



R. A. Podar College
Of Commerce and Economics,
(Autonomous)
Matunga, Mumbai.



Syllabus
and
Question Paper Pattern
Of
Courses of B.Com. Programme
First Year (Semester I and II)
Under Choice Based Credit System

To be implemented from Academic Year 2019-2020
(Revised from Academic Year 2020-21)

Faculty of Commerce

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Bachelor of Commerce (B.Com) Programme

Under Choice Based Credit, Grading and Semester System

Course Structure

F. Y. B. Com

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

No. of Courses	Semester I	Credits	No. of Courses	Semester II	Credits
1	Elective Courses (EC)		1	Elective Courses (EC)	
1A	Discipline Specific Elective(DSE)Courses		1A	Discipline Specific Elective(DSE)Courses	
1	Accountancy and Financial Management I	03	1	Accountancy and Financial Management II	03
1B	Discipline Related Elective(DRE)Courses		1B	Discipline Related Elective(DRE)Courses	
2	Commerce I	03	2	Commerce II	03
3	Business Economics I	03	3	Business Economics II	03
2	Ability Enhancement Courses (AEC)		2	Ability Enhancement Courses (AEC)	
2A	Ability Enhancement Compulsory Courses (AECC)		2A	Ability Enhancement Compulsory Courses (AECC)	
4	Business Communication I	03	4	Business Communication II	03
5	Environmental Studies I	03	5	Environmental Studies II	03
2B	Skill Enhancement Courses (SEC)		2B	Skill Enhancement Courses (SEC)	
6	Foundation Course - I	02	6	Foundation Course - II	02
3	Core Courses (CC)		3	Core Courses (CC)	
7	Mathematical and Statistical Techniques I	03	7	Mathematical and Statistical Techniques II	03
Total Credits		20	Total Credits		20

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

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

Semester I

No. of Courses	Semester I	Credits
1	Elective Courses (EC)	
1A	Discipline Specific Elective(DSE)Courses	
1	Accountancy and Financial Management I	03
1B	Discipline Related Elective(DRE)Courses	
2	Commerce I	03
3	Business Economics I	03
2	Ability Enhancement Courses (AEC)	
2A	Ability Enhancement Compulsory Courses (AECC)	
4	Business Communication I	03
5	Environmental Studies I	03
2B	Skill Enhancement Courses (SEC)	
6	Foundation Course - I	02
3	Core Courses (CC)	
7	Mathematical and Statistical Techniques I	03
Total Credits		20

Syllabus of courses of F.Y.B.Com Programme

With effect from the Academic Year 2019-2020

Discipline Specific Elective (DSE) Courses

1. Accountancy and Financial Management (3 Credits)

Objectives:

1. To impart the knowledge of various accounting concepts, conventions, policies and related accounting standards to the learners.
2. To impart the knowledge to learners about accounting procedures, methods and techniques in solving problems and issues relating to various areas of accounting.
3. To acquaint learners with practical aspects of 'accounts writing' by giving them exposure to special areas of accounting such as Co-operative Housing Societies, Trust, Branches, Installment Sale, Lease Accounting, Single Entry, etc.

Semester I

Modules at a Glance

Accountancy and Financial Management - Paper I (3 Credits)		
Sr. No.	Modules	No. of Lectures
1	Accounting Concepts, Conventions and Related Standards	15
2	Valuation of Inventories: AS-2	15
3	Final Accounts of Manufacturing Enterprise	15
4	Accounting for Instalment Sale and Lease	15
Total No. of Lectures:		60

Sr. No.	Modules
1	Accounting Concepts, Conventions and Related Standards
	<ul style="list-style-type: none">• Accounting Concepts: Business Entity, Going Concern, Money Measurement, Periodicity, Accrual, Matching, Realisation, Historical Cost, Fair Value, Dual Aspect, Contingent Assets, Contingent Liabilities, Provisions v/s Reserves, Charge v/s Appropriation• Accounting Conventions: Conservatism, Materiality, Consistency, Uniformity

