts : Slack Variables, Surplus Variables, Artificial Variables, Duality, Product Mix and Profit, Feasible and Infeasible Solution, Unique or Alternate Optimal Solution, Degeneracy, Non Degenerate, Shadow Prices of Resources, Scarce and Abundant Resources, Utilized and Unutilized Capacity of Resources, Percentage Utilization of Resources, Decision for Introduction of a New
	Product. Note:
	 Surplus Variable, Artificial Variable and Duality to be covered only at <u>Conceptual</u> level for Theory Questions only and not included in Numerical. Sensitivity Analysis including Profit Range and Capacity Range is not included.

N	Modules/ Units
2	Assignment and Transportation Models
á	a) Assignment Problem – Hungarian Method
	 Maximization & Minimization Type Problems.
	 Balanced and Unbalanced Problems.
	 Prohibited Assignment Problems, Unique or Multiple Optimal Solutions.
	 Simple Formulation of Assignment Problems.
	 Maximum 5 x 5 Matrix. Up to Maximum Two Iterations after Row and Column Minimization.
	Note:
	1. Travelling Salesman Assignment Problem is not included.
1	b) Transportation Problems
	 Maximization & Minimization Type Problems.
	 Balanced and Unbalanced problems.
	 Prohibited Transportation Problems, Unique or Multiple Optimal Solutions.
	 Simple Formulation of Transportation Problems.
	 Initial Feasible Solution (IFS) by:
	a. North West Corner Rule (NWCR)
	b. Least Cost Method (LCM)
	c. Vogel's Approximation Method (VAM)
	 Maximum 5 x 5 Transportation Matrix.
	• Finding Optimal Solution by <u>Modified Distribution (MODI) Method</u> . (u, v and Δ)
	 <u>Maximum Two Iterations</u> (i.e. Maximum Two Loops) after IFS.
	Note:
	 Production Scheduling Problem is not included.
	2. Time Minimization Problem is not included.
	Degeneracy Concept to be covered only at Conceptual Level. Not to be included in Numerical.

SN	Modules/ Units
3	Network Analysis
	 a) Critical Path Method (CPM) Concepts: Activity, Event, Network Diagram, Merge Event, Burst Event, Concurrent and Burst Activity, Construction of a Network Diagram. Node Relationship and Precedence Relationship. Principles of Constructing Network Diagram. Use of Dummy Activity Numerical Consisting of Maximum Ten (10) Activities. Critical Path, Sub-critical Path, Critical and Non-critical Activities, Project Completion Time. Forward Pass and Backward Pass Methods.
	 Calculation of EST, EFT, LST, LFT, Head Event Slack, Tail Event Slack, Total Float, Free Float, Independent Float and Interfering Float b) Presidet Creating
	 b) Project Crashing Meaning of Project Crashing. Concepts: Normal Time, Normal Cost, Crash Time, Crash Cost of Activities. Cost Slope of an Activity. Costs involved in Project Crashing: Numericals with Direct, Indirect, Penalty, crash cost and Total Costs. Time – Cost Trade off in Project Crashing. Optimal (Minimum) Project Cost and Optimal Project Completion Time. Process of Project Crashing. Numerical Consisting of Maximum Ten (10) Activities.
	 Numerical based on Maximum Four (04) Iterations of Crashing c) Program Evaluation and Review Technique (PERT)
	 Three Time Estimates of PERT: Optimistic Time (a), Most Likely Time (m) and Pessimistic Time (b). Expected Time (te) of an Activity Using Three Time Estimates. Difference between CPM and PERT. Numerical Consisting of Maximum Ten (10) Activities. Construction of PERT Network using tevalues of all Activities. Mean (Expected) Project Completion Time. Standard Deviation and Variance of Activities. Project Variance and Project Standard Deviation. 'Prob. Z' Formula. Standard Normal Probability Table. Calculation of Probability from the
	 Probability Table using 'Z' Value and Simple Questions related to PERT Technique. Meaning, Objectives, Importance, Scope, RORO/LASH

SN	Modules/ Units
4	Job Sequencing and Theory of Games
	a) Job Sequencing Problem
	 Processing Maximum 9 Jobs through Two Machines only.
	 Processing Maximum 6 Jobs through Three Machines only.
	Calculations of Idle Time, Elapsed Time etc.
	b) Theory of Games
	Introduction
	• Terminology of Game Theory: Players, Strategies, Play, Payoff, Payoff matrix,
	Maximin, Maximax, Saddle Point.
	• Types of Games.
	Numericals based on:
	 Two Person Zero Sum Games including strictly determinable and Fair Game
	- Pure Strategy Games (Saddle Point available). Principles of Dominance
	method.

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 IM Pandey, Financial Management, Vikas Publishing House Ltd. Khan M.Y., Financial Services, Mc Graw Hill Education. Dr.S.Gurusamy, Financial Services, Vijay Nicole Imprints. Financial Market and Services, E, Gordon and K. Natrajan, Himalaya Publishing House Project Management
 Harold Kerzer, Project Management – A System Approach to Planning, Scheduling & Controlling Jack.R.Meredith & Samuel.J.Mantel, Jr.,Project Management – A Managerial Approach Bhavesh.M.Patel, Project Management – Strategic Financial Planning, Evaluation & Control Strategic Financial Management
 C. Paramasivan& T. Subramanian, Financial Management IM Pandey, Financial Management Ravi Kishor, Financial Management Khan & Jain, Financial Management Van Horne & Wachowiz, Fundamentals of Financial Management Prasanna Chandra, Strategic Financial Management
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• Dessler Gary, A Framework for Human Resource Management, Pearson Publication, 7th Edition.
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Aniversity of Mumbai



Bachelor of Management Studies Programme Guidelines for Project Work at Third Year Semester VI

Under Choice Based Credit, Grading and Semester System

(To be implemented from Academic Year 2018-2019)

Board of Studies-in-Business Management

Introduction

Inclusion of project work in the course curriculum of the Bachelor of Management Studies programme is one of the ambitious aspects in the programme structure. The main objective of inclusion of project work is to inculcate the element of research analyse and scientific temperament challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret particular aspect of the study. It is expected that the guiding teacher should undertake the counselling sessions and make the awareness among the learners about the methodology of formulation, preparation and evaluation pattern of the project work.

- There are two modes of preparation of project work
 - 1. Project work based on research methodology in the study area
 - 2. Project work based on internship in the study area

Guidelines for preparation of Project Work

1. General guidelines for preparation of project work based on Research Methodology

- The project topic may be undertaken in any area of Elective Courses.
- Each of the learner has to undertake a Project individually under the supervision of a teacher-guide.
- The learner shall decide the topic and title which should be specific, clear and with definite scope in consultation with the teacher-guide concerned.
- University/college shall allot a guiding teacher for guidance to the students based on her / his specialization.
- The project report shall be prepared as per the broad guidelines given below:
 - Font type: Times New Roman
 - Font size: 12-For content, 14-for Title
 - Line Space : 1.5-for content and 1-for in table work
 - Paper Size: A4
 - Margin : in Left-1.5, Up-Down-Right-1
 - The Project Report shall be bounded.
 - The project report should be 80 to 100 pages

Format

1st page (Main Page)

Title of the problem of the Project

A Project Submitted to

University of Mumbai for partial completion of the degree of

Bachelor of Management Studies

Under the Faculty of Commerce

By

Name of the Learner

Under the Guidance of

Name of the Guiding Teacher

Name and address of the College

Month and Year

 2^{nd} Page This page to be repeated on 2^{nd} page (i.e. inside after main page)

Index

Chapter No. 1	Title of the Chapter	Page No.
(sub point 1.1, 1.1.1, And so on)		
Chapter No. 2	Title of the Chapter	
Chapter No. 3	Title of the Chapter	
Chapter No. 4	Title of the Chapter	
Chapter No. 5	Title of the Chapter	

List of tables, if any, with page numbers. List of Graphs, if any, with page numbers. List of Appendix, if any, with page numbers. Abbreviations used:

Structure to be followed to maintain the uniformity in formulation and presentation of Project Work

(Model Structure of the Project Work)

• Chapter No. 1: Introduction

In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner.

• Chapter No. 2: Research Methodology

This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc can be incorporated by the learner.

• Chapter No. 3: Literature Review

This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue.

• Chapter No. 4: Data Analysis, Interpretation and Presentation

This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner.

• Chapter No. 5: Conclusions and Suggestions

In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.

Note: If required more chapters of data analysis can be added.

- Bibliography
- Appendix

Name and address of the college

Certificate

This is to	certify that	t Ms/Mi	r						ha	s wo	rked
and duly	completed	her/his	Project	Work	for the	degree	of Bac	helor of	Mar	nage	ment
Studies	under	the	Faculty	of	Com	imerce	in	the	subj	ect	of
						and	her/his	project	is	enti	tled,
				<u>Title c</u>	of the Pr	<u>oject</u>				_" u	nder

my supervision.

I further certify that the entire work has been done by the learner under my guidance and that no part of it has been submitted previously for any Degree or Diploma of any University.

It is her/ his own work and facts reported by her/his personal findings and investigations.

Seal of the College

Name and Signature of Guiding Teacher

Date of submission:

Declaration by learner

I the undersigned Miss / Mr					Name of the learner						here by,
declare	that	the	work	embodied	in	this	project	work	titled	.د	
				Title	of th	e Proj	ject				»»

forms my own contribution to the research work carried out under the guidance of <u>Name of the guiding teacher</u> is a result of my own research work and has not been previously submitted to any other University for any other Degree/ Diploma to this or any other University.

Wherever reference has been made to previous works of others, it has been clearly indicated as such and included in the bibliography.

I, here by further declare that all information of this document has been obtained and presented in accordance with academic rules and ethical conduct.

Name and Signature of the learner

Certified by

Name and signature of the Guiding Teacher

Acknowledgment

(Model structure of the acknowledgement)

To list who all have helped me is difficult because they are so numerous and the depth is so enormous.

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my **Principal**, ______for providing the necessary facilities required for completion of this project.

I take this opportunity to thank our **Coordinator**, for her moral support and guidance.

I would also like to express my sincere gratitude towards my project guide ______whose guidance and care made the project successful.

I would like to thank my **College Library**, for having provided various reference books and magazines related to my project.

Lastly, I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **my Parents and Peers** who supported me throughout my project.

2. Guidelines for Internship based project work

- Minimum 20 days/ 100 hours of Internship with an Organisation/ NGO/ Charitable Organisation/ Private firm.
- The theme of the internship should be based on any study area of the elective courses
- Experience Certificate is Mandatory
- A project report has to be brief in content and must include the following aspects:

Executive Summary:

A bird's eye view of your entire presentation has to be precisely offered under this category.

Introduction on the Company:

A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis.

Statement and Objectives:

The mission and vision of the organization need to be stated enshrining its broad strategies.

• Your Role in the Organisation during the internship:

The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head.

Challenges:

The challenges confronted while churning out theoretical knowledge into practical world.

• Conclusion:

A brief overview of your experience and suggestions to bridge the gap between theory and practice.

- The project report based on internship shall be prepared as per the broad guidelines given below:
 - Font type: Times New Roman
 - Font size: 12-For content, 14-for Title
 - Line Space : 1.5-for content and 1-for in table work
 - Paper Size: A4
 - Margin : in Left-1.5, Up-Down-Right-1
 - The Project Report shall be bounded.
 - The project report should be of minimum 50 pages

Evaluation pattern of the project work

The Project Report shall be evaluated in two stages viz.					
Evaluation of Project Report (Bound Copy)	60 Marks				
 Introduction and other areas covered 	20 Marks				
 Research Methodology, Presentation, Analysis and interpretation of data 	30 Marks				
 Conclusion & Recommendations 	10 Marks				
Conduct of Viva-voce	40 Marks				
 In the course of Viva-voce, the questions may be asked such as importance / relevance of the study, objective of the study methodology of the study/ mode of Enquiry (question responses) 					
 Ability to explain the analysis, findings, concluding observations, recommendation, limitations of the Study 	20 Marks				
Overall Impression (including Communication Skill)	10 Marks				

Note:

• The guiding teacher along with the external evaluator appointed by the University/ College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern

Passing Standard

- Minimum of Grade E in the project component
- In case of failing in the project work, the same project can be revised for ATKT examination.
- Absence of student for viva voce: If any student fails to appear for the viva voce on the date and time fixed by the department such student shall appear for the viva voce on the date and time fixed by the Department, such student shall appear for the viva voce only along with students of the next batch.

Revised Syllabus of Courses of Bachelor of Management Studies Programme at Semester V and VI with effect from the Academic Year 2018-2019 Scheme of Evaluation

The performance of the learners will be evaluated in two Components. One component will be the Internal Assessment component carrying 25% marks and the second component will be the Semester-wise End Examination component carrying 75% marks. The allocation of marks for the Internal Assessment and Semester End Examinations will be as shown below:-

A) Internal Assessment: 25 %

Question Paper Pattern (Internal Assessment- Courses without Practical Courses)

Sr. No.	Particular	Marks
1	One class test (20 Marks)	
	Match the Column/ Fill in the Blanks/ Multiple Choice Questions	05 Marks
	(½ Mark each)	
	Answer in One or Two Lines (Concept based Questions)	05 Marks
	(01 Mark each)	
	Answer in Brief (Attempt Any Two of the Three)	10 Marks
	(05 Marks each)	
2	Active participation in routine class instructional deliveries and	05 Marks
	overall conduct as a responsible learner, mannerism and	
	articulation and exhibit of leadership qualities in organizing	
	related academic activities	

B) Semester End Examination: 75 %

- i) Duration: The examination shall be of 2 ½ Hours duration
- ii) Theory question paper pattern
 - There shall be five questions each of 15 marks.
 - All questions shall be compulsory with internal choice within the questions.
 - Question may be subdivided into sub-questions a, b, c... and the allocation of marks depends on the weightage of the topic.

(Detail question paper pattern has been given separately)

Passing Standard

The learners to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Internal Assessment and Semester End Examination. The learners shall obtain minimum of 40% marks (i.e. 10 out of 25) in the Internal Assessment and 40% marks in Semester End Examination (i.e. 30 Out of 75) separately, to pass the course and minimum of Grade E to pass a particular semester A learner will be said to have passed the course if the learner passes the Internal Assessment and Semester End Examination together.

Board of Studies-in-Business Management, University of Mumbai 126 | P a g e

Question Paper Pattern (Practical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
Q-1	Objective Questions	15 Marks
Q-1	A. Sub Questions to be asked 10 and to be answered any 08	TO IMIGLIKS
	B. Sub Questions to be asked 10 and to be answered any 07	
	(*Multiple choice / True or False / Match the columns/Fill in the	
	blanks)	
Q-2	Full Length Practical Question	15 Marks
	OR	
Q-2	Full Length Practical Question	15 Marks
Q-3	Full Length Practical Question	15 Marks
	OR	
Q-3	Full Length Practical Question	15 Marks
Q-4	Full Length Practical Question	15 Marks
	OR	
Q-4	Full Length Practical Question	15 Marks
Q-5	A) Theory questions	08 Marks
	B) Theory questions	07 Marks
	OR	
Q-5	Short Notes	15 Marks
	To be asked 05	
	To be answered 03	

Note:

Practical question of 15 marks may be divided into two sub questions of 7/8 and 10/5Marks. If the topic demands, instead of practical questions, appropriate theory question may be asked.

Question Paper Pattern (Theoretical Courses)

Maximum Marks: 75

Questions to be set: 05

Duration: 2 1/2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No	Particular	Marks
NO		
Q-1	Objective Questions	15 Marks
	A) Sub Questions to be asked 10 and to be answered any 08	
	B) Sub Questions to be asked 10 and to be answered any 07	
	(*Multiple choice / True or False / Match the columns/Fill in the blanks)	
Q-2	Full Length Question	15 Marks
	OR	
Q-2	Full Length Question	15 Marks
Q-3	Full Length Question	15 Marks
	OR	
Q-3	Full Length Question	15 Marks
Q-4	Full Length Question	15 Marks
	OR	
Q-4	Full Length Question	15 Marks
Q-5	A) Theory questions	08 Marks
	B) Theory questions	07 Marks
	OR	
Q-5	Short Notes	15 Marks
	To be asked 05	
	To be answered 03	

Note:

Theory question of 15 marks may be divided into two sub questions of 7/8 and 10/5Marks.

UNIVERSITY OF MUMBAI No. UG/7-6 of 2018-19

CIRCULAR:-

Attention of the Principals of the affiliated Colleges and Directors of the recognized Institutions in Science & Technology Faculty is invited to this office Circular Nos. UG/66 of 2012-13, dated 12th September, 2012 relating to syllabus of the Bachelor of Science (B.Sc.) programme in the course of Information Technology.

They are hereby informed that the recommendations made by the Ad-hoc Board of Studies in Information Technology at its meeting held on 8^{th} June, 2018 have been accepted by the Academic Council at its meeting held on 14^{th} June, 2018 <u>vide</u> item No. 4.49 and that in accordance therewith, the revised syllabus as per the (CBCS) for the T.Y.B.Sc. in Information Technology (Sem – V & VI), has been brought into force with effect from the academic year 2018-19, accordingly. (The same is available on the University's website <u>www.mu.ac.in</u>).

MUMBAI - 400 032 6⁴⁴ June, 2018 To July

The Principals of the affiliated Colleges & Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9th January, 2018.)