	<ul style="list-style-type: none"> • Accounting Standards: <ul style="list-style-type: none"> AS-1: Disclosure of Accounting Policies: Purpose, Areas of Policies, Illustrations AS-6: Depreciation Accounting: Introduction, Definitions, Applicability, Disclosure, Illustrations AS-9: Revenue Recognition: Meaning and Scope, Transactions excluded, Sale of Goods, Rendering of Services, Effects of Uncertainties, Disclosure, Illustrations AS-10: Accounting for Fixed Assets: Introduction, Definitions, Applicability, Disclosure, Illustrations
2	Valuation of Inventories: AS-2
	<ul style="list-style-type: none"> • AS-2: Valuation of Inventories: Meaning and Definition, Applicability, Measurement of Inventory, Disclosure in Final Account, Explanation with Illustrations • Inventory Valuation (Stock): Cost for Inventory Valuation, Inventory Systems, Periodic Inventory, Perpetual Inventory, Valuation: Meaning and Importance, Methods of Stock Valuation as per AS-2, First in First Out (FIFO) Method, Weighted Average Method, Illustrations on computation of inventory as per above methods as on a particular date and as on a balance sheet date if inventory is taken on a date which is either before or after the balance sheet date
3	Final Accounts of Manufacturing Enterprise
	Expenditure: Capital, Revenue; Receipts: Capital, Revenue; Adjustment and Closing Entries, Final Accounts of Manufacturing Concerns (Proprietary Firm)
4	Accounting for Installment Sale and Lease
	<ul style="list-style-type: none"> • Installment Sale : Meaning, , Distinction between Hire Purchase and Installment Sale, Calculation of Interest, Accounting for Installment Sale by Asset Purchase (Credit Purchase) Method, Interest Suspense Method, Journal Entries, Ledger Accounts, (Including Default, Repossession and Calculation of Cash Price) • Lease: Operational Lease, Financial Lease, Accounting in the books of Lessor, Accounting in the books of Lessee

Semester II

Modules at a Glance

Accountancy and Financial Management - Paper II		
Sr. No.	Modules	No. of Lectures
1	Accounting from Incomplete Records	15
2	Accounting for Non-Profit Organisation w.r.t. Co-operative Housing Society and Trusts	15
3	Departmental Accounts	15
4	Branch Accounts	15
Total No. of Lectures:		60

Sr. No.	Modules
1	Accounting from Incomplete Records
	Introduction, Problems on preparation of final accounts of Proprietary Trading Concern (By Conversion Method)
2	Accounting for Non-Profit Organisation w.r.t. Co-operative Housing Society and Trusts
	Earmarked Funds, Earmarked Investments, Interest Accounting of Earmarked Investments, Other provisions in relation to preparation of Final Accounts, Receipts and Payments Accounts, Income and Expenditure Accounts and Balance Sheet
3	Departmental Accounts
	Meaning, Basis of Allocation of Expenses, Basis of Allocation of Incomes/Receipts, Inter Departmental Transfers, At Cost Price, At Invoice Price, Reserve, Illustrations –Departmental Trading and Profit & Loss Account and Balance Sheet
4	Branch Accounts
	Meaning, Classification of Branch, Accounting of Independent Branch, Accounting for Dependent Branch not maintaining full books by Debtors Method and Stock and Debtors Method.

**Accountancy & Financial Management:
Semester I & II**

Paper Pattern
(Academic Year: 2019-2020)

Maximum Marks : 60
Duration : 2 Hours

Note: (1) Question No. 1 and 5 are Compulsory
(2) Attempt any Two Questions from the remaining Q. No. 2, 3 & 4.
(3) All questions carry 15 marks each

Question No.	Particulars (Nature of Questions)	Marks (To Be Attempted)
1.	Concept /Application Based Questions (3 Marks Each) To be given : Seven To be attempted : Any Five	15
2.	Practical Question/s (*)	(15 x 2) = 30
3.	Practical Question/s (*)	
4.	Practical Question/s (*)	
5 (A)	Attempt any three out of five sub questions given (2 marks each)	6
5 (B)	Short Notes: Attempt any three out of five given (3 marks each)	9
Total		60