A.C./4.49/14/06/2018

No. UG/ 7-6 -A of 2018

MUMBAI-400 032

6" June, 2018 July

Mulanh

(Dr. Dinesh Kamble)

I/c REGISTRAR

Copy forwarded with Compliments for information to:-

- 1) The I/c Dean, Faculty of Science & Technology,
- 2) The Chairman, Ad-hoc Board of Studies in Information Technology,
- 3) The Director, Board of Examinations and Evaluation,
- 4) The Director, Board of Students Development,
- 5) The Co-Ordinator, University Computerization Centre,

(Dr. Dinesh Kamble) I/c REGISTRAR

Academic Council 14/06/2018 Item No:4.49



	Semester – 5				
Course Code	Course Type	Course Title	Credits		
USIT501	Skill Enhancement Course	Software Project Management	2		
USIT502	Skill Enhancement Course	Internet of Things	2		
USIT503	Skill Enhancement Course	Advanced Web Programming	2		
USIT504	Discipline Specific Elective	Artificial Intelligence	2		
USIT505	(Any One)	Linux System Administration	2		
USIT506	Discipline Specific Elective	Enterprise Java	2		
USIT507	(Any One)	Next Generation Technologies	Z		
USIT5P1	Skill Enhancement Course	Project Dissertation	2		
	Practical				
USIT5P2	Skill Enhancement Course	Internet of Things Practical	2		
	Practical				
USIT5P3	Skill Enhancement Course	Advanced Web Programming Practical	2		
	Practical				
USIT5P4	Discipline Specific Elective	Artificial Intelligence Practical	2		
USIT5P5	Practical (Any One)*	Linux Administration Practical	2		
USIT5P6	Discipline Specific Elective	Enterprise Java Practical	2		
USIT5P7	Practical (Any One)*	Next Generation Technologies Practical	Z		
		Total Credits	20		

(All the practical mentioned in the syllabi are compulsory as per the courses chosen)

	Semester – 6				
Course Code	Course Type	Course Title	Credits		
USIT601	Skill Enhancement Course	Software Quality Assurance	2		
USIT602	Skill Enhancement Course	Security in Computing	2		
USIT603	Skill Enhancement Course	Business Intelligence	2		
USIT604	Discipline Specific Elective	Principles of Geographic Information Systems	2		
USIT605	(Any One)	Enterprise Networking			
USIT606	Discipline Specific Elective	IT Service Management	2		
USIT607	(Any One)	Cyber Laws	2		
USIT6P1	Skill Enhancement Course Practical	Project Implementation	2		
USIT6P2	Skill Enhancement Course Practical	Security in Computing Practical	2		
USIT6P3	Skill Enhancement Course Practical	Business Intelligence Practical	2		
USIT6P4	Discipline Specific Elective	Principles of Geographic Information Systems Practical	2		
USIT6P5	Practical (Any One)*	Enterprise Networking Practical			
USIT6P6	Skill Enhancement Course Practical	Advanced Mobile Programming	2		
		Total Credits	20		

*The choice of Practical course is based on the theory Course. For Semester V, USIT504, USIT505, USIT506 and USIT507, the practical courses are USIT5P4, USIT5P5 USIT5P6, USIT5P7. For Semester VI, USIT604, USIT605 the practical courses are USIT6P4, USIT6P5 respectively. Practical Course USIT6P6 is compulsory.

SEMESTER V

B. Sc. (Information Tech	Semester – V		
Course Name: Software Project	Management	Course Co	ode: USIT501
Periods per week (1 Period is 50	minutes)		5
Credits		2	
			Marks
Evaluation System	21/2	75	
	Internal		25

Unit	Details	Lectures
I	Introduction to Software Project Management:Introduction, Why is Software Project Management Important? What is a Project? Software Projects versus Other Types of Project, Contract Management and Technical Project Management, Activities Covered by Software Project Management, Plans, Methods and Methodologies, Some Ways of Categorizing Software Projects, Project Charter, Stakeholders, Setting Objectives, The Business Case, Project Success and Failure, What is Management? Management Control, Project Management Life Cycle, Traditional versus Modern Project Management Practices. Project Evaluation and Programme Management: Introduction, Business Case, Project Portfolio Management, Evaluation of Individual Projects, Cost–benefit Evaluation Techniques, Risk Evaluation, Programme Management, Managing the Allocation of Resources within Programme, Strategic Programme Management, Creating a Programme, Aids to Programme Management. An Overview of Project Planning:Introduction to Step Wise Project Planning, Step 0: Select Project, Step 1: Identify Project Scope and Objectives, Step 2: Identify Project Infrastructure, Step 3: Analyse Project Characteristics, Step 4: Identify Project Products and Activities, Step 5: Estimate Effort for Each Activity, Step 6: Identify Activity Risks, Step 7: Allocate Resources, Step 8: Review/Publicize Plan, Steps 9 and 10: Execute Plan/Lower Levels of Planning	12
II	Selection of an Appropriate Project Approach:Introduction, Build or Buy? Choosing Methodologies and Technologies, Software Processes and Process Models, Choice of Process Models, Structure versus Speed of Delivery, The Waterfall Model, The Spiral Model, Software Prototyping, Other Ways of Categorizing Prototypes, Incremental Delivery, Atern/Dynamic Systems Development Method, Rapid Application Development, Agile Methods, Extreme Programming (XP), Scrum, Lean Software Development, Managing Iterative Processes, Selecting the Most Appropriate Process Model. Software Effort Estimation:Introduction, Where are the Estimates Done? Problems with Over- and Under-Estimates, The Basis for Software Estimating, Software Effort Estimation Techniques, Bottom- up Estimating, The Top-down Approach and Parametric Models, Expert Judgement, Estimating by Analogy, Albrecht Function Point	12

	Analysis, Function Points Mark II, COSMIC Full Function Points, COCOMO II: A Parametric Productivity Model, Cost Estimation, Staffing Pattern, Effect of Schedule Compression, Capers Jones Estimating Rules of Thumb.	
III	 Activity Planning: Introduction, Objectives of Activity Planning, When to Plan, Project Schedules, Projects and Activities, Sequencing and Scheduling Activities, Network Planning Models, Formulating a Network Model, Adding the Time Dimension, The Forward Pass, Backward Pass, Identifying the Critical Path, Activity Float, Shortening the Project Duration, Identifying Critical Activities, Activity-on-Arrow Networks. Risk Management: Introduction, Risk, Categories of Risk, Risk Identification, Risk Assessment, Risk Planning, Risk Management, Evaluating Risks to the Schedule, Boehm's Top 10 Risks and Counter Measures, Applying the PERT Technique, Monte Carlo Simulation, Critical Chain Concepts. Resource Allocation: Introduction, Nature of Resources, Identifying Resource Requirements, Scheduling Resources, Creating Critical Paths, Counting the Cost, Being Specific, Publishing the Resource Schedule, Cost Schedules, Scheduling Sequence. 	12
IV	 Monitoring and Control: Introduction, Creating the Framework, Collecting the Data, Review, Visualizing Progress, Cost Monitoring, Earned Value Analysis, Prioritizing Monitoring, Getting the Project Back to Target, Change Control, Software Configuration Management (SCM). Managing Contracts: Introduction, Types of Contract, Stages in Contract Placement, Typical Terms of a Contract, Contract Management, Acceptance. Managing People in Software Environments: Introduction, Understanding Behaviour, Organizational Behaviour: A Background, Selecting the Right Person for the Job, Instruction in the Best Methods, Motivation, The Oldham–Hackman Job Characteristics Model, Stress, Stress Management, Health and Safety, Some Ethical and Professional Concerns. 	12
V	 Working in Teams: Introduction, becoming a Team, Decision Making, Organization and Team Structures, Coordination Dependencies, Dispersed and Virtual Teams, Communication Genres, Communication Plans, Leadership. Software Quality: Introduction, The Place of Software Quality in Project Planning, Importance of Software Quality, Defining Software Quality, Software Quality Models, ISO 9126, Product and Process Metrics, Product versus Process Quality Management, Quality Management Systems, Process Capability Models, Techniques to Help Enhance Software Quality, Testing, Software Reliability, Quality Plans. Project Closeout: Introduction, Reasons for Project Closure, Project 	12

Clo	osure	Process,	Performing	a	Financial	Closure,	Project	Closeout	
Re	port.								

Books a	Books and References:								
Sr. No.	Title	Author/s	Publisher	Edition	Year				
1.	Software Project Management	Bob Hughes, Mike Cotterell, Rajib Mall	ТМН	6 th	2018				
2.	Project Management and Tools & Technologies – An overview	Shailesh Mehta	SPD	1st	2017				
3.	Software Project Management	Walker Royce	Pearson		2005				

B. Sc. (Information Technology)	Semester – V
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Course Name: Internet of Thing	Course Code: USIT502		
Periods per week (1 Period is 50	5		
Credits		2	
	Hours	Marks	
Evaluation System	valuation System Theory Examination		
		25	

I The Internet of Things: An Overview: The Flavour of the Internet of Things, The "Internet" of "Things", The Technology of the Internet of Things, Enchanted Objects, Who is Making the Internet of Things? Design Principles for Connected Devices: Calm and Ambient Technology, Magic as Metaphor, Privacy, Keeping Secrets, Whose Data Is It Anyway? Web Thinking for Connected Devices, Small Pieces, Loosely Joined, First-Class Citizens on The Internet, Graceful Degradation, Affordances. 12 Internet Principles: Internet Communications: An Overview, IP, TCP, The IP Protocol Suite (TCP/IP), UDP, IP Addresses, DNS, Static IP Address Assignment, Dynamic IP Address Assignment, IPv6, MAC Addresses, TCP and UDP Ports, An Example: HTTP Ports, Other Common Ports, Application Layer Protocols, HTTP, HTTPS: Encrypted HTTP, Other Application Layer Protocols. 11 Thinking About Prototyping: Sketching, Familiarity, Costs versus Ease of Prototyping, Prototypes and Production, Changing Embedded Platform, Physical Prototypes and Mass Personalisation, climbing into the Cloud, Open Source versus Closed Source, Closed Source for Mass Market Projects, Tapping into the Community. 12 Prototyping Embedded Devices: Electronics, Sensors, Actuators, Scaling Up the Electronics, Embedded Computing Basics, Microcontrollers, System-on-Chips, Choosing Your Platform, Arduino, developing on the Arduino, Some Notes on the Hardware, Openness. 12 III Prototyping the Physical Design: Preparation Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, CNC Milling, Repurposing/Recycling. 12 III Prototyping Online Components: Getting Started with an API, Mashing Up APIs, Scraping, Legaliti	Unit	Details	Lectures
HTTPS: Encrypted HTTP, Other Application Layer Protocols.IIThinking About Prototyping: Sketching, Familiarity, Costs versus Ease of Prototyping, Prototypes and Production, Changing Embedded Platform, Physical Prototypes and Mass Personalisation, climbing into the Cloud, Open Source versus Closed Source, Why Closed? Why Open? Mixing Open and Closed Source, Closed Source for Mass Market Projects, Tapping into the Community. Prototyping Embedded Devices: Electronics, Sensors, Actuators, Scaling Up the Electronics, Embedded Computing Basics, Microcontrollers, System-on-Chips, Choosing Your Platform, Arduino, developing on the Arduino, Some Notes on the Hardware, Openness, Raspberry Pi, Cases and Extension Boards, Developing on the Raspberry Pi, Some Notes on the Hardware, Openness.12IIIPrototyping the Physical Design: Preparation, Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, CNC Milling, Repurposing/Recycling. Prototyping Online Components: Getting Started with an API, Mashing Up APIs, Scraping, Legalities, writing a New API, Clockodillo, Security, implementing the API, Using Curl to Test, Going Further, Real-Time Reactions, Polling, Comet, Other Protocols, MQ Telemetry Transport, Extensible Messaging and Presence12		 The Internet of Things: An Overview: The Flavour of the Internet of Things, The "Internet" of "Things", The Technology of the Internet of Things, Enchanted Objects, Who is Making the Internet of Things? Design Principles for Connected Devices: Calm and Ambient Technology, Magic as Metaphor, Privacy, Keeping Secrets, Whose Data Is It Anyway? Web Thinking for Connected Devices, Small Pieces, Loosely Joined, First-Class Citizens on The Internet, Graceful Degradation, Affordances. Internet Principles: Internet Communications: An Overview, IP, TCP, The IP Protocol Suite (TCP/IP), UDP, IP Addresses, DNS, Static IP Address Assignment, IPv6, MAC Addresses, TCP and UDP Ports, An Example: HTTP Ports, Other Common Ports, 	
Ease of Prototyping, Prototypes and Production, Changing Embedded Platform, Physical Prototypes and Mass Personalisation, climbing into the Cloud, Open Source versus Closed Source, Why Closed? Why Open? Mixing Open and Closed Source, Closed Source for Mass Market Projects, Tapping into the Community. Prototyping Embedded Devices: Electronics, Sensors, Actuators, Scaling Up the Electronics, Embedded Computing Basics, Microcontrollers, System-on-Chips, Choosing Your Platform, Arduino, developing on the Arduino, Some Notes on the Hardware, Openness, Raspberry Pi, Cases and Extension Boards, Developing on the Raspberry Pi, Some Notes on the Hardware, Openness.12III Prototyping the Physical Design: Preparation, Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, CNC Milling, Repurposing/Recycling. Prototyping Online Components: Getting Started with an API, Mashing Up APIs, Scraping, Legalities, writing a New API, Clockodillo, Security, implementing the API, Using Curl to Test, Going Further, Real-Time Reactions, Polling, Comet, Other Protocols, MQ Telemetry Transport, Extensible Messaging and Presence12		HTTPS: Encrypted HTTP, Other Application Layer Protocols.	
IIIPrototyping the Physical Design: Preparation, Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, Hinges and Joints, 3D Printing, Types of 3D Printing, Software, CNC Milling, Repurposing/Recycling.12Prototyping Online Components:Getting Started with an API, Mashing Up APIs, Scraping, Legalities, writing a New API, Clockodillo, Security, implementing the API, Using Curl to Test, Going Further, Real-Time Reactions, Polling, Comet, Other Protocols, MQ Telemetry Transport, Extensible Messaging and Presence12	Π	Ease of Prototyping, Prototypes and Production, Changing Embedded Platform, Physical Prototypes and Mass Personalisation, climbing into the Cloud, Open Source versus Closed Source, Why Closed? Why Open? Mixing Open and Closed Source, Closed Source for Mass Market Projects, Tapping into the Community. Prototyping Embedded Devices: Electronics, Sensors, Actuators, Scaling Up the Electronics, Embedded Computing Basics, Microcontrollers, System-on-Chips, Choosing Your Platform, Arduino, developing on the Arduino, Some Notes on the Hardware, Openness, Raspberry Pi, Cases and Extension Boards, Developing on	12
IVTechniques for Writing Embedded Code: Memory Management,12		 Prototyping the Physical Design: Preparation, Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, Hinges and Joints, 3D Printing, Types of 3D Printing, Software, CNC Milling, Repurposing/Recycling. Prototyping Online Components: Getting Started with an API, Mashing Up APIs, Scraping, Legalities, writing a New API, Clockodillo, Security, implementing the API, Using Curl to Test, Going Further, Real-Time Reactions, Polling, Comet, Other Protocols, MQ Telemetry Transport, Extensible Messaging and Presence Protocol, Constrained Application Protocol. 	

	Types of Memory, Making the Most of Your RAM, Performance and Battery Life, Libraries, Debugging. Business Models: A Short History of Business Models, Space and Time, From Craft to Mass Production, The Long Tail of the Internet, Learning from History, The Business Model Canvas, Who Is the Business Model For? Models, Make Thing, Sell Thing, Subscriptions, Customisation, be a Key Resource, Provide Infrastructure: Sensor Networks, take a Percentage, Funding an Internet of Things Startup, Hobby Projects and Open Source, Venture Capital, Government	
V	 Funding, Crowdfunding, Lean Startups. Moving to Manufacture: What Are You Producing? Designing Kits, Designing Printed circuit boards, Software Choices, The Design Process, Manufacturing Printed Circuit Boards, Etching Boards, Milling Boards. Assembly, Testing, Mass-Producing the Case and Other Fixtures, Certification, Costs, Scaling Up Software, Deployment, Correctness and Maintainability, Security, Performance, User Community. Ethics: Characterizing the Internet of Things, Privacy, Control, Disrupting Control, Crowdsourcing, Environment, Physical Thing, Electronics, Internet Service, Solutions, The Internet of Things as Part of the Solution, Cautious Optimism, The Open Internet of Things Definition. 	12

Books a	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	DesigningtheInternetof	Adrian McEwen,	WILEY	First	2014	
	Things	Hakim Cassimally				
2.	Internet of Things –	Raj Kamal	McGraw	First	2017	
	Architecture and Design		Hill			
3.	Getting Started with the	CunoPfister	O'Reilly	Sixth	2018	
	Internet of Things					
4.	Getting Started with	Matt Richardson and	SPD	Third	2016	
	Raspberry Pi	Shawn Wallace				

B. Sc. (Information Tech	Semester – V		
Course Name: Advanced Web P	rogramming	Course Code: USIT503	
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation SystemTheory Examination		21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Introducing .NET : The .NET Framework, C#, VB, and the .NET Languages, The Common Language Runtime, The .NET Class Library.	
	The C# Language : C# Language Basics, Variables and Data Types, Variable Operations, Object-Based Manipulation, Conditional Logic, Loops, Methods.	12
	Types, Objects, and Namespaces : The Basics About Classes, Building a Basic Class, Value Types and Reference Types, Understanding Namespaces and Assemblies, Advanced Class Programming.	
Π	 Web Form Fundamentals: Writing Code, Using the Code-Behind Class, Adding Event Handlers, Understanding the Anatomy of an ASP.NET Application, Introducing Server Controls, Using the Page Class, Using Application Events, Configuring an ASP.NET Application. Form Controls: Stepping Up to Web Controls, Web Control Classes, List Controls, Table Controls, Web Control Events and AutoPostBack, Validation, Understanding Validation, Using the Validation Controls, Rich Controls, The Calendar, The AdRotator, Pages with Multiple Views, User Controls and Graphics, User Controls, Dynamic Graphics, The Chart Control, Website Navigation: Site Maps, URL Mapping and Routing, The SiteMapPath Control, The TreeView Control, The Menu Control. 	12
III	 Error Handling, Logging, and Tracing: Avoiding Common Errors, Understanding Exception Handling, Handling Exceptions, Throwing Your Own Exceptions, Using Page Tracing State Management: Understanding the Problem of State, Using View State, Transferring Information Between Pages, Using Cookies, Managing Session State, Configuring Session State, Using Application State, Comparing State Management Options Styles, Themes, and Master Pages: Styles, Themes, Master Page Basics, Advanced Master Pages, 	12
IV	 ADO.NET Fundamentals: Understanding Databases, Configuring Your Database, Understanding SQL Basics, Understanding the Data Provider Model, Using Direct Data Access, Using Disconnected Data Access. Data Binding: Introducing Data Binding, Using Single-Value Data Binding, Using Repeated-Value Data Binding, Working with Data 	12