***Note – Q. No. 2, 3 & 4 may be divided into sub questions of 10/5, 8/7 or 5/5/5 marks each.**

Reference:

1. Introduction to Accountancy by T. S. Grewal, S. Chand and Company (P) Ltd., New Delhi
2. Advance Accounts by Shukla & Grewal, S. Chand and Company (P) Ltd., New Delhi
3. Advanced Accountancy by R. L Gupta and M Radhaswamy, S. Chand and Company (P) Ltd., New Delhi
4. Modern Accountancy by Mukherjee and Hanif, Tata Mc. Grow Hill & Co. Ltd., Mumbai
5. Financial Accounting by Lesile Chandwick, Pentice Hall of India Adin Bakley (P) Ltd.
6. Financial Accounting for Management by Dr. Dinesh Harsalekar, Multi-Tech. Publishing Co. Ltd., Mumbai.
7. Financial Accounting by P. C. Tulsian, Pearson Publications, New Delhi Accounting Principles by Anthony, R.N. and Reece J.S., Richard Irwin Inc.
8. Financial Accounting by Monga, J.R. Ahuja, Girish Ahuja and Shegal Ashok, Mayur Paper Back
9. Compendium of Statement & Standard of Accounting, ICAI. Indian Accounting Standards, Ashish Bhattacharya, Tata Mc. Grow Hill & Co. Ltd., Mumbai
10. Financial Accounting by Williams, Tata Mc. Grow Hill & Co. Ltd., Mumbai
11. Company Accounting Standards by Shrinivasan Anand, Taxman.
12. Financial Accounting by V. Rajasekaran, Pearson Publications, New Delhi.
13. Introduction to Financial Accounting by Horngren, Pearson Publications.
14. Financial Accounting by M. Mukherjee.M. Hanif. Tata McGraw Hill Education Private Ltd; New Delhi

Syllabus of courses of F.Y.B.Com Programme

With effect from the Academic Year 2019-2020

Discipline Related Elective (DRE) Courses

2. Commerce (3 Credits)

Objectives:

1. To create awareness among the learners regarding the concept and importance of business
2. To apprise the learners regarding business environment and entrepreneurship.
3. To familiarize learners regarding setting up of Business unit.

Learning Outcome:

1. It is expected that the learners become fully conversant with the aspects of business, elements of business environment, entrepreneurship and setting up of business unit.
2. Learners appreciate the importance of business in a developing economy.
3. Learners consider entrepreneurship as a career option.

Semester I

Modules at a Glance

Commerce I- Introduction to Business		
Sr. No.	Modules	No. of Lectures
1	Introduction to Business	11
2	Business Environment	11
3	Entrepreneurship	11
4	Setting up of Business	12
Total No. of Lectures:		45

Sr. No.	Modules
1	Introduction to Business
	<ol style="list-style-type: none">1. Business: Concept2. Significance to Business Firms, Customers and Society3. Business Functions4. Objectives of Business: Classification of business objectives, Reconciliation of Economic with Social Objectives.5. Social Responsibility of a Business Firm towards various Stakeholders.6. Corporate Social Responsibility: Concept, Relevance and Importance of CSR7. Linkage between business and society: Experience in India with reference to Past, Present & Future.8. Strategy Alternatives: Growth, Stability, Retrenchment, Restructuring, Turnaround / Business Combinations.