	Source Controls, The Data Controls : The GridView, Formatting the GridView, selecting a GridView Row, Editing with the GridView, Sorting and Paging the GridView, Using GridView Templates, The DetailsView and FormView	
V	 XML: XML Explained, The XML Classes, XML Validation, XML Display and Transforms. Security Fundamentals: Understanding Security Requirements, Authentication and Authorization, Forms Authentication, Windows Authentication. ASP.NET AJAX: Understanding Ajax, Using Partial Refreshes, Using Progress Notification, Implementing Timed Refreshes, Working with the ASP.NET AJAX Control Toolkit. 	12

Books a	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Beginning ASP.NET 4.5 in C#	Matthew MacDonald	Apress		2012	
2.	C# 2015	Anne Bohem and Joel Murach	Murach	Third	2016	
3.	Murach's ASP.NET 4.6 Web Programming in C#2015	Mary Delamater and Anne Bohem	SPD	Sixth	2016	
4.	ASP.NET 4.0 programming	J. Kanjilal	Tata McGraw- Hill		2011	
5.	Programming ASP.NET	D.Esposito	Microsoft Press (Dreamtech)		2011	
6.	Beginning Visual C# 2010	K. Watson, C. Nagel, J.H Padderson, J.D. Reid, M.Skinner	Wrox (Wiley)		2010	

B. Sc. (Information Tech	Semester – V		
Course Name: Artificial Intellige	ence	Course Code: USIT504	
		(I	Elective I)
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Introduction: What is Artificial Intelligence? Foundations of AI,	
	history, the state of art AI today.	12
	Intelligent Agents: agents and environment, good behavior, nature of	14
	environment, the structure of agents.	
II	Solving Problems by Searching: Problem solving agents, examples	
	problems, searching for solutions, uninformed search, informed search	
	strategies, heuristic functions.	12
	Beyond Classical Search: local search algorithms, searching with	
	non-deterministic action, searching with partial observations, online search agents and unknown environments.	
III	Adversarial Search: Games, optimal decisions in games, alpha-beta	
	pruning, stochastic games, partially observable games, state-of-the-are	
	game programs.	12
	Logical Agents: Knowledge base agents, The Wumpus world, logic, propositional logic, propositional theorem proving, effective propositional model checking, agents based on propositional logic.	12
IV	First Order Logic: Syntax and semantics, using First Order Logic,	
	Knowledge engineering in First Order Logic.	10
	Inference in First Order Logic: propositional vs. First Order, unification and lifting, forward and backward chaining, resolution.	12
V	Planning: Definition of Classical Planning, Algorithms for planning	
	as state space search, planning graphs, other classical planning	
	approaches, analysis of planning approaches, Time, Schedules and	
	resources, hierarchical planning, Planning and Acting in Nondeterministic	12
	Domains, multiagent planning,	14
	Knowledge Representation: Categories and Objects, events, mental	
	events and objects, reasoning systems for categories, reasoning with default information, Internet shopping world	

Books a	Books and References:						
Sr.	Title	Author/s	Publisher	Edition	Year		
No.							
1.	Artificial Intelligence:	Stuart Russel and	Pearson	3 rd	2015		
	A Modern Approach	Peter Norvig					

2.	A First Course in	Deepak Khemani	ТМН	First	2017
	Artificial Intelligence				
3.	Artificial Intelligence:	Rahul Deva	Shroff	1^{st}	2018
	A Rational Approach		publishers		
4.	Artificial Intelligence	Elaine Rich, Kevin	TMH	3 rd	2009
		Knight and			
		Shivashankar Nair			
5.	Artificial Intelligence &	Anandita Das	SPD	1^{st}	2013
	Soft Computing for	Bhattacharjee			
	Beginners				

B. Sc. (Information Tech	Semester – V		
Course Name: Linux System Ad	ministration	Course Code: USIT505	
		(E	Clective I)
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Introduction to Red Hat Enterprise Linux: Linux, Open Source	
	and Red Hat, Origins of Linux, Distributions, Duties of Linux System	
	Administrator.	
	Command Line: Working with the Bash Shell, Getting the Best of	
	Bash, Useful Bash Key Sequences, Working with Bash History,	
	Performing Basic File System Management Tasks, Working with	
	Directories, Piping and Redirection, Finding Files	
	System Administration Tasks: Performing Job Management Tasks, System and Process Monitoring and Management, Managing	
	Processes with ps, Sending Signals to Processes with the kill	12
	Command, using top to Show Current System Activity, Managing	14
	Process Niceness, Scheduling Jobs, Mounting Devices, Working with	
	Links, Creating Backups, Managing Printers, Setting Up System	
	Logging, Setting Up Rsyslog, Common Log Files, Setting Up	
	Logrotate	
	Managing Software: Understanding RPM, Understanding Meta	
	Package Handlers, Creating Your Own Repositories, Managing	
	Repositories, Installing Software with Yum, Querying Software,	
	Extracting Files from RPM Packages	
II	Configuring and Managing Storage: Understanding Partitions and	
	Logical Volumes, Creating Partitions, Creating File Systems, File	
	Systems Overview, Creating File Systems, Changing File System Properties, Checking the File System Integrity, Mounting File	
	Systems Automatically Through fstab, Working with Logical	
	Volumes, Creating Logical Volumes, Resizing Logical Volumes,	
	Working with Snapshots, Replacing Failing Storage Devices, Creating	
	Swap Space, Working with Encrypted Volumes	
		12
	Connecting to the Network: Understanding NetworkManager,	14
	Working with Services and Runlevels, Configuring the Network with	
	NetworkManager, Working with system-config-network,	
	NetworkManager Configuration Files, Network Service Scripts,	
	Networking from the Command Line, Troubleshooting Networking,	
	Setting Up IPv6, Configuring SSH, Enabling the SSH Server, Using the SSH Client, Using PuTTY on Windows Machines, Configuring	
	the SSH Client, Using PuTTY on Windows Machines, Configuring Key-Based SSH Authentication, Using Graphical Applications with	
	SSH, Using SSH Port Forwarding, Configuring VNC Server Access	

	Working with Users, Groups, and Permissions: Managing Users and Groups, Commands for User Management, Managing Passwords, Modifying and Deleting User Accounts, Configuration Files, Creating Groups, Using Graphical Tools for User, and Group Management, Using External Authentication Sources, the Authentication Process, sssd, nsswitch, Pluggable Authentication Modules, Managing Permissions, the Role of Ownership, Basic Permissions: Read, Write, and Execute, Advanced Permissions, Working with Access Control	
	Lists, Setting Default Permissions with umask, Working with Attributes	
III	Securing Server with iptables: Understanding Firewalls, Setting Up a Firewall with system-config-firewall, Allowing Services, Trusted Interfaces, Masquerading, Configuration Files, Setting Up a Firewall with iptables, Tables, Chains, and Rules, Composition of Rule, Configuration Example, Advanced iptables Configuration, Configuring Logging, The Limit Module, Configuring NAT Setting Up Cryptographic Services: Introducing SSL, Proof of Authenticity: The Certificate Authority, Managing Certificates with openssl, Creating a Signing Request, Working with GNU Privacy Guard, Creating GPG Keys, Key Transfer, Managing GPG Keys, Encrypting Files with GPG, GPG Signing, Signing RPM Files Configuring Server for File Sharing: What is NFS? Advantages and Disadvantages of NFS, Configuring NFS4, Setting Up NFSv4, Mounting an NFS Share, Making NFS Mounts Persistent, Configuring Automount, Configuring Samba, Setting Up a Samba File Server, Samba Advanced Authentication Options, Accessing Samba Shares, Offering FTP Services.	12
IV	 Configuring DNS and DHCP:Introduction to DNS, The DNS Hierarchy, DNS Server Types, The DNS Lookup Process, DNS Zone Types, Setting Up a DNS Server, Setting Up a Cache-Only Name Server, Setting Up a Primary Name Server, Setting Up a Secondary Name Server, Understanding DHCP, Setting Up a DHCP Server Setting Up a Mail Server: Using the Message Transfer Agent, the Mail Delivery Agent, the Mail User Agent, Setting Up Postfix as an SMTP Server, Working with Mutt, Basic Configuration, Internet Configuration, Configuring Dovecot for POP and IMAP Configuring Apache on Red Hat Enterprise Linux: Configuring the Apache Web Server, creating a Basic Website, Understanding the Apache Configuration Files, Apache Log Files, Working with Virtual Hosts, Securing the Web Server with TLS Certificates, Configuring Authentication, Setting Up Authentication with .htpasswd, Configuring LDAP Authentication, Setting Up MySQL 	12

 Working with Script Arguments, A. Substitution, Substitution Operator Pattern Matching, Performing Cald Using ifthenelse, Using case, U Configuring booting with GRUB. High-Availability Clustering: I Workings of High Availability, Hi Hat High-Availability Add-on Sc Cluster-Based Services, Setting Storage, Installing the Red Hat H the Initial State of the Cluster Properties, Configuring a Quorum Resources and Services, Troubles Configuring GFS2 File Systems Setting Up an Installation Server an Installation Server, Setting Up Boot, Installing the TFTP Server, Creating the TFTP PXE Server Using a Kickstart File to Performance. 	Working with Variables and Input, bles, Subshells, and Sourcing, Asking for Input, Using Command s, Changing Variable Content with culations, Using Control Structures, Jsing while, Using until, Using for, High-Availability Clustering, The gh-Availability Requirements, Red oftware, Components, Configuring Up Bonding, Setting Up Shared igh Availability Add-On, Building , Configuring Additional Cluster Disk, Setting Up Fencing, Creating hooting a Nonoperational Cluster, :: Configuring a Network Server as a TFTP and DHCP Server for PXE Configuring DHCP for PXE Boot, Content, creating a Kickstart File, form an Automated, Installation, h, system-config-kickstart, Making
e	n, system-config-kickstart, Making

Books a	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Red Hat Enterprise	Sander van Vugt	John		2013	
	Linux6 Administration		Wiley			
			and Sons			
2.	Red hat Linux	Terry Collings and	Wiley	3 rd		
	Networking and System	Kurt Wall				
	Administration					
3.	Linux Administration: A	Wale Soyinka	TMH	Fifth		
	Beginner's Guide			Edition		

B. Sc. (Information Tech	Semester – V		
Course Name: Enterprise Java	Course Code: USIT506		
			lective II)
Periods per week (1 Period is 50	minutes)	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Understanding Java EE: WhatisanEnterpriseApplication?	
	Whatisjavaenterpriseedition? JavaEETechnologies, JavaEEevolution,	
	Glassfishserver	
	JavaEE Architecture,Serverand Containers:	
	TypesofSystemArchitecture, JavaEEServer, JavaEEContainers.	
	Introduction to Java Servlets: TheNeedforDynamicContent,	
	JavaServletTechnology, WhyServlets? WhatcanServletsdo?	12
	Servlet API and Lifecycle: JavaServletAPI, TheServletSkeleton,	
	TheServletLifeCycle, ASimpleWelcomeServlet	
	WorkingwithServlets: GettingStarted,	
	UsingAnnotationsInsteadofDeploymentDescriptor.	
	Working with Databases: WhatIsJDBC? JDBCArchitecture,	
	AccessingDatabase, TheServletGUI and DatabaseExample.	
II	Request Dispatcher: Resquest dispatcher Interface, Methods of	
	Requestdispatcher, Requestdispatcher Application.	
	COOKIES: KindsofCookies, WhereCookiesAreUsed?	
	CreatingCookiesUsingServlet,	
	DynamicallyChangingtheColorsofAPage	
	SESSION: WhatAreSessions? LifecycleofHttpSession,	
	SessionTrackingWithServletAPI, AServlet Session Example	12
	Workingwith Files: UploadingFiles,	
	CreatinganUploadFileApplication, DownloadingFiles,	
	CreatingaDownloadFileApplication.	
	Workingwith Non-Blocking I/O: CreatingaNon-	
	BlockingReadApplication, CreatingTheWeb Application,	
	CreatingJavaClass, Creating Servlets, Retrieving The File, Creating	
TTT	index.jsp	
III	Introduction To Java ServerPages: WhyuseJava ServerPages?	
	DisadvantagesOfJSP, JSPv\sServlets, LifeCycleofaJSPPage,	
	HowdoesaJSPfunction? HowdoesJSPexecute? AboutJava ServerPages	
	Getting Started With Java ServerPages: Comments, JSPDocument, ISPElamenta, ISPCLIERamenta	
	JSPElements, JSPGUIExample.ActionElements:IncludingotherFiles,	12
	ForwardingJSPPagetoAnotherPage,	
	PassingParametersforotherActions, LoadingaJavabean.	
	Implicit Objects, Scopeand ElExpressions: ImplicitObjects,	
	CharacterQuotingConventions,	

	UnifiedExpressionLanguage[UnifiedEl], ExpressionLanguage.	
	Java Server Pages Standard Tag Libraries:	
	WhatiswronginusingJSPScriptletTags?	
	HowJSTLFixesJSPScriptlet'sShortcomings? DisadvantagesOfJSTL,	
IV	TagLibraries. Introduction To EnterpriseJavabeans: EnterpriseBeanArchitecture,	
1 V	BenefitsofEnterpriseBean, TypesofEnterpriseBean,	
	AccessingEnterpriseBeans, EnterpriseBeanApplication,	
	PackagingEnterpriseBeans	
	Workingwith Session Beans: WhentouseSessionBeans?	
	TypesofSessionBeans, RemoteandLocalInterfaces,	
	AccessingInterfaces, LifecycleofEnterpriseBeans,	
	PackagingEnterpriseBeans, Exampleof StatefulSessionBean, Example	
	ofStatelessSessionBean, Example of SingletonSessionBeans.	
	Working with Message DrivenBeans:	12
	LifecycleofaMessageDrivenBean, UsesofMessageDrivenBeans, TheMessage DrivenBeansExample.	
	Interceptors: Request andInterceptor, Defining An Interceptor,	
	AroundInvokeMethod, ApplyingInterceptor, Adding An Interceptor	
	To An Enterprise Bean, Build and Run the Web Application.	
	Java Naming and Directory Interface: What is Naming Service?	
	What is Directory Service? What is Java Naming and Directory	
	interface? Basic Lookup, JNDI Namespace in Java EE, Resources and	
	JNDI, Datasource Resource Definition in Java EE.	
V	Persistence, Object/Relational Mapping And JPA:	
	WhatisPersistence? PersistenceinJava,	
	CurrentPersistenceStandardsinJava, WhyanotherPersistenceStandards? Object/RelationalMapping,	
	Introduction to JavaPersistence API: TheJavaPersistenceAPI,	
	JPA,ORM,DatabaseandtheApplication, ArchitectureofJPA,	
	HowJPAWorks? JPA Specifications.	
	1	
	Writing JPA Application: ApplicationRequirementSpecifications,	
	SoftwareRequirements, TheApplicationDevelopmentApproach,	
	SoftwareRequirements,TheApplicationDevelopmentApproach,CreatingDatabaseandTablesinMysql,creatingaWebApplication,	
	SoftwareRequirements,TheApplicationDevelopmentApproach,CreatingDatabaseandTablesinMysql,creatingaWebApplication,AddingtheRequiredLibraryFiles,creatingaJavabeanClass,	
	SoftwareRequirements,TheApplicationDevelopmentApproach, creatingDatabaseandTablesinMysql, creatingaWebApplication, creatingaJavabeanClass, CreatingPersistenceUnit[Persistence.Xml],CreatingJSPS,	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, creatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, creatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, CreatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.IntroductiontoHibernate:WhatisHibernate? WhyHibernate?	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, CreatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.IntroductiontoHibernate:WhatisHibernate? ComponentsofHibernate, ComponentsofHibernate,	12
	SoftwareRequirements, TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, creatingaJavabeanClass, CreatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication. Introduction to Hibernate: WhatisHibernate? WhyHibernate? Hibernate,DatabaseandTheApplication, ComponentsofHibernate, ArchitectureofHibernate, HowHibernateWorks?	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, CreatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.IntroductiontoHibernate:WhatisHibernate? WhyHibernate?Hibernate, DatabaseandTheApplication, ArchitectureofHibernate, HowHibernateWorks?ComponentsofHibernate, WritingHibernateApplication:	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, CreatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.IntroductiontoHibernate:WhatisHibernate? WhyHibernate?Hibernate,DatabaseandTheApplication, ArchitectureofHibernate, HowHibernateWorks?ComponentsofHibernate, SoftwareRequirements, SoftwareRequirements,	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, AddingtheRequiredLibraryFiles, CreatingPersistenceUnit[Persistence.Xml], CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.IntroductiontoHibernate:WhatisHibernate? WhyHibernate?Hibernate, DatabaseandTheApplication, ArchitectureofHibernate, HowHibernateWorks?ComponentsofHibernate, WritingHibernateApplication:	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, creatingDatabaseandTablesinMysql,creatingaWebApplication, creatingaWebApplication, AddingtheRequiredLibraryFiles,AddingtheRequiredLibraryFiles,creatingaJavabeanClass, creatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.Introduction to Hibernate:WhatisHibernate?WhyHibernate, DatabaseandTheApplication, ArchitectureofHibernate, HowHibernateWorks?WritingHibernateApplication: ApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql, creatingaWebApplication, creatingaJavabeanClass,	12
	SoftwareRequirements,TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql,creatingaWebApplication, creatingaWebApplication, AddingtheRequiredLibraryFiles,AddingtheRequiredLibraryFiles,creatingaJavabeanClass, CreatingJSPS, TheJPAApplicationStructure, RunningtheJPAApplication.Introduction to Hibernate:WhatisHibernate?Hibernate,DatabaseandTheApplication, ComponentsofHibernate, ArchitectureofHibernate, HowHibernateWorks?WritingHibernateApplication: ApplicationRequirementSpecifications, TheApplicationDevelopmentApproach, CreatingDatabaseandTablesinMysql,creatingaWebApplication, CreatingaWebApplication,	12

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Java EE 7 For Beginners	Sharanam Shah, Vaishali Shah	SPD	First	2017
2.	Java EE 8 Cookbook: Build reliable applications with the most robust and mature technology for enterprise development	Elder Moraes	Packt	First	2018
3.	Advanced Java Programming	Uttam Kumar Roy	Oxford Press		2015

B. Sc. (Information Technology)		Semester – V	
Course Name: Next Generation Technologies		Course Code: USIT507	
			lective II)
Periods per week (1 Period is 50 minutes), 5		5	
Credits		2	
		Hours	Marks
Evaluation SystemTheory Examination		21 /2	75
	Internal		25

Unit	Details	Lectures
I	 Big Data: Getting Started, Big Data, Facts About Big Data, Big Data Sources, Three Vs of Big Data, Volume, Variety, Velocity, Usage of Big Data, Visibility, Discover and Analyze Information, Segmentation and Customizations, Aiding Decision Making, Innovation, Big Data Challenges, Policies and Procedures, Access to Data, Technology and Techniques, Legacy Systems and Big Data, Structure of Big Data, Data Storage, Data Processing, Big Data Technologies NoSQL: SQL, NoSQL, Definition, A Brief History of NoSQL, ACID vs. BASE, CAP Theorem (Brewer's Theorem), The BASE, NoSQL Advantages and Disadvantages, Advantages of NoSQL, Disadvantages of NoSQL, SQL vs. NoSQL Databases, Categories of NoSQL Databases Introducing MongoDB: History, MongoDB Design Philosophy, Speed, Scalability, and Agility, Non-Relational Approach, JSON-Based Document Store, Performance vs. Features, Running the Database Anywhere, SQL Comparison 	12
II	The MongoDB Data Model: The Data Model, JSON and BSON, The Identifier (_id), Capped Collection, Polymorphic Schemas, Object- Oriented Programming, Schema EvolutionUsing MongoDB Shell: Basic Querying, Create and Insert, Explicitly Creating Collections, Inserting Documents Using Loop, Inserting by Explicitly Specifying _id, Update, Delete, Read, Using Indexes, Stepping Beyond the Basics, Using Conditional Operators, Regular Expressions, MapReduce, aggregate(), Designing an Application's Data Model, Relational Data Modeling and Normalization, MongoDB Document Data Model ApproachMongoDBArchitecture: Core	12

	Processes,mongod,mongo,mongos,MongoDB Tools,Standalone Deployment,Replication,Master/Slave Replication,Replica Set,Implementing Advanced Clustering with Replica Sets,Sharding,Sharding Components,Data Distribution Process,Data Balancing Process,Operations,Implementing Sharding,Controlling Collection Distribution (Tag-Based Sharding),Points to Remember When Importing Data in a ShardedEnvironment,Monitoring for Sharding,Monitoring the Config Servers,Production Cluster Architecture,Scenario 1,Scenario 2,Scenario 3,Scenario 4	
III	 MongoDB Storage Engine: Data Storage Engine, Data File (Relevant for MMAPv1), Namespace (.ns File), Data File (Relevant for WiredTiger), Reads and Writes, How Data Is Written Using Journaling, GridFS – The MongoDB File System, The Rationale of GridFS, GridFSunder the Hood, Using GridFS, Indexing, Types of Indexes, Behaviors and Limitations MongoDB Use Cases: Use Case 1 -Performance Monitoring, Schema Design, Operations, Sharding, Managing the Data, Use Case 2 – Social Networking, Schema Design, Operations, Sharding 	
	MongoDB Limitations: MongoDB Space Is Too Large (Applicable for MMAPv1), Memory Issues (Applicable for Storage Engine MMAPv1), 32-bit vs. 64-bit, BSON Documents, Namespaces Limits, Indexes Limit, Capped Collections Limit - Maximum Number of Documents in a Capped Collection, Sharding Limitations, Shard Early to Avoid Any Issues, Shard Key Can't Be Updated, Shard Collection Limit, Select the Correct Shard Key, Security Limitations, No Authentication by Default, Traffi c to and from MongoDB Isn't Encrypted, Write and Read Limitations, Case-Sensitive Queries, Type-Sensitive Fields, No JOIN, Transactions, MongoDB Not Applicable Range	12
	MongoDB Best Practices: Deployment, Hardware Suggestions from the MongoDB Site, Few Points to be Noted, Coding, Application Response Time Optimization, Data Safety, Administration, Replication Lag, Sharding, Monitoring	
IV	The End of Disk? SSD and In-Memory Databases: The End of Disk?, Solid State Disk, The Economics of Disk, SSD-Enabled Databases, In-Memory Databases, TimesTen, Redis, SAP HANA, VoltDB, Oracle 12c "in-Memory Database, Berkeley Analytics Data Stack and Spark, Spark Architecture jQuery: Introduction, Traversing the DOM, DOM Manipulation with jQuery, Events, Ajax with jQuery, jQuery Plug-ins, jQuery Image Slider	12
V	JSON: Introduction, JSON Grammar, JSON Values, JSON Tokens, Syntax, JSON vs XML,Data Types,Objects,Arrays,Creating JSON,	12

JSON Object, Parsing JSON, Persisting JSON, Data Interchange, JSON PHP, JSON HTML, JSONP

Books a	Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Practical MongoDB	Shakuntala Gupta Edward	Apress			
		NavinSabharwal				
2.	Beginning jQuery	Jack Franklin Russ Ferguson	Apress	Second		
3.	Next Generation Databases	Guy Harrison	Apress			
4.	Beginning JSON	Ben Smith	Apress			

B. Sc. (Information Tech	Semester – V		
Course Name: Project Dissertati	Course Code: USIT5P1		
Periods per week (1 Period is 50	minutes)	3	
Credits	2		
			Marks
Evaluation System	21/2	50	
	Internal		

The details are given in Appendix – I

B. Sc. (Information Technology)		Semester – V	
Course Name: Internet of Things Practical		Course Code: USIT5P2	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	21/2	50	
	Internal		

Practical	Details
No	
0	Starting Raspbian OS, Familiarising with Raspberry Pi Components and
	interface, Connecting to ethernet, Monitor, USB.
1	Displaying different LED patterns with Raspberry Pi.
2	Displaying Time over 4-Digit 7-Segment Display using Raspberry Pi
3	Raspberry Pi Based Oscilloscope
4	Controlling Raspberry Pi with WhatsApp.
5	Setting up Wireless Access Point using Raspberry Pi
6	Fingerprint Sensor interfacing with Raspberry Pi
7	Raspberry Pi GPS Module Interfacing
8	IoT based Web Controlled Home Automation using Raspberry Pi
9	Visitor Monitoring with Raspberry Pi and Pi Camera
10	
10	Interfacing Raspberry Pi with RFID.
11	
11	Building Google Assistant with Raspberry Pi.
10	
12	Installing Windows 10 IoT Core on Raspberry Pi

Raspberry Pi Kits and components should be made available in the ratio of 1 kit : 3 students minimum.

B. Sc. (Information Technology)		Semester – V		
Course Name: Advanced Web Programming Practical		Course Code: USIT5P3		
Periods per week (1 Period is 50 minutes)		3		
Credits		2		
		Hours	Marks	
Evaluation System Practical Examination			50	
	Internal			

List	of Practical		
1.	Working with basic C# and ASP .NET		
a.	Create an application that obtains four int values from the user and displays the product.		
b.	Create an application to demonstrate string operations.		
c.	Create an application that receives the (Student Id, Student Name, Course Name, Date of		
	Birth) information from a set of students. The application should also display the		
	information of all the students once the data entered.		
d.	Create an application to demonstrate following operations		
	i. Generate Fibonacci series. ii. Test for prime numbers.		
	iii. Test for vowels. iv. Use of foreach loop with arrays		
2.	v. Reverse a number and find sum of digits of a number.Working with Object Oriented C# and ASP .NET		
2. a.	Create simple application to perform following operations		
а.			
	c ·		
	iii. Quadratic Equation iv. Temperature Conversion		
b.	Create simple application to demonstrate use of following concepts		
	i. Function Overloading ii. Inheritance (all types)		
	iii. Constructor overloading iv. Interfaces		
c.	Create simple application to demonstrate use of following concepts		
	i. Using Delegates and events ii. Exception handling		
3.	Working with Web Forms and Controls		
a.	Create a simple web page with various sever controls to demonstrate setting and use of		
	their properties. (Example : AutoPostBack)		
b.	Demonstrate the use of Calendar control to perform following operations.		
	a) Display messages in a calendar control b) Display vacation in a calendar		
	control		
	c) Selected day in a calendar control using style d) Difference between two calendar		
	dates		
с.	Demonstrate the use of Treeview control perform following operations.		

	a) Treeview control and datalist b) Treeview operations			
4.	Working with Form Controls			
a.	Create a Registration form to demonstrate use of various Validation controls.			
b.	Create Web Form to demonstrate use of Adrotator Control.			
с.	Create Web Form to demonstrate use User Controls.			
5.	Working with Navigation, Beautification and Master page.			
a.	Create Web Form to demonstrate use of Website Navigation controls and Site Map.			
b.	Create a web application to demonstrate use of Master Page with applying Styles and			
	Themes for page beautification.			
с.	Create a web application to demonstrate various states of ASP.NET Pages.			
6.	Working with Database			
a.	Create a web application bind data in a multiline textbox by querying in another textbox.			
b.	Create a web application to display records by using database.			
с.	Demonstrate the use of Datalist link control.			
-				
7.	Working with Database			
a.	Create a web application to display Databinding using dropdownlist control.			
b.	Create a web application for to display the phone no of an author using database. Create a web application for inserting and deleting record from a database. (Using			
с.	Execute-Non Query).			
	Execute-Mon Query).			
8.	Working with data controls			
a.	Create a web application to demonstrate various uses and properties of SqlDataSource.			
b.	Create a web application to demonstrate various uses and properties of SqiDataSource. Create a web application to demonstrate data binding using DetailsView and FormView			
	Control.			
с.	Create a web application to display Using Disconnected Data Access and Databinding			
	using GridView.			
9.	Working with GridView control			
a.	Create a web application to demonstrate use of GridView control template and GridView			
	hyperlink.			
b.	Create a web application to demonstrate use of GridView button column and GridView			
	events.			
с.	Create a web application to demonstrate GridView paging and Creating own table format			
	using GridView.			
10	Wowking with AIAV and VMI			
10.	Working with AJAX and XML Create a web application to demonstrate reading and writing operation with XML.			
a. b.	Create a web application to demonstrate reading and writing operation with XML. Create a web application to demonstrate Form Security and Windows Security with			
0.	proper Authentication and Authorization properties.			
с.	Create a web application to demonstrate use of various Ajax controls.			
	create a web appreation to demonstrate use of various rijax controls.			
11.	Programs to create and use DLL			

B. Sc. (Information Technology)		Semester – V	
Course Name: Artificial Intelligence Practical		Course Code: USIT5P4	
		(E	lective I)
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation SystemPractical Examination		2 ¹ / ₂	50
	Internal		

Practical		Details	
No			
1	а	Write a program to implement depth first search algorithm.	
	b	Write a program to implement breadth first search algorithm.	
2	а	Write a program to simulate 4-Queen / N-Queen problem.	
	b	Write a program to solve tower of Hanoi problem.	
3	a	Write a program to implement alpha beta search.	
	b	Write a program for Hill climbing problem.	
4	а	Write a program to implement A* algorithm.	
	b	Write a program to implement AO* algorithm.	
5	а	Write a program to solve water jug problem.	
	b	Design the simulation of tic $-$ tac $-$ toe game using min-max algorithm.	
6	а	Write a program to solve Missionaries and Cannibals problem.	
	b	Design an application to simulate number puzzle problem.	
7	а	Write a program to shuffle Deck of cards.	
	b	Solve traveling salesman problem using artificial intelligence technique.	
8	а	Solve the block of World problem.	
	b	Solve constraint satisfaction problem	
9	а	Derive the expressions based on Associative law	
	b	Derive the expressions based on Distributive law	
10	a	Write a program to derive the predicate.	
		(for e.g.: Sachin is batsman, batsman is cricketer) - >Sachin is Cricketer.	
	b	Write a program which contains three predicates: male, female, parent. Make	
		rules for following family relations: father, mother, grandfather, grandmother,	
		brother, sister, uncle, aunt, nephew and niece, cousin.	
		Question:	
		i. Draw Family Tree.	
		ii. Define: Clauses, Facts, Predicates and Rules with conjunction and	
		disjunction	

The practicals can be implemented in C / C++ / Java/ Python / R /Prolog / LISP or any other language.

B. Sc. (Information Technology)		Semester – V	
Course Name: Linux System Administration		Course Code: USIT5P5 (Elective I)	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	21/2	50	
	Internal		

Practical	Details
No	
0	Installation of RHEL 6.X
1	Graphical User Interface and Command Line Interface and Processes
a	Exploring the Graphical Desktop
b	The Command Line Interface
С	Managing Processes
2	Storage Devices and Links, Backup and Repository
b	Working with Storage Devices and Links
a	Making a Backup
b	Creating a Repository
3	Working with RPMsm Storage and Networking
a	Using Query Options
b	Extracting Files From RPMs
С	Configuring and Managing Storage
d	Connecting to the Network
4	Working with Users, Groups, and Permissions
5	Firewall and Cryptographic services
a	Securing Server with iptables
b	Setting Up Cryptographic Services
6	Configuring Server for File Sharing
a	Configuring NFS Server and Client
b	Configuring Samba
С	Configuring FTP
7	DNS, DHCP and Mail Server
a	Configuring DNS

b	Configuring DHCP
с	Setting Up a Mail Server
8	Web Server
a	Configuring Apache on Red Hat Enterprise Linux
b	Writing a Script to Monitor Activity on the Apache Web Server
с	Using the select Command
9	Shell Scripts and High-Availability Clustering
a	Writing Shell Scripts
b	Configuring Booting with GRUB
с	Configuring High Availability Clustering
10	Setting Up an Installation Server
a	Configuring Network Server as an Installation Server
b	Setting Up a TFTP and DHCP Server for PXE Boot

B. Sc. (Information Technology)		Semester – V	
Course Name: Enterprise Java		Course Code: USIT5P6 (Elective II)	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System Practical Examination			50
Internal			

of Practical
Implement the following Simple Servlet applications.
Create a simple calculator application using servlet.
Create a servlet for a login page. If the username and password are correct then it
says message "Hello <username>" else a message "login failed"</username>
Create a registration servlet in Java using JDBC. Accept the details such as
Username, Password, Email, and Country from the user using HTML Form and store
the registration details in the database.
Implement the following Servlet applications with Cookies and Sessions.
Using Request Dispatcher Interface create a Servlet which will validate the password
entered by the user, if the user has entered "Servlet" as password, then he will be
forwarded to Welcome Servlet else the user will stay on the index.html page and an
error message will be displayed.
Create a servlet that uses Cookies to store the number of times a user has visited
servlet. Create a servlet demonstrating the use of session creation and destruction. Also check
whether the user has visited this page first time or has visited earlier also using
sessions.
Implement the Servlet IO and File applications.
Create a Servlet application to upload and download a file.
Develop Simple Servlet Question Answer Application using Database.
Create simple Servlet application to demonstrate Non-Blocking Read Operation.
Implement the following JSP applications.
Develop a simple JSP application to display values obtained from the use of intrinsic
objects of various types.
Develop a simple JSP application to pass values from one page to another with
validations. (Name-txt, age-txt, hobbies-checkbox, email-txt, gender-radio button).
Create a registration and login JSP application to register and authenticate the user
based on username and password using JDBC.

5.	Implement the following JSP JSTL and EL Applications.
a.	Create an html page with fields, eno, name, age, desg, salary. Now on submit this
	data to a JSP page which will update the employee table of database with matching
	eno.
b.	Create a JSP page to demonstrate the use of Expression language.
с.	Create a JSP application to demonstrate the use of JSTL.
6.	Implement the following EJB Applications.
a.	Create a Currency Converter application using EJB.
b.	Develop a Simple Room Reservation System Application Using EJB.
с.	Develop simple shopping cart application using EJB [Stateful Session Bean].
7.	Implement the following EJB applications with different types of Beans.
a.	Develop simple EJB application to demonstrate Servlet Hit count using Singleton Session Beans.
b.	Develop simple visitor Statistics application using Message Driven Bean [Stateless
	Session Bean].
с.	Develop simple Marks Entry Application to demonstrate accessing Database using
	EJB.
8.	Implement the following JPA applications.
a.	Develop a simple Inventory Application Using JPA.
b.	Develop a Guestbook Application Using JPA.
с.	Create simple JPA application to store and retrieve Book details.
9.	Implement the following JPA applications with ORM and Hibernate.
a.	
	Develop a JPA Application to demonstrate use of ORM associations.
a. b.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL
b.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database.
	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database. Develop a Hibernate application to store and retrieve employee details in MySQL
b.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database.
b. c.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database. Develop a Hibernate application to store and retrieve employee details in MySQL Database.
b. c. 10.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database. Develop a Hibernate application to store and retrieve employee details in MySQL Database. Implement the following Hibernate applications.
b. c.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database. Develop a Hibernate application to store and retrieve employee details in MySQL Database.
b. c. 10.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database. Develop a Hibernate application to store and retrieve employee details in MySQL Database. Implement the following Hibernate applications. Develop an application to demonstrate Hibernate One- To -One Mapping Using Annotation.
b. c. 10. a.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database. Develop a Hibernate application to store and retrieve employee details in MySQL Database. Implement the following Hibernate applications. Develop an application to demonstrate Hibernate One- To -One Mapping Using Annotation. Develop Hibernate application to enter and retrieve course details with ORM
b. c. 10. a.	Develop a JPA Application to demonstrate use of ORM associations. Develop a Hibernate application to store Feedback of Website Visitor in MySQL Database. Develop a Hibernate application to store and retrieve employee details in MySQL Database. Implement the following Hibernate applications. Develop an application to demonstrate Hibernate One- To -One Mapping Using Annotation.

B. Sc. (Information Tech	Semester – V		
Course Name: Next Generation Technologies Practical		Course Code: USIT5P7 (Elective II)	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation SystemPractical Examination		21/2	50
	Internal		

Practical	Details			
No				
1	MongoDB Basics			
a	Write a MongoDB query to create and drop database.			
b	Write a MongoDB query to create, display and drop collection			
с	Write a MongoDB query to insert, query, update and delete a document.			
2	Simple Queries with MongoDB			
3	Implementing Aggregation			
a	Write a MongoDB query to use sum, avg, min and max expression.			
b	Write a MongoDB query to use push and addToSet expression.			
с	Write a MongoDB query to use first and last expression.			
4				
4	Replication, Backup and Restore			
a	Write a MongoDB query to create Replica of existing database.			
b	Write a MongoDB query to create a backup of existing database.			
C	Write a MongoDB query to restore database from the backup.			
5	Java and MongoDB			
a	Connecting Java with MongoDB and inserting, retrieving, updating and deleting.			
6	PHP and MongoDB			
a	Connecting PHP with MongoDB and inserting, retrieving, updating and deleting.			
7	Python and MongoDB			

a	Connecting Python with MongoDB and inserting, retrieving, updating and
	deleting.
8	Programs on Basic jQuery
a	jQuery Basic, jQuery Events
b	jQuery Selectors, jQuery Hide and Show effects
с	jQuery fading effects, jQuery Sliding effects
9	jQuery Advanced
a	jQuery Animation effects, jQuery Chaining
b	jQuery Callback, jQuery Get and Set Contents
c	jQuery Insert Content, jQuery Remove Elements and Attribute
10	JSON
a	Creating JSON
b	Parsing JSON
c	Persisting JSON
11	Create a JSON file and import it to MongoDB
a	Export MongoDB to JSON.
b	Write a MongoDB query to delete JSON object from MongoDB

SEMESTER VI

B. Sc. (Information Technology)		Semester – VI	
Course Name: Software Quality Assurance		Course Code: USIT601	
Periods per week (1 Period is 50	week (1 Period is 50 minutes) 5		5
Credits		2	
		Hours	Marks
Evaluation SystemTheory Examination		21/2	75
	Internal		25

Unit	Details	Lectures
Ι	Introduction to Quality: Historical Perspective of Quality, What is Quality? (Is it a fact or perception?), Definitions of Quality, Core Components of Quality, Quality View, Financial Aspect of Quality, Customers, Suppliers and Processes, Total Quality Management (TQM), Quality Principles of Total Quality Management, Quality Management Through Statistical Process Control, Quality Management Through Cultural Changes, Continual (Continuous) Improvement Cycle, Quality in Different Areas, Benchmarking and Metrics, Problem Solving Techniques, Problem Solving Software Tools. Software Quality: Introduction, Constraints of Software Product Quality Assessment, Customer is a King, Quality and Productivity Relationship, Requirements of a Product, Organisation Culture, Characteristics of Software, Software Development Process, Types of Products, Schemes of Criticality Definitions, Problematic Areas of Software Has Defects?Processes Related to Software Quality, Quality Management System, Important Aspects of Quality Management.	12
II	Fundamentals of testing: Introduction, Necessity of testing, What is testing? Fundamental test process, The psychology of testing, Historical Perspective of Testing, Definitions of Testing, Approaches to Testing, Testing During Development Life Cycle, Requirement Traceability Matrix, Essentials of Software Testing, Workbench, Important Features of Testing Process, Misconceptions About Testing,	12

	Principles of Software Testing, Salient Features of Good Testing, Test Policy, Test Strategy or Test Approach, Test Planning, Testing Process and Number of Defects Found in Testing, Test Team Efficiency, Mutation Testing, Challenges in Testing, Test Team Approach, Process Problems Faced by Testing, Cost Aspect of Testing, Establishing Testing Policy, Methods, Structured Approach to Testing, Categories of Defect, Defect, Error, or Mistake in Software, Developing Test Strategy, Developing Testing Methodologies (Test Plan), Testing Process, Attitude Towards Testing (Common People Issues), Test Methodologies/Approaches, People Challenges in Software Testing, Raising Management Awareness for Testing, Skills Required by Tester, Testing throughout the software life cycle, Software development models, Test levels, Test types, the targets of testing, Maintenance tasting	
III	testing Unit Testing: Boundary Value Testing: Normal Boundary Value Testing, Robust Boundary Value Testing, Worst-Case Boundary ValueTesting, Special Value Testing, Examples, Random Testing, Guidelines for Boundary Value Testing, Equivalence Class Testing: Equivalence Classes, Traditional Equivalence Class Testing, Improved Equivalence Class Testing, Edge Testing, Guidelines and Observations. Decision Table–Based Testing: Decision Tables, Decision Table Techniques, Cause-and-Effect Graphing, Guidelines and Observations, Path Testing: Program Graphs, DD-Paths, Test Coverage Metrics, Basis Path Testing, Guidelines and Observations, Data Flow Testing: Define/Use Testing, Slice-Based Testing, Program Slicing Tools.	12
IV	 Software Verification and Validation:Introduction, Verification, Verification Workbench, Methods of Verification, Types of reviews on the basis od Stage Phase, Entities involved in verification, Reviews in testing lifecycle, Coverage in Verification, Concerns of Verification, Validation, Validation Workbench, Levels of Validation, Coverage in Validation, Acceptance Testing, Management of Verification and Validation, Software development verification and validation activities. V-test Model:Introduction, V-model for software, testing during Proposal stage, Testing during requirement stage, Testing during test planning phase, Testing during design phase, Testing during coding, VV Model, Critical Roles and Responsibilities. 	12
V	 Levels of Testing: Introduction, Proposal Testing, Requirement Testing, Design Testing, Code Review, Unit Testing, Module Testing, Integration Testing, Big-Bang Testing, Sandwich Testing, Critical Path First, Sub System Testing, System Testing, Testing Stages. Special Tests:Introduction, GUI testing, Compatibility Testing, Security Testing, Performance Testing, Volume Testing, Stress Testing, Recovery Testing, Installation Testing, Manual Support Testing, 	12

Intersystem Testing, Control Testing, Smoke Testing, Adhoc Testing, Parallel Testing, Execution Testing, Operations Testing, Compliance Testing, Usability Testing, Decision Table Testing, Documentation Testing, Training testing, Rapid Testing, Control flow graph, Generating tests on the basis of Combinatorial Designs, State Graph, Risk Associated with New Technologies, Process maturity level of Technology, Testing Adequacy of Control in New technology usage, Object Oriented Application Testing, Testing of Internal Controls, COTS Testing, Client Server Testing, Web Application Testing, Mobile Application Testing, eBusiness eCommerce Testing, Agile Development Testing, Data Warehousing Testing.

Books a	Books and References:				
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Software Testing and	William E. Lewis	CRC	Third	2016
	Continuous Quality		Press		
	Improvement				
2	Software Testing:	M. G. Limaye	TMH		2017
	Principles, Techniques				
	and Tools				
3.	Foundations of Software	Dorothy Graham, Erik	Cengage	3 rd	
	Testing	van Veenendaal,	Learning		
		Isabel Evans, Rex			
		Black			
4.	Software Testing: A	Paul C. Jorgenson	CRC	4^{th}	2017
	Craftsman's Approach		Press		

B. Sc. (Information Technology)		Semester – VI		
Course Name: Security in Computing		Course Code: USIT602		
Periods per week (1 Period is 5	od is 50 minutes) 5		5	
Credits		2		
		Hours	Marks	
Evaluation System Theory Examination		21/2	75	
	Internal		25	

Unit	Details	Lectures
I	 Information Security Overview: The Importance of Information Protection, The Evolution of Information Security, Justifying Security Investment, Security Methodology, How to Build a Security Program, The Impossible Job, The Weakest Link, Strategy and Tactics, Business Processes vs. Technical Controls. Risk Analysis: Threat Definition, Types of Attacks, Risk Analysis. Secure Design Principles: The CIA Triad and Other Models, Defense Models, Zones of Trust, Best Practices for Network Defense. 	12
II	 Authentication and Authorization: Authentication, Authorization Encryption: A Brief History of Encryption, Symmetric-Key Cryptography, Public Key Cryptography, Public Key Infrastructure. Storage Security: Storage Security Evolution, Modern Storage Security, Risk Remediation, Best Practices. Database Security: General Database Security Concepts, Understanding Database Security Layers, Understanding Database-Level Security, Using Application Security, Database Backup and Recovery, Keeping Your Servers Up to Date, Database Auditing and Monitoring. 	12
III	 Secure Network Design: Introduction to Secure Network Design, Performance, Availability, Security. Network Device Security: Switch and Router Basics, Network Hardening. Firewalls: Overview, The Evolution of Firewalls, Core Firewall 	12

	Functions, Additional Firewall Capabilities, Firewall Design.	
	Wireless Network Security: Radio Frequency Security Basics, Data-	
	Link Layer Wireless Security Features, Flaws, and Threats, Wireless	
	Vulnerabilities and Mitigations, Wireless Network Hardening	
	Practices and Recommendations, Wireless Intrusion Detection and	
	Prevention, Wireless Network Positioning and Secure Gateways.	
IV	Intrusion Detection and Prevention Systems: IDS Concepts, IDS	
	Types and Detection Models, IDS Features, IDS Deployment	
	Considerations, Security Information and Event Management (SIEM).	
	Voice over IP (VoIP) and PBX Security: Background, VoIP	
	Components, VoIP Vulnerabilities and Countermeasures, PBX, TEM:	12
	Telecom Expense Management.	
	Operating System Security Models: Operating System Models,	
	Classic Security Models, Reference Monitor, Trustworthy Computing,	
	International Standards for Operating System Security.	
V	Virtual Machines and Cloud Computing: Virtual Machines, Cloud	
	Computing.	
	Secure Application Design: Secure Development Lifecycle,	
	Application Security Practices, Web Application Security, Client	10
	Application Security, Remote Administration Security.	12
	Physical Security: Classification of Assets, Physical Vulnerability	
	Assessment, Choosing Site Location for Security, Securing Assets:	
	Locks and Entry Controls, Physical Intrusion Detection.	

Books a	Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	TheCompleteReference: Information Security	Mark Rhodes- Ousley	McGraw- Hill	2^{nd}	2013		
2.	Essential Cybersecurity Science	Josiah Dykstra	O'Reilly	Fifth	2017		
3.	Principles of Computer Security: CompTIA Security+ and Beyond	Wm.Arthur Conklin, Greg White	McGraw Hill	Second	2010		

B. Sc. (Information Tecl	Semester – VI		
Course Name: Business Intellige	Course Code: USIT603		
Periods per week (1 Period is 50	5		
Credits	2		
	Hours	Marks	
Evaluation System	Theory Examination	21/2	75
	Internal		25

Unit	Details	Lectures	
Ι	 Business intelligence: Effective and timely decisions, Data, information and knowledge, The role of mathematical models, Business intelligence architectures, Ethics and business intelligence Decision support systems: Definition of system, Representation of the decision-making process, Evolution of information systems, Definition of decision support system, Development of a decision support system 		
II	 Mathematical models for decision making: Structure of mathematical models, Development of a model, Classes of models Data mining: Definition of data mining, Representation of input data , Data mining process, Analysis methodologies Data preparation: Data validation, Data transformation, Data reduction 	12	
III	Classification: Classification problems, Evaluation of classification models, Bayesian methods, Logistic regression, Neural networks, Support vector machines Clustering: Clustering methods, Partition methods, Hierarchical methods, Evaluation of clustering models	12	
IV	Business intelligence applications: Marketing models: Relational marketing, Sales force management, Logistic and production models: Supply chain optimization, Optimization models for logistics planning, Revenue management systems.	12	

	Data envelopment analysis: Efficiency measures, Efficient frontier,		
	The CCR model, Identification of good operating practices		
V	Knowledge Management: Introduction to Knowledge Management,		
	Organizational Learning and Transformation, Knowledge Management		
	Activities, Approaches to Knowledge Management, Information		
	Technology (IT) In Knowledge Management, Knowledge Management		
	Systems Implementation, Roles of People in Knowledge Management		
	Artificial Intelligence and Expert Systems:		
	Concepts and Definitions of Artificial Intelligence, Artificial		
	Intelligence Versus Natural Intelligence, Basic Concepts of Expert		
	Systems, Applications of Expert Systems, Structure of Expert Systems,		
	Knowledge Engineering, Development of Expert Systems		

Books and References:						
Sr. No.	Title	Author/s	Publisher	Edition	Year	
1.	Business Intelligence: Data Mining and Optimization for Decision Making	Carlo Vercellis	Wiley	First	2009	
2.	Decision support and Business Intelligence Systems	Efraim Turban, Ramesh Sharda, DursunDelen	Pearson	Ninth	2011	
3.	Fundamental of Business Intelligence	Grossmann W, Rinderle-Ma	Springer	First	2015	

B. Sc. (Information Tech	Semester – VI			
Course Name: Principles of Geographic Information		Course Code: USIT604		
Systems		(Elective I)		
Periods per week (1 Period is 50 minutes)		5		
Credits		2		
		Hours	Marks	
Evaluation System	Theory Examination	2 ¹ / ₂	75	
	Internal		25	

Unit	Details	Lectures
I	 A Gentle Introduction to GIS The nature of GIS: Some fundamental observations, Defining GIS, GISystems, GIScience and GIApplications, Spatial data and Geoinformation. The real world and representations of it: Models and modelling, Maps, Databases, Spatial databases and spatial analysis Geographic Information and Spatial Database Models and Representations of the real world Geographic Phenomena: Defining geographic phenomena, types of geographic phenomena, Geographic fields, Geographic objects, Boundaries Computer Representations of Geographic Information: Regular tessellations, irregular tessellations, Vector representations, Topology and Spatial relationships, Scale and Resolution, Representation of Geographic fields, Representation of Geographic objects Organizing and Managing Spatial Data The Temporal Dimension 	12
II	Data Management and Processing Systems Hardware and Software Trends Geographic Information Systems: GIS Software, GIS Architecture	12

	 and functionality, Spatial Data Infrastructure (SDI) Stages of Spatial Data handling: Spatial data handling and preparation, Spatial Data Storage and maintenance, Spatial Query and Analysis, Spatial Data Presentation. Database management Systems: Reasons for using a DBMS, Alternatives for data management, The relational data model, Querying the relational database. GIS and Spatial Databases: Linking GIS and DBMS, Spatial database functionality. 	
III	 Spatial Referencing and Positioning Spatial Referencing: Reference surfaces for mapping, Coordinate Systems, Map Projections, Coordinate Transformations Satellite-based Positioning: Absolute positioning, Errors in absolute positioning, Relative positioning, Network positioning, code versus phase measurements, Positioning technology Data Entry and Preparation Spatial Data Input: Direct spatial data capture, Indirect spatial data capture, Obtaining spatial data elsewhere Data Quality: Accuracy and Positioning, Positional accuracy, Attribute accuracy, temporal accuracy, Lineage, Completeness, Logical consistency Data Preparation: Data checks and repairs, Combining data from multiple sources Point Data Transformation: Interpolating discrete data, 	12
IV	Interpolating continuous data Spatial Data Analysis Classification of analytical GIS Capabilities Retrieval, classification and measurement: Measurement, Spatial selection queries, Classification Overlay functions: Vector overlay operators,Raster overlay operators Neighbourhood functions: Proximity computations, Computation of diffusion, Flow computation, Raster based surface analysis Analysis: Network analysis, interpolation, terrain modeling GIS and Application models:GPS, Open GIS Standards, GIS Applications and Advances Error Propagation in spatial data processing: How Errors propagate, Quantifying error propagation	12
V	Data Visualization GIS and Maps, The Visualization Process Visualization Strategies: Present or explore? The cartographic toolbox: What kind of data do I have? How can I map my data? How to map? How to map qualitative data, How to map the terrain elevation, How to map time series	12

Map Cosmetics, Map Dissemination

Books and References:						
Sr.	Title	Author/s	Publisher	Edition	Year	
No.	D: :1 0			D 1	2000	
1.	Principles of	Editors: Otto	The	Fourth	2009	
	Geographic	Huisman and Rolf	International			
	Information Systems-	А.	Institute of			
	An Introductory Text		Geoinformation			
	Book		Science and			
			Earth			
			Observation			
2.	Principles of	P.A Burrough and	Oxford	Third	1999	
	Geographic	R.A.McDonnell	University			
	Information Systems		Press			
3.	Fundamentals of	R.Laurini and D.	Academic		1994	
	Spatial Information	Thompson,	Press			
	Systems,					
4.	Fundamentals of	Michael N.Demers	Wiley	Fourth	2009	
	Geographic		Publications			
	Information Systems					
5.	Introduction to	Chang Kang-tsung	McGrawHill	Any	2013	
	Geographic	(Karl),		above	7 th	
	Information Systems			3 rd	Edition	
				Edition		
6.	GIS Fundamentals: A	Paul Bolsatd	XanEdu	5 th		
	First Text on		Publishing Inc	Edition		
	Geographic					
	Information Systems					

B. Sc. (Information Tech	Semester – VI		
Course Name: Enterprise Networking		Course Code: USIT605 (Elective II)	
Periods per week (1 Period is 50 minutes)		5	
Credits			2
		Hours	Marks
Evaluation System Theory Examination		21/2	75
	Internal		25

Unit	Details	Lectures			
Ι	General Network Design: Network Design Methodology,				
	Architectures for the Enterprise, Borderless Networks Architecture,				
	Collaboration and Video Architecture, Data Center and Virtualization				
	Architecture, Design Lifecycle: Plan, Build, Manage Plan Phase Build				
	Phase Manage Phase Prepare, Plan, Design, Implement, Operate, and				
	Optimize Phases Prepare Phase Plan Phase Design Phase Implement				
	Phase Operate Phase Optimize Phase Summary of PPDIOO Phases				
	Project Deliverables Design Methodology Identifying Customer				
	Design Requirements Characterizing the Existing Network Steps in				
	Gathering Information Network Audit Tools Network Checklist				
	Designing the Network Topology and Solutions Top-Down Approach				
	Pilot and Prototype Tests Design Document				
		12			
	Network Design Models: Hierarchical Network Models Benefits of				
	the Hierarchical Model, Hierarchical Network Design, Core Layer,				
	Distribution Layer, Access Layer, Hierarchical Model Examples,				
	Hub-and-Spoke, Design Collapsed Core, Design Enterprise				
	Architecture Model, Enterprise Campus Module, Enterprise Edge				
	Area, E-Commerce Module, Internet Connectivity Module,				
	VPN/Remote Access, Enterprise WAN, Service Provider Edge				
	Module, Remote Modules, Enterprise Branch Module, Enterprise				
	Data Center Module, Enterprise Teleworker Module, High				
	Availability Network Services, Workstation-to-Router Redundancy				
	and LAN, High Availability Protocols, ARP Explicit Configuration,				
	RDP, RIP, HSRP, VRRP, GLBP, Server Redundancy, Route				

	Redundancy, Load Balancing, Increasing Availability, Link Media Redundancy	
Π	 Enterprise LAN Design: LAN Media, Ethernet Design Rules, 100Mbps Fast Ethernet Design Rules, Gigabit Ethernet Design Rules, 1000BASE-LX Long-Wavelength Gigabit Ethernet, 1000BASE-SX Short-Wavelength Gigabit Ethernet, 1000BASE-CX Gigabit Ethernet over Coaxial Cable, 1000BASE-T Gigabit Ethernet over UTP 86, 10 Gigabit Ethernet Design Rules, 10GE Media Types, EtherChannel, Comparison of Campus Media LAN Hardware, Repeaters, Hubs, Bridges, Switches, Routers, Layer 3 Switches, Campus LAN Design and Best Practices Best Practices for Hierarchical Layers, Access Layer Best Practices, Distribution Layer Best Practices, Core Layer Best Practices, STP Design Considerations, STP Toolkit, PortFast, UplinkFast, BackboneFast, Loop Guard, Root Guard, BPDU Guard, BPDU Filter, VLAN and Trunk Considerations, Unidirectional Link Detection (UDLD) Protocol, Large-Building LANs, Enterprise Campus LANs, Edge Distribution, Medium-Size LANs, Small and Remote Site LANs, Server Farm Module, Server Connectivity Options, Enterprise Data Center Infrastructure, Campus LAN QoS Considerations, Multicast Traffic Considerations, CGMP, IGMP Snooping. 	12
	Data Center Design: Enterprise DC Architecture, Data Center Foundation Components, Data Center Topology Components, Data Center Network Programmability, SDN, Controllers, APIs, ACI, Challenges in the DC, Data Center Facility Aspects, Data Center Space, Data Center Power, Data Center Cooling, Data Center Heat, Data Center Cabling, Enterprise DC Infrastructure, Data Center Storage, Data Center Reference Architecture, Defining the DC Access Layer, Defining the DC Aggregation Layer, Defining the DC Core Layer, Security in the DC, Fabric Extenders, Virtualization Overview, Challenges, Defining Virtualization and Benefits, Virtualization Risks, Types of Virtualization, Virtualization, Server Scaling, Virtual Switching, Network Virtualization Design Considerations, Access Control, Path Isolation, Services Edge, Data Center Interconnect, DCI Use Cases, DCI Transport Options, DCI L2 Considerations, Load Balancing in the DC, Application Load Balancing, Network Load Balancing.	
III	 Wireless LAN Design: Wireless LAN Technologies, WLAN Standards, ISM and UNII Frequencies, Summary of WLAN Standards, Service Set Identifier, WLAN Layer 2 Access Method, WLAN Security, Unauthorized Access, WLAN Security Design Approach, IEEE 802.1X-2001 Port-Based Authentication, Dynamic WEP Keys and LEAP, Controlling WLAN Access to Servers, WLAN Authentication, Authentication Options, WLAN Controller Components, WLC Interface Types, AP Controller Equipment 	12

Scaling, Roaming and Mobility Groups, Intracontroller Roaming, Layer 2 Intercontroller Roaming, Layer 3 Intercontroller Roaming, Mobility Groups, WLAN Design, Controller Redundancy Design: Deterministic vs. Dynamic, N+1 WLC Redundancy, N+N WLC Redundancy, N+N+1 WLC Redundancy, Radio Management and Radio Groups, RF Groups, RF Site Survey, Using EoIP Tunnels for Guest Services, Wireless Mesh for Outdoor Wireless, Mesh Design Recommendations, Campus Design Considerations, Power over Ethernet (PoE), Wireless and Quality of Service (QoS), Branch Design Considerations, Local MAC, REAP, Hybrid REAP, Branch Office Controller Options.

WAN Technologies and the Enterprise Edge: WAN and Enterprise Edge Overview, Definition of WAN, WAN Edge Module, Enterprise Edge Modules, WAN Transport Technologies, ISDN, ISDN BRI Service, ISDN PRI Service, Digital Subscriber Line, Cable, Wireless, Frame Relay. Time-Division Multiplexing, Metro Ethernet. SONET/SDH, Multiprotocol Label Switching (MPLS), Dark Fiber, Wavelength-Division Multiplexing, Ordering WAN Dense Technology and Contracts, WAN and Edge Design Methodologies, Response Time, Throughput, Reliability, Bandwidth Considerations, WAN Link Categories, Optimizing Bandwidth Using QoS, Queuing, and Policing, Classification, Congestion Traffic Shaping Management, Priority Queuing, Custom Queuing, Weighted Fair Queuing, Class-Based Weighted Fair Queuing, Low-Latency Queuing, Traffic Shaping and Policing, Link Efficiency, Window Size, DMZ Connectivity, Segmenting DMZs, DMZ Services, Internet Connectivity, Centralized Internet (Branch) vs. Direct Internet (Branch), High Availability for the Internet Edge, VPN Network Design.

WAN Design

Traditional WAN Technologies Hub-and-Spoke Topology Full-Mesh Topology Partial-Mesh Topology Point-to-Point Topology **Remote Site Connectivity** Enterprise VPN vs. Service Provider VPN Enterprise Managed VPN: IPsec IPsec Direct Encapsulation Generic Routing Encapsulation IPsec DMVPN IPsec Virtual Tunnel Interface Design GETVPN Service Provider-Managed Offerings ,Metro Ethernet Service Provider VPNs: L2 vs. L3 ,Virtual Private Wire Services VPWS L2 VPN Considerations, Virtual Private LAN Services VPLS L2 VPN Considerations ,MPLS, MPLS Layer 3 Design Overview MPLS L3 VPN Considerations ,VPN Benefits WAN Backup Design WAN Backup over the Internet Enterprise WAN Architecture Cisco Enterprise MAN/WAN Enterprise WAN/MAN Architecture Comparison ,Enterprise WAN Components Comparing Hardware and Software Enterprise Branch Architecture Branch Design Branch

	Connectivity Redundancy for Branches Single WAN Carrier vs. Dual	
	WAN Carriers Single MPLS Carrier Site ,Dual MPLS Carriers Hybrid	
	WAN: L3 VPN with IPsec VPN ,Internet for Branches Flat Layer 2	
	vs. Collapsed Core ,Enterprise Branch Profiles Small Branch Design	
	Medium Branch Design Large Branch Design Enterprise Teleworker	
	Design ,ISRs for Teleworkers	
IV	Internet Protocol Version 4 Design, IPv4 Header ToS IPv4	
1 V	e e	
	Fragmentation IPv4 Addressing ,IPv4 Address Classes Class A	
	Addresses Class B Addresses ,Class C Addresses Class D Addresses	
	Class E Addresses ,IPv4 Address Types IPv4 Private Addresses NAT	
	,IPv4 Address Subnets Mask Nomenclature IP Address Subnet Design	
	Example Determining the Network Portion of an IP Address Variable-	
	Length Subnet Masks, Loopback Addresses IP Telephony Networks	
	,IPv4 Addressing Design Goal of IPv4 Address Design , Plan for	
	Future Use of IPv4 Addresses, Performing Route Summarization,	
	Plan for a Hierarchical IP Address Network, Private and Public IP	
	Address and NAT Guidelines, Steps for Creating an IPv4 Address	
	Plan	
	Case Study: IP Address Subnet Allocation, Address Assignment and	
	•	
	Name Resolution , Recommended Practices of IP Address	
	Assignment, BOOTP DHCP DNS, Internet Protocol Version 6	
	Design, IPv6 Header IPv6 Address Representation IPv4-Compatible	
	IPv6 Addresses IPv6 Prefix Representation IPv6 Address Scope	
	Types and Address Allocations IPv6 Address Allocations IPv6	
	Unicast Address Global Unicast Addresses Link-Local Addresses,	
	Unique Local IPv6 Address Global Aggregatable IPv6 Address,	
		10
	IPv4-Compatible IPv6 Address IPv6 Anycast Addresses , IPv6	12
	Multicast Addresses IPv6 Mechanisms ICMPv6, IPv6 Neighbor	
	Discovery Protocol IPv6 Name Resolution, Path MTU Discovery	
	IPv6 Address-Assignment Strategies, Manual Configuration SLAAC	
	of Link-Local Address, SLAAC of Globally Unique IPv6 Address	
	DHCPv6, DHCPv6 Lite IPv6 Security IPv6 Routing Protocols	
	RIPng OSPFv3, BGP4 Multiprotocol Extensions (MP-BGP) for IPv6	
	, IPv6 Addressing Design , Planning for Addressing with IPv6 , Route	
	Summarization with IPv6 IPv6 Private Addressing	
	IPv6 for the Enterprise IPv6 Address Allocation, Partly Linked IPv4	
	Address into IPv6, Whole IPv4 Address Linked into IPv6	
	IPv6 Addresses Allocated Per Location and/or Type, IPv4-to-IPv6	
	Transition Mechanisms and Deployment Models , Dual-Stack	
	Mechanism IPv6 over IPv4 Tunnels , Protocol Translation	
	,	
	Mechanisms IPv6 Deployment Models , Dual-Stack Model Hybrid	
	Model Service Block Model ,IPv6 Deployment Model Comparison	
	IPv6 Comparison with IPv4, OSPF, BGP, Route Manipulation, and IP	
	Multicast,OSPFv2 OSPFv2 Metric OSPFv2 Adjacencies and Hello	
	Timers, OSPFv2 Areas OSPF Area Design Considerations OSPF	
	Router Types OSPF DRs LSA Types Autonomous System External	
	Path Types OSPF Stub Area Types Stub Areas Totally Stubby Areas,	
	Taur Types OSTT Stub Area Types Stub Areas Totally Stubby Areas,	

	NSSAs Virtual Links OSPFv2 Router Authentication , OSPFv2 Summary OSPFv3 OSPFv3 Changes from OSPFv2, OSPFv3 Areas and Router Types OSPFv3 LSAs OSPFv3 Summary BGP BGP Neighbors eBGPiBGP Route Reflectors Confederations BGP Administrative Distance, BGP Attributes, Weight, and the BGP Decision Process BGP Path Attributes Next-Hop Attribute Local Preference Attribute Origin Attribute Autonomous System Path Attribute MED Attribute Community Attribute Atomic Aggregate and Aggregator Attributes Weight BGP Decision Process, BGP Summary, Route Manipulation PBR Route Summarization Route Redistribution Default Metric OSPF Redistribution Route Filtering Transit Traffic Routing Protocols on the Hierarchical Network Infrastructure IP Multicast Review, Multicast Addresses Layer 3 to Layer 2 Mapping IGMP, IGMPv1 IGMPv2 IGMPv3 CGMP IGMP Snooping, Sparse Versus Dense Multicast Multicast Source and Shared Trees PIM PIM-SM PIM DR Auto-RP PIMv2 Bootstrap Router, DVMRP IPv6 Multicast Addresses	
V	Managing Security Managing Security Network Devices Total and Security Legislation Security Threats Reconnaissance and Port Scanning Vulnerability Scanners Unauthorized Access Security Risks Targets Loss of Availability Integrity Violations and Confidentiality Breaches, Security Policy and Process Security Policy Defined, Basic Approach of a Security Policy Purpose of Security Policies, Security Policy Components Risk Assessment, Risk Index Continuous Security Integrating Security Mechanisms into Network Design Trust and Identity Management, Trust Domains of Trust Identity Passwords Tokens Certificates, Network Access Control Secure Services Encryption Fundamentals Encryption Keys VPN Protocols, Transmission Confidentiality Data Integrity Threat Defense, Physical Security Infrastructure Protection Security Management Solutions Security Solution Network Security Platforms, Trust and Identity Technologies Firewall Fundamentals, Types of Firewalls Next-Gen Firewalls NAT Placement, Firewall Guidelines Firewall ACLs, Identity and Access Control Deployments Detecting and Mitigating Threats IPS/IDS Fundamentals IPS/IDS Guidelines, Threat Detection and Mitigation Technologies, Threat- Detection and Threat-Mitigation Solutions, FirePOWER IPS Security Management Applications, Security Platform Solutions Security Management Network Integrating Security into Network Devices IOS Security, ISR G2 Security Hardware Options Securing the Enterprise, Implementing Security in the Campus Implementing Security in the Data Center Implementing Security in the Enterprise Edge Network Management Protocols, Simple Network Management Protocol SNMP Components, MIB SNMP Message Versions	12

	SNMPv1	SNMPv2	SNMPv3,	Other	Network	Management	
	Technolog	ies RMON,	RMON2 No	etFlow (Compared to	o RMON and	
	SNMP, CI	OP LLDP Sy	slog		-		

Books and References:							
Sr. No.	Title	Author/s	Publisher	Edition	Year		
1.	CCDA200-310Official	ANTHONY BRUNO,	Cisco				
	Cert Guide	CCIE No. 2738	Press				
		STEVE JORDAN,					
		CCIE No. 11293					
2.	Network Warrior	Gary A Donabue	O Reilly	2^{nd}	2011		

B. Sc. (Information Technol	Semester – VI		
Course Name: IT Services Management		Course Code: USIT606	
		(h	Elective I)
Periods per week (1 Period is 50	minutes),	5	
Credits		2	
		Hours	Marks
Evaluation System	Theory Examination	n $2^{1/2}$ 75	
	Internal		25

Unit	Details	Lectures	
I	IT Service Management: Introduction, What is service management? What are services? Business Process, Principles of Service management: Specialisation and Coordination, The agency principle, Encapsulation, Principles of systems, The service Life Cycle, Functions and processes across the life cycle. Service Strategy Principles: Value creation, Service Assets, Service Provider Service Structures, Service Strategy Principles. Service Strategy: Define the market, Develop the offerings, Develop Strategic Assets, Prepare for execution. Challenges, Critical Success factors and risks: Complexity, Coordination and Control, Preserving value, Effectiveness in measurement, Risks.	12	
II	 Service Design: Fundamentals, Service Design Principles: Goals, Balanced Design, Identifying Service requirements, identifying and documenting business requirements and drivers, Design activities, Design aspects, Subsequent design activities, Design constraints, Service oriented architecture, Business Service Management, Service Design Models Service Design Processes:Service Catalogue Management, Service Level Management, Capacity Management, Availability Management, IT Service Continuity Management, Information Security 		

	Management, Supplier Management	
	Challenges, Critical Success factors and risks: Challenges, Risks	
III	Service Transition: Fundamentals, Service Transition Principles:	
	Principles Supporting Service Transition, Policies for Service	
	Transition	
	Service Transition Processes: Transition planning and support,	
	Change Management, Service Asses Configuration Management,	12
	Service and Deployment Management, Service Validation and	
	Testing, Evaluation, Knowledge Management.	
	Challenges, Critical Success factors and risks:Challenges, Critical	
	Success factors, Risks, Service Transition under difficult Conditions.	
IV	Service Operation: Fundamentals, Service Operation Principles:	
1 V	Functions, groups, teams, departments and divisions, a chieving	
	balance in service operations, Providing service, Operation staff	
	involvement in service design and service transition, Operational	
	Health, Communication, Documentation	10
	Service Operation Processes:Event Management, Incident	12
	Management, Request fulfilment, Problem Management, Access	
	Management, Operational activities of processes covered in other	
	lifecycle phases.	
	Challenges, Critical Success factors and risks:Challenges, Critical	
	Success factors, Risks	
V	Continual Service Improvement(CSI) Principles: CSI Approach,	
	CSI and organizational change, Ownership, CSI register, External and	
	Internal drivers, Service level management, Knowledge management,	
	The Deming cycle, Service Measurement, IT governance,	
	Frameworks, models, standards and quality Systems, CSI inputs and	
	outputs.	
	CSI Process: The seven-step improvement process. CSI Methods	
	nad Techniques: Methods and techniques, Assessments,	
	benchmarking, Service Measurement, Metrics, Return on Investment,	10
	Service reporting, CSI and other service management processes,	12
	Organising for CSI:Organisational development, Functions, roles,	
	Customer Engagement, Responsibility model - RACI, Competence	
	and training.	
	Technology considerations: Tools to support CSI activities.	
	Implementing CSI: Critical Considerations for implementing	
	CSI, The start, Governance, CSI and organisational change,	
	Communication Strategy and Plan	
	Communication StrateSy and Fran	

Books a	Books and References:							
Sr. No.	Title	Author/s	Publisher	Edition	Year			
1.	ITIL v3 Foundation				2009			
	Complete Certification							
	Kit							
2.	ITIL v3 Service Strategy		OGC/TSO					

3.	ITIL v3 Service	OGC/TSO		
	Transition			
4.	ITIL v3 Service	OGC/TSO		
	Operation			
5.	ITIL Continual Service	TSO	2011	2011
	Improvement			

B. Sc. (Information Technology)		Semester – VI		
Course Name: Cyber Laws		Course Code: USIT607		
		(F	(Elective I)	
Periods per week (1 Period is 50 minutes)		5		
Credits		2		
		Hours	Marks	
Evaluation System	Theory Examination	21/2	75	
	Internal		25	

Unit	Details	Lectures
I	Power of Arrest Without Warrant Under the IT Act, 2000: A Critique, Crimes of this Millennium, Section 80 of the IT Act, 2000 – A Weapon or a Farce? Forgetting the Line Between Cognizable and Non-Cognizable Offences, Necessity of Arrest without Warrant from Any Place, Public or Otherwise, Check and Balances Against Arbitrary	Lectures
	Arrests, Arrest for "About to Commit" an Offence Under the IT Act: A Tribute to Draco, Arrest, But NO Punishment! Cyber Crime and Criminal Justice: Penalties, Adjudication and Appeals Under the IT Act,2000: Concept of "Cyber Crime " and the IT Act, 2000, Hacking, Teenage Web Vandals, Cyber Fraud and Cyber Cheating, Virus on the Internet, Defamation, Harassment and E- mail Abuse, Cyber Pornography, Other IT Act Offences, Monetary Penalties, Adjudication and Appeals Under IT Act, 2000, Network Service Providers, Jurisdiction and Cyber Crime, Nature of Cyber Criminality, Strategies to Tackle Cyber Crime and Trends, Criminal Justice in India and Implications on Cyber Crime.	12
II	Contracts in the Infotech World: Contracts in the Infotech World, Click-Wrap and Shrink-Wrap Contract: Status under the Indian	12

	Contract Act, 1872, Contract Formation Under the Indian Contract Act, 1872, Contract Formation on the Internet, Terms and Conditions of Contracts.	
	Jurisdiction in the Cyber World: Questioning the Jurisdiction and Validity of the Present Law of Jurisdiction, Civil Law of Jurisdiction	
	in India, Cause of Action, Jurisdiction and the Information Technology Act,2000, Foreign Judgements in India, Place of Cause of Action in Contractual and IPR Disputes, Exclusion Clauses in	
	Contracts, Abuse of Exclusion Clauses, Objection of Lack of Jurisdiction, Misuse of the Law of Jurisdiction, Legal Principles on Jurisdiction in the United State of America, Jurisdiction Disputes	
	w.r.t. the Internet in the United State of America, Jurisdiction Disputes	
III	Battling Cyber Squatters and Copyright Protection in the Cyber	
	World: Concept of Domain Name and Reply to Cyber Squatters, Meta-Tagging, Legislative and Other Innovative Moves Against Cyber Squatting, The Battle Between Freedom and Control on the Internet, Works in Which Copyright Subsists and meaning of Copyright, Copyright Ownership and Assignment, License of Copyright, Copyright Terms and Respect for Foreign Works, Copyright Infringement, Remedies and Offences, Copyright Protection of Content on the Internet; Copyright Notice, Disclaimer and Acknowledgement, Downloading for Viewing Content on the Internet, Hyper-Linking and Framing, Liability of ISPs for Copyright Violation in the Cyber World: Legal Developments in the US, Napster and its Cousins: A Revolution on the Internet but a Crisis for Copyright Owners, Computer Software Piracy.	12
IV	E-Commerce Taxation: Real Problems in the Virtual World: A Tug of War on the Concept of 'Permanent Establishment', Finding the PE in Cross Border E-Commerce, The United Nations Model Tax Treaty, The Law of Double Taxation Avoidance Agreements and Taxable Jurisdiction Over Non-Residents, Under the Income Tax Act, 1961, Tax Agents of Non-Residents under the Income Tax Act, 1961, Tax Agents of Non-Resident under the Income Tax Act, 1961, Tax Agents of Non-Resident under the Income Tax Act, 1961, Tax Agents of Non-Resident under the Income Tax Act, 1961, Tax Agents of Non-Resident under the Income Tax Act, 1961, Tax Agents of Non-Resident under the Income Tax	12
V	The Indian Evidence Act of 1872 v. Information Technology Act, 2000: Status of Electronic Records as Evidence, Proof and Management of Electronic Records; Relevancy, Admissibility and Probative Value of E-Evidence, Proving Digital Signatures, Proof of Electronic Agreements, Proving Electronic Messages, Other Amendments in the Indian Evidence Act by the IT Act, Amendments to the Bankers Books Evidence Act, 1891 and Reserve Bank of India	12

Act, 1934.	
Protection of Cyber Consumers in India: Are Cyber Consumers	
Covered Under the Consumer Protection Act? Goods and Services,	
Consumer Complaint, Defect in Goods and Deficiency in Services,	
Restrictive and Unfair Trade Practices, Instances of Unfair Trade	
Practices, Reliefs Under CPA, Beware Consumers, Consumer Foras,	
Jurisdiction and Implications on cyber Consumers in India,	
Applicability of CPA to Manufacturers, Distributors, Retailers and	
Service Providers Based in Foreign Lands Whose Goods are Sold or	
Services Provided to a Consumer in India.	
Amendments in Indian IT Act 2000	

Books an	nd References:				
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Cyber Law Simplified	VivekSood	TMH		2001
			Education		
2.	Cybersecurity Law	Jeff Kosseff	Wiley		2017

B. Sc. (Information Technology)		Semester – VI	
Course Name: Project Implementation		Course Code: USIT6P1	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	150
	Internal		-

The details are given in Appendix – I

B. Sc. (Information Technology)		Semester – VI	
Course Name: Security in Computing Practical		Course Code: USIT6P2	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		-

Practical	Details
No	
1	Configure Routers
а	OSPF MD5 authentication.
b	NTP.
С	to log messages to the syslog server.
d	to support SSH connections.
2	Configure AAA Authentication
a	Configure a local user account on Router and configure authenticate on the console
	and vty lines using local AAA
b	Verify local AAA authentication from the Router console and the PC-A client
3	Configuring Extended ACLs
a	Configure, Apply and Verify an Extended Numbered ACL
4	Configure IP ACLs to Mitigate Attacks and IPV6 ACLs

a Verify connectivity among devices before firewall configuration.	
b Use ACLs to ensure remote access to the routers is available only from	n
management station PC-C.	
c Configure ACLs on to mitigate attacks.	
d Configuring IPv6 ACLs	
5 Configuring a Zone-Based Policy Firewall	
6 Configure IOS Intrusion Prevention System (IPS) Using the CLI	
a Enable IOS IPS.	
b Modify an IPS signature.	
7 Layer 2 Security	
a Assign the Central switch as the root bridge.	
b Secure spanning-tree parameters to prevent STP manipulation attacks	•
c Enable port security to prevent CAM table overflow attacks.	
8 Layer 2 VLAN Security	
9 Configure and Verify a Site-to-Site IPsec VPN Using CLI	
10 Configuring ASA Basic Settings and Firewall Using CLI	
a Configure basic ASA settings and interface security levels using CLI	
b Configure routing, address translation, and inspection policy using CL	I
c Configure DHCP, AAA, and SSH	
d Configure a DMZ, Static NAT, and ACLs	

B. Sc. (Information Technology)		Semester – VI	
Course Name: Business Intelligence Practical		Course Code: USIT6P3	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation SystemPractical Examination		2 ¹ / ₂	50
	Internal		-

Practical	Details
No	
1	Import the legacy data from different sources such as (Excel, SqlServer, Oracle etc.) and load in the target system. (You can download sample database such as Adventureworks, Northwind, foodmart etc.)
2	Perform the Extraction Transformation and Loading (ETL) process to construct the database in the Sqlserver.
3	a. Create the Data staging area for the selected database.b. Create the cube with suitable dimension and fact tables based on ROLAP, MOLAP and HOLAP model.
4	a.Create the ETL map and setup the schedule for execution.b. Execute the MDX queries to extract the data from the datawarehouse.
5	a. Import the datawarehouse data in Microsoft Excel and create the Pivot table and Pivot Chart.

	b. Import the cube in Microsoft Excel and create the Pivot table and Pivot Chart to perform data analysis.
6	Apply the what – if Analysis for data visualization. Design and generate necessary reports based on the datawarehouse data.
7	Perform the data classification using classification algorithm.
8	Perform the data clustering using clustering algorithm.
9	Perform the Linear regression on the given datawarehouse data.
10	Perform the logistic regression on the given datawarehouse data.

The BI tools such as Tableau / Power BI / BIRT / R / Excel or any other can be used.

B. Sc. (Information Technology)		Semester – VI	
Course Name: Principles of Geographical Information		Course Code: USIT6P4	
System Practical		(Elective II)	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation SystemPractical Examination		21 /2	50
	Internal		-

Practical	Details			
No				
0	Familiarizing Quantum GIS: Installation of QGIS, datasets for both Vector and Raster data, Maps.			
1	Creating and Managing Vector Data: Adding vector layers, setting properties, formatting, calculating line lengths and statistics			
2	Exploring and Managing Raster data: Adding raster layers, raster styling and analysis, raster mosaicking and clipping			
3	Making a Map, Working with Attributes, Importing Spreadsheets or CSV files Using Plugins, Searching and Downloading OpenStreetMap Data			

4	Working with attributes, terrain Data
5	Working with Projections and WMS Data
6	Georeferencing Topo Sheets and Scanned Maps
	Georeferencing Aerial Imagery
	Digitizing Map Data
7	Managing Data Tables and Saptial data Sets: Table joins, spatial joins, points
,	in polygon analysis, performing spatial queries
	in polygon analysis, performing spatial queries
8	Advanced GIS Operations 1:Nearest Neighbor Analysis, Sampling Raster
	Data using Points or Polygons, Interpolating Point Data
9	Advance GIS Operations 2: Batch Processing using Processing Framework
	Automating Complex Workflows using Processing Modeler
	Automating Map Creation withPrint Composer Atlas
10	Validating Mag data
10	Validating Map data

B. Sc. (Information Technology)		Semester – VI	
Course Name: Advanced Networking Practical		Course Code: USIT6P5	
		(Elective II)	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		-

Details			
Configuring OSPF – I			
Single-Area OSPF Link Costs and Interface Priorities			
Multi-Area OSPF with Stub Areas and Authentication			
Configuring OSPF – II			
OSPF Virtual Links and Area Summarization			
OSPF over Frame Relay			
Redistribution and Administrative Distances			
Redistribution Between RIP and OSPF			
Manipulating Administrative Distances			
	Configuring OSPF – I Single-Area OSPF Link Costs and Interface Priorities Multi-Area OSPF with Stub Areas and Authentication Configuring OSPF – II OSPF Virtual Links and Area Summarization OSPF over Frame Relay Redistribution and Administrative Distances Redistribution Between RIP and OSPF		

4	BGP
a	Configuring BGP with Default Routing
b	Using the AS_PATH Attribute
с	BGP Route Reflectors and Route Filters
5	IPv6
а	Configuring OSPF for IPv6
b	Configuring 6to4 Tunnels
6	VLANs and EtherChannel
а	Static VLANS, VLAN Trunking, and VTP Domains and Modes
b	Configuring EtherChannel
7	Spanning Tree Protocol
а	Spanning Tree Protocol (STP) Default Behavior
b	Modifying Default Spanning Tree Behavior
8	VLAN and Spanning Tree
а	Per-VLAN Spanning Tree Behavior
b	Multiple Spanning Tree
9	Internal VLAN Routing
а	Inter-VLAN Routing with an External Router
b	Inter-VLAN Routing with an Internal Route Processor
10	Configure NAT Services

B. Sc. (Information Technology)		Semester – VI	
Course Name: Advanced Mobile Programming Practical		Course Code: USIT6P6	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	21/2	50
	Internal		

Practical	Details			
No				
1Introduction to Android, Introduction to Android Studio IDE, Ap Fundamentals: Creating a Project, Android Components, Activities, Content Providers, Broadcast Receivers, Interface overview, Creating Virtual device, USB debugging mode, Android Application Overview "Hello World" program.				
2	Programming Resources Android Resources: (Color, Theme, String, Drawable, Dimension, Image),			
3	Programming Activities and fragments Activity Life Cycle, Activity methods, Multiple Activities, Life Cycle of fragments and multiple fragments.			
4	Programs related to different Layouts			

	Coordinate, Linear, Relative, Table, Absolute, Frame, List View, Grid View.
5	Programming UI elements
	AppBar, Fragments, UI Components
6	Programming menus, dialog, dialog fragments
7	Programs on Intents, Events, Listeners and Adapters
	The Android Intent Class, Using Events and Event Listeners
8	Programs on Services, notification and broadcast receivers
9	Database Programming with SQLite
10	Programming threads, handles and asynchronized programs
11	Programming Media API and Telephone API
12	Programming Security and permissions
13	Programming Network Communications and Services (JSON)

APPENDIX – 1

Project Dissertation Semester V and Project Implementation Semester VI

Chapter 1 to 4 should be submitted in Semester V in spiral binding. These chapter have also to be included in Semester VI report. Semester VI report has to be hard bound with golden embossing. Students will be evaluated based on the dissertation in semester V and dissertation and viva voce in Semester VI.

I. OBJECTIVES

- Describe the Systems Development Life Cycle (SDLC).
- Evaluate systems requirements.
- Complete a problem definition.
- Evaluate a problem definition.
- Determine how to collect information to determine requirements.

- Perform and evaluate feasibility studies like cost-benefit analysis, technical feasibility, time feasibility and Operational feasibility for the project.
- Work on data collection methods for fact finding.
- Construct and evaluate data flow diagrams.
- Construct and evaluate data dictionaries.
- Evaluate methods of process description to include structured English, decision tables and decision trees.
- Evaluate alternative tools for the analysis process.
- Create and evaluate such alternative graphical tools as systems flow charts and state transition diagrams.
- Decide the S/W requirement specifications and H/W requirement specifications.
- Plan the systems design phase of the SDLC.
- Distinguish between logical and physical design requirements.
- Design and evaluate system outputs.
- Design and evaluate systems inputs.
- Design and evaluate validity checks for input data.
- Design and evaluate user interfaces for input.
- Design and evaluate file structures to include the use of indexes.
- Estimate storage requirements.
- Explain the various file update processes based on the standard file organizations.
- Decide various data structures.
- Construct and evaluate entity-relationship (ER) diagrams for RDBMS related projects.
- Perform normalization for the unnormalized tables for RDBMS related projects
- Decide the various processing systems to include distributed, client/server, online and others.
- Perform project cost estimates using various techniques.
- Schedule projects using both GANTT and PERT charts.
- Perform coding for the project.
- Documentation requirements and prepare and evaluate systems documentation.
- Perform various systems testing techniques/strategies to include the phases of testing.
- Systems implementation and its key problems.

- Generate various reports.
- Be able to prepare and evaluate a final report.
- Brief the maintenance procedures and the role of configuration management in operations.
- To decide the future scope and further enhancement of the system.
- Plan for several appendices to be placed in support with the project report documentation.
- Decide the various processing systems to include distributed, client/server, online and others.
- Perform project cost estimates using various techniques.
- Schedule projects using both GANTT and PERT charts.
- Perform coding for the project.
- Documentation requirements and prepare and evaluate systems documentation.
- Perform various systems testing techniques/strategies to include the phases of testing.
- Systems implementation and its key problems.
- Generate various reports.
- Be able to prepare and evaluate a final report.
- Brief the maintenance procedures and the role of configuration management in operations.
- To decide the future scope and further enhancement of the system.
- Plan for several appendices to be placed in support with the project report documentation.
- Work effectively as an individual or as a team member to produce correct, efficient, wellorganized and documented programs in a reasonable time.
- Recognize problems that are amenable to computer solutions, and knowledge of the tool necessary for solving such problems.
- Develop of the ability to assess the implications of work performed.
- Get good exposure and command in one or more application areas and on the software
- Develop quality software using the software engineering principles
- Develop of the ability to communicate effectively.

II. Type of the Project

The majority of the students are expected to work on a real-life project preferably in some industry/ Research and Development Laboratories/Educational Institution/Software Company. Students are encouraged to work in the areas listedbelow. However, it is *not mandatory* for a

student to work on a real-life project. The student can formulate a project problem with the help of her/his Guide and submit the project proposal of the same. **Approval of the project proposal is mandatory**. If approved, the student can commence working on it, and complete it. Use the latest versions of the software packages for the development of the project.

III. SOFTWARE AND BROAD AREAS OF APPLICATION

FRONT END / GUI Tools	.Net Technologies,Java
DBMS/BACK END	Oracle, SQL Plus, MY SQL, SQL Server,
LANGUAGES	C, C++, Java, VC++, C#, R,Python
SCRIPTING LANGUAGES	PHP,JSP, SHELL Scripts (Unix), TcL/TK,
.NET Platform	F#,C#. Net, Visual C#. Net, ASP.Net
MIDDLE WARE (COMPONENT) TECHNOLOGIES	COM/DCOM, Active-X, EJB
UNIX INTERNALS	Device Drivers, RPC, Threads, Socket programming
NETWORK/WIRELESS TECHNOLOGIES	-
REALTIME OPERATING SYSTEM/ EMBEDDED SKILLS	LINUX, Raspberry Pi, Arduino, 8051
APPLICATION AREAS	Financial / Insurance / Manufacturing / Multimedia / Computer Graphics / Instructional Design/ Database Management System/ Internet / Intranet / Computer Networking-Communication Software development/ E- Commerce/ ERP/ MRP/ TCP-IP programming / Routing protocols programming/ Socket programming.

IV.Introduction

The project report should be documented with scientific approach to the solution of the problem that the students have sought to address. The project report should be prepared in order to solve the problem in a methodical and professional manner, making due references to appropriate techniques, technologies and professional standards. The student should start the documentation process from the first phase of software development so that one can easily identify the issues to be focused upon in the ultimate project report. The student should also include the details from the project diary, in which they will record the progress of their project throughout the course. The project report should contain enough details to enable examiners to evaluate the work. The important points should be highlighted in the body of the report, with details often referred to appendices.

1.1 PROJECT REPORT:

Title Page Original Copy of the Approved Proforma of the Project Proposal Certificate of Authenticated work Role and Responsibility Form Abstract Acknowledgement Table of Contents Table of Figures **CHAPTER 1: INTRODUCTION** 1.1 Background 1.2 Objectives 1.3 Purpose, Scope, and Applicability 1.3.1 Purpose 1.3.2 Scope 1.3.3 Applicability **1.4 Achievements** 1.5 Organisation of Report **CHAPTER 2: SURVEY OF TECHNOLOGIES CHAPTER 3: REQUIREMENTS AND ANALYSIS** 3.1 Problem Definition 3.2 Requirements Specification 3.3 Planning and Scheduling 3.4 Software and Hardware Requirements 3.5 Preliminary Product Description 3.6 Conceptual Models **CHAPTER 4: SYSTEM DESIGN**

4.1 Basic Modules
4.2 Data Design
4.2.1 Schema Design
4.2.2 Data Integrity and Constraints
4.3 Procedural Design
4.3.1 Logic Diagrams
4.3.2 Data Structures
4.3.3 Algorithms Design
4.4 User interface design
4.5 Security Issues
4.6 Test Cases Design
The documentation should use tools

The documentation should use tools like star UML, Visuo for windows, Rational Rose for design as part of Software Project Management Practical Course. The documentation should be spiral bound for semester V and the entire documentation should be hard bound during semester VI. CHAPTER 5: IMPLEMENTATION AND TESTING

5.1 Implementation Approaches

5.2 Coding Details and Code Efficiency

5.2.1 Code Efficiency

5.3 Testing Approach

5.3.1 Unit Testing

5.3.2 Integrated Testing

5.3.3 Beta Testing

5.4 Modifications and Improvements

5.5 Test Cases

CHAPTER 6: RESULTS AND DISCUSSION

6.1 Test Reports6.2 User DocumentationCHAPTER 7: CONCLUSIONS

7.1 Conclusion

7.1.1 Significance of the System

7.2 Limitations of the System7.3 Future Scope of the ProjectREFERENCESGLOSSARY

APPENDIX A

APPENDIX B

V. EXPLANATION OF CONTENTS

Title Page

Sample format of Title page is given in Appendix 1 of this block. Students should follow the given format.

Original Copy of the Approved Proforma of the Project Proposal

Sample Proforma of Project Proposal is given in Appendix 2 of this block. Students should follow the given format.

Certificate of Authenticated work

Sample format of Certificate of Authenticated work is given in Appendix 3 of this block. Students should follow the given format.

Role and Responsibility Form

Sample format for Role and Responsibility Form is given in Appendix 4 of this block.

Students should follow the given format.

Abstract

This should be one/two short paragraphs (100-150 words total), summarising the project work. It is important that this is not just a re-statement of the original project outline. A suggested flow is background, project aims and main achievements. From the abstract, a reader should be able to ascertain if the project is of interest to them and, it should present results of which they may wish to know more details.

Acknowledgements

This should express student's gratitude to those who have helped in the preparation of project.

Table of Contents: The table of contents gives the readers a view of the detailed structure of the report. The students would need to provide section and subsection headings with associated pages. The formatting details of these sections and subsections are given below.

Table of Figures: List of all Figures, Tables, Graphs, Charts etc. along with their page numbers in a table of figures.

Chapter 1: Introduction

The introduction has several parts as given below:

Background: A description of the background and context of the project and its relation to work already done in the area. Summarise existing work in the area concerned with the project work.

Objectives: Concise statement of the aims and objectives of the project. Define exactly what is going to be done in the project; the objectives should be about 30 /40 words.

Purpose, Scope and Applicability: The description of Purpose, Scope, and Applicability are given below:

• Purpose: Description of the topic of the project that answers questions on why this project is being done. How the project could improve the system its significance and theoretical framework.

• Scope: A brief overview of the methodology, assumptions and limitations. The students should answer the question: What are the main issues being covered in the project? What are the main functions of the project?

• Applicability: The student should explain the direct and indirect applications of their work. Briefly discuss how this project will serve the computer world and people.

Achievements: Explain what knowledge the student achieved after the completion of the work. What contributions has the project made to the chosen area? Goals achieved - describes the degree to which the findings support the original objectives laid out by the project. The goals may be partially or fully achieved, or exceeded.

Organisation of Report: Summarising the remaining chapters of the project report, in effect, giving the reader an overview of what is to come in the project report.

Chapter 2: Survey of Technologies

In this chapter Survey of Technologies should demonstrate the students awareness and understanding of Available Technologies related to the topic of the project. The student should give the detail of all the related technologies that are necessary to complete the project. The should describe the technologies available in the chosen area and present a comparative study of all those Available Technologies. Explain why the student selected the one technology for the completion of the objectives of the project.

Chapter 3: Requirements and Analysis

Problem Definition: Define the problem on which the students are working in the project.

Provide details of the overall problem and then divide the problem in to sub-problems. Define each sub-problem clearly.

Requirements Specification: In this phase the student should define the requirements of the system, independent of how these requirements will be accomplished. The Requirements Specification describes the things in the system and the actions that can be done on these things. Identify the operation and problems of the existing system.

Planning and Scheduling: Planning and scheduling is a complicated part of software development. Planning, for our purposes, can be thought of as determining all the small tasks that must be carried out in order to accomplish the goal. Planning also takes into account, rules, known as constraints, which, control when certain tasks can or cannot happen. Scheduling can be thought of as determining whether adequate resources are available to carry out the plan. The student should show the Gantt chart and Program Evaluation Review Technique (PERT).

Software and Hardware Requirements: Define the details of all the software and hardware needed for the development and implementation of the project.

Hardware Requirement: In this section, the equipment, graphics card, numeric co-processor, mouse, disk capacity, RAM capacity etc. necessary to run the software must be noted.
Software Requirements: In this section, the operating system, the compiler, testing tools, linker, and the libraries etc. necessary to compile, link and install the software must be listed.
Preliminary Product Description: Identify the requirements and objectives of the new system. Define the functions and operation of the application/system the students are developing as project.

Conceptual Models: The student should understand the problem domain and produce a model of the system, which describes operations that can be performed on the system, and the allowable sequences of those operations. Conceptual Models could consist of complete Data Flow Diagrams, ER diagrams, Object-oriented diagrams, System Flowcharts etc.

Chapter 4: System Design

Describes desired features and operations in detail, including screen layouts, business rules, process diagrams, pseudocode and other documentation.

Basic Modules: The students should follow the divide and conquer theory, so divide the overall problem into more manageable parts and develop each part or module separately. When all modules are ready, the student should integrate all the modules into one system. In this phase, the student should briefly describe all the modules and the functionality of these modules.

Data Design: Data design will consist of how data is organised, managed and manipulated.

• Schema Design: Define the structure and explanation of schemas used in the project.

• Data Integrity and Constraints: Define and explain all the validity checks and constraints provided to maintain data integrity.

Procedural Design: Procedural design is a systematic way for developing algorithms or procedurals.

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• Logic Diagrams: Define the systematical flow of procedure that improves its comprehension and helps the programmer during implementation. e.g., Control Flow Chart, Process Diagrams etc.

• Data Structures: Create and define the data structure used in procedures.

• Algorithms Design: With proper explanations of input data, output data, logic of processes, design and explain the working of algorithms.

User Interface Design: Define user, task, environment analysis and how to map those requirements in order to develop a "User Interface". Describe the external and internal components and the architecture of user interface. Show some rough pictorial views of the user interface and its components.

Security Issues: Discuss Real-time considerations and Security issues related to the project and explain how the student intends avoiding those security problems. What are the security policy plans and architecture?

Test Cases Design: Define test cases, which will provide easy detection of errors and mistakes with in a minimum period of time and with the least effort. Explain the different conditions in which the students wish to ensure the correct working of the project.

Chapter 5: Implementation and Testing

Implementation Approaches: Define the plan of implementation, and the standards the students have used in the implementation.

Coding Details and Code Efficiency: Students not need include full source code, instead, include only the important codes (algorithms, applets code, forms code etc). The program code should contain comments needed for explaining the work a piece of code does. Comments may be needed to explain why it does it, or, why it does a particular way.

The student can explain the function of the code with a shot of the output screen of that program code.

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• Code Efficiency: The student should explain how the code is efficient and how the students have handled code optimisation.

Testing Approach: Testing should be according to the scheme presented in the system design chapter and should follow some suitable model - e.g., category partition, state machine-based. Both functional testing and user-acceptance testing are appropriate. Explain the approach of testing.

• Unit Testing: Unit testing deals with testing a unit or module as a whole. This would test the interaction of many functions but, do confine the test within one module.

• Integrated Testing: Brings all the modules together into a special testing environment, then checks for errors, bugs and interoperability. It deals with tests for the entire application. Application limits and features are tested here.

Modifications and Improvements: Once the students finish the testing they are bound to be faced with bugs, errors and they will need to modify your source code to improve the system. Define what modification are implemented in the system and how it improved the system.

Chapter 6: Results and Discussion

Test Reports: Explain the test results and reports based on the test cases, which should show that theproject is capable of facing any problematic situation and that it works fine in different conditions. Take the different sample inputs and show the outputs.

User Documentation: Define the working of the software; explain its different functions, components with screen shots. The user document should provide all the details of the product in such a way that any user reading the manual, is able to understand the working and functionality of the document.

Chapter 7: Conclusions

Conclusion: The conclusions can be summarised in a fairly short chapter (2 or 3 pages). This chapter brings together many of the points that would have made in the other chapters.

Limitations of the System: Explain the limitations encountered during the testing of the project that the students were not able to modify. List the criticisms accepted during the demonstrations of the project.

Future Scope of the Project describes two things: firstly, new areas of investigation prompted by developments in this project, and secondly, parts of the current work that was not completed due to time constraints and/or problems encountered.

REFERENCES

It is very important that the students acknowledge the work of others that they have used or adapted in their own work, or that provides the essential background or context to the project. The use of references is the standard way to do this. Please follow the given standard for the references for books, journals, and online material. The citation is mandatory in both the reports. E.g:

Linhares, A., & Brum, P. (2007). Understanding our understanding of strategic scenarios: What role do chunks play? *Cognitive Science*, *31*(6), 989-1007. https://doi.org/doi:10.1080/03640210701703725

Lipson, Charles (2011). Cite right : A quick guide to citation styles; MLA, APA, Chicago, the sciences, professions, and more (2nd ed.). Chicago [u.a.]: University of Chicago Press. p. 187. ISBN 9780226484648.

Elaine Ritchie, J Knite. (2001). Artificial Intelligence, Chapter 2, p.p 23 - 44. Tata McGrawHill.

GLOSSARY

If you the students any acronyms, abbreviations, symbols, or uncommon terms in the project report then their meaning should be explained where they first occur. If they go on to use any of them extensively then it is helpful to list them in this section and define the meaning.

APPENDICES

These may be provided to include further details of results, mathematical derivations, certain illustrative parts of the program code (e.g., class interfaces), user documentation etc.

In particular, if there are technical details of the work done that might be useful to others who wish to build on this work, but that are not sufficiently important to the project as a whole to justify being discussed in the main body of the project, then they should be included as appendices.

VI. SUMMARY

Project development usually involves an engineering approach to the design and development of a software system that fulfils a practical need. Projects also often form an important focus for discussion at interviews with future employers as they provide a detailed example of what the students are capable of achieving. In this course the students can choose your project topic from the lists given in Unit 4: Category-wise Problem Definition.

VII. FURTHER READINGS

1. Modern Systems Analysis and Design; Jeffrey A. Hoffer, Joey F. George, Joseph,S. Valacich; Pearson Education; Third Edition; 2002.

2. ISO/IEC 12207: Software Life Cycle Process

(http://www.software.org/quagmire/descriptions/iso-iec12207.asp).

- 3. IEEE 1063: Software User Documentation (http://ieeexplore.ieee.org).
- 4. ISO/IEC: 18019: Guidelines for the Design and Preparation of User Documentation for Application Software.
- 5. http://www.sce.carleton.ca/squall.
- 6. http://en.tldp.org/HOWTO/Software-Release-Practice-HOWTO/documentation.html.
- 7. http://www.sei.cmu.edu/cmm/

PROFORMA FOR THE APPROVAL PROJECT PROPOSAL

(Note:All entries of the proforma of approval should be filled up with appropriate and complete information. Incomplete proforma of approval in any respect will be summarily rejected.)

PNR **No.:**

Rollno:

1. Name of the Student

2.	Title of the Project		
3.	Name of the Guide		
4.	Teaching experience of the Guide _		
5.	Is this your first submission?	Yes	No
Signat	ure of the Student		Signature of the Guide
Date:		Da	ite:

Signature of the Coordinator

Date:

(All the text in the report should be in times new roman)

TITLE OF THE PROJECT (NOT EXCEEDING 2 LINES, 24 BOLD, ALL CAPS)

A Project Report (12 Bold)

Submitted in partial fulfillment of the Requirements for the award of the Degree of (size-12)

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)(14 BOLD, CAPS)

By(12 Bold)

Name of The Student (size-15, title case) Seat Number (size-15)

Under the esteemed guidance of (13 bold) Mr./Mrs. Name of The Guide (15 bold, title case) Designation (14 Bold, title case)

COLLEGE LOGO

DEPARTMENT OF INFORMATION TECHNOLOGY(12 BOLD, CAPS) COLLEGE NAME (14 BOLD, CAPS) (Affiliated to University of Mumbai) (12, Title case, bold, italic) CITY, PIN CODE(12 bold, CAPS) MAHARASHTRA (12 bold, CAPS) YEAR (12 bold)

COLLEGE NAME (14 BOLD, CAPS) (Affiliated to University of Mumbai) (13, bold, italic) CITY-MAHARASHTRA-PINCODE(13 bold, CAPS)

DEPARTMENT OF INFORMATION TECHNOLOGY (14 BOLD, CAPS)

College Logo

CERTIFICATE (14 BOLD, CAPS, underlined, centered)

This is to certify that the project entitled, "**Title of The Project** ", is bonafied work of **NAME OF THE STUDENT** bearing Seat.No: (**NUMBER**) submitted in partial fulfillment of the requirements for the award of degree of BACHELOR OF SCIENCE in INFORMATION TECHNOLOGY from University of Mumbai. (12, times new roman, justified)

Internal Guide (12 bold)

Coordinator

(Don't write names of lecturers or HOD)

External Examiner

Date:

College Seal

COMPANY CERTIFICATE (if applicable)

(Project Abstract page format) Abstract (20bold, caps, centered)

Content (12, justified)

Note: Entire document should be with <u>1.5</u> <u>line spacing and all paragraphs should start with 1 tab space.</u>

ACKNOWLEDGEMENT (20, BOLD, ALL CAPS, CENTERED)

The acknowledgement should be in times new roman, 12 font with 1.5 line spacing, justified.

(Declaration page format)

DECLARATION (20 bold, centered, allcaps)

Content (12, justified)

I here by declare that the project entitled, "**Title of the Project**" done at **place where the project is done**, has not been in any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university.

The project is done in partial fulfillment of the requirements for the award of degree of **BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)** tobe submitted as final semester project as part of our curriculum.

Name and Signature of the Student

TABLE OF CONTENTS (20bold, caps, centered)

Should be generated automatically using word processing software.

Chapter 1: Introduction	01(no bold)
1.1 Background	02(no bold)
1.2 Objectives	
1.3 Purpose and Scope	••••
1.2.1Purpose	
1.2.2Scope	
-	

Chapter 2: System Analysis 2.1 Existing System 2.2 Proposed System 2.3 Requirement Analysis 2.4 Hardware Requirements 2.5 Software Requirements 2.6 Justification of selection of Technology

Chapter 3: System Design 3.1 Module Division 3.2 Data Dictionary 3.3 ER Diagrams 3.4 DFD/UML Diagrams

Chapter 4: Implementation and Testing

4.1 Code (Place Core segments)
4.2 Testing Approach

4.2.1Unit Testing (Test cases and Test Results)
4.2.2 Integration System (Test cases and Test Results)

Chapter 5: Results and Discussions (Output Screens) Chapter 6: Conclusion and Future Work Chapter 7: References

List of Tables (20 bold, centered, Title Case)

Should be generated automatically using word processing software.

List of Figures (20 bold, centered, Title Case)

Should be generated automatically using word processing software.

(Project Introduction page format) Chapter 1

Introduction (20 Bold, centered)

Content or text (12, justified)

Note: Introduction has to cover brief description of the project with minimum 4 pages.

System Analysis (20 bold, Centered)

Subheadings are as shown below with following format (16 bold, CAPS)

2.1 Existing System (16 Bold)

2.1.1 ------ (14 bold, title case)

2.1.1.1 ------ (12 bold, title case)

2.2 Proposed System

2.3 Requirement Analysis

2.4 Hardware Requirements

2.5 Software Requirements

2.6 Justification of Platform – (how h/w & s/w satisfying the project)

Table 2.1: Caption

System Design (20 bold, centered)

Subheadings are as shown below with following format (16 bold, CAPS) Specify figures as Fig 11.1 – caption

- **3.1 Module Division**
- 3.2 Data Dictionary
- 3.3 E-R Diagrams
- **3.4 Data Flow Diagrams / UML**

Note: write brief description at the bottom of all diagrams

Sample Figure

Fig. 3.1: Caption

Implementation and Testing (20 bold, centered)

4.1 Code (Place Core segments)

Content includes description about coding phase in your project (Font-12) (* don't include complete code----just description)

4.2 Testing Approach

Subheadings are as shown below with following format (16 bold, CAPS)

4.2.1 Unit Testing

4.2.2 Integration Testing

Note:

- Explain about above testing methods
- Explain how the above techniques are applied in your project
 Provide Test plans, test cases, etc relevant to your project

Results and Discussions(20 bold, centered)

Note: Place Screen Shots and write the functionality of each screen at the bottom

Conclusion and Future Work (20 bold, centered)

The conclusions can be summarized in a fairly short chapter around 300 words. Also include limitations of your system and future scope (12, justified)

References (20 bold, centered)

Content (12, LEFT)

[1] Title of the book, Author

[2] Full URL of online references

[3] -----

* <u>NOTE ABOUT PROJECT VIVA VOCE:</u>

Student may be asked to write code for problem during VIVA to demonstrate his coding capabilities and he/she may be asked to write any segment of coding used in the in the project. The project can be done in group of at most four students. However, the length and depth of the project should be justified for the projects done in group. A big project can be modularised and different modules can be assigned as separate project to different students.

Marks Distribution:

Semester V: 50 Marks

Documentation: 50 marks

Semester VI: 150 Marks

Documentation: 50 Marks:

Implementation and Viva Voce: 100 Marks

The plagiarism should be maintained as per the UGC guidelines.