	<ol style="list-style-type: none"> 9. Case-studies of successful businesses world-wide: Apple, Google, TCS, Toyota, Sony 10. Case studies of companies that perished- lessons to be learned- Encyclopedia Britannica, Lehman Brothers, Kodak etc.
2	Business Environment
	<ol style="list-style-type: none"> 1. Concept and importance of Business Environment 2. Inter relationship between Business and Environment 3. Internal Business Environment – Elements 4. External Business Environment: Micro & Macro – Elements 5. SWOC Analysis: Concept and Importance 6. WTO Agreements (TRIPs, TRIMs, GATS, AoA) 7. Major Trading Blocs (EU, ASEAN, SAARC, NAFTA)
3	Entrepreneurship
	<ol style="list-style-type: none"> 1. Introduction: Concept and importance of entrepreneurship, 2. Factors Contributing to Growth of Entrepreneurship 3. Entrepreneur and Manager, Entrepreneur and Intrapreneur 4. Types of Entrepreneurs 5. Competencies Of An Entrepreneur 6. Training and Development centers in India. 7. Incentives to Entrepreneurs in India (Govt) 8. Start up space in India: Importance, Challenges and Solutions available in the changing scenario. 9. Women Entrepreneurs: Problems and Promotion.
4	Setting up of Business
	<ol style="list-style-type: none"> 1. Introduction: Business Planning Process; 2. Concept and importance of Project Planning; Project Report; 3. Feasibility Study-Types, Importance. 4. Business Unit Promotion: Concept and Stages of Business Unit Promotion. 5. Location - Factors determining location, 6. Role of Government in Promotion Business Units 7. Licensing and Registration Procedure, Filling returns and other documents, 8. Ease of doing business In India : Importance, India’s position worldwide 9. Sources of funding for starting up new business 10. Project on preparation of Business Plan.

Commerce -II-Service Sector

Objectives:

1. To make aware the learners regarding the broad framework of different types of Services.
2. To provide insights into the key requirements, opportunities and challenges in the services sector.

Learning Outcomes:

1. It is expected that the learners acquaint themselves with the opportunities and challenges in the services sector.
2. The learners are expected to develop skills relating to marketing of services.

Semester II

Modules at a Glance

Commerce -II-Service Sector		
Sr. No.	Modules	No. of Lectures
1	Introduction to Services Sector	15
2	Retailing	10
3	Recent Trends in Services Sector	10
4	E – Commerce	10
Total No. of Lectures:		45

Sr. No.	Modules
1	Introduction to Services Sector
	<ol style="list-style-type: none">1. Concept of Services, Characteristics2. Scope of Services3. Importance of Service sector in the Indian context.4. Marketing Mix for Services5. Consumer Expectations,6. Managing Demand and Capacity, Role of Customer Relationship Management in Services Marketing7. Case-studies of Successful Entrepreneurs in Services Sector
2	Retailing
	<ol style="list-style-type: none">1. Concept of organized and unorganized retailing2. Trends in retailing in India3. Survival strategies for unorganized Retailers.4. Retail Format: Store format, Non-Store format5. Store Planning, design and layout.6. IT in retailing

	<ol style="list-style-type: none"> 7. Mall Management, Retail Franchising, FDI in Retailing, Careers in Retailing. 8. Legal and ethical aspects in retailing 9. Case-studies: Successful Retailers in India & in the World- Walmart, TESCO, D-Mart, Lulu International.
3	Recent Trends in Services Sector
	<ol style="list-style-type: none"> 1. ITES Sector: Concept and scope of BPO/ KPO/LPO 2. Enterprise Resource Planning 3. Trends in Aviation Sector 4. Trends in Banking Sector 5. Trends in Insurance Sector 6. Trends in Tourism Sector 7. Trends in Logistics Sector 8. Trends in Health and Wellness 9. Trends in Hospitality Sector
4	E – Commerce
	<ol style="list-style-type: none"> 1. E-Commerce-Concept, Functions. 2. Benefits of E-Commerce 3. Challenges of E-Commerce 4. Internet Payment systems 5. E-Commerce Business Strategies 6. Business Models of E-Commerce 7. Principles of Website Design 8. E-Marketing- Techniques 11. Cyber Security.

Commerce
Paper I and Paper II
Question Paper Pattern
(Academic Year: 2019-2020)

I. Cumulative Continuous Assessment (CCA)

- Written test on concept clarity for 10 marks where the learners need to answer within two lines the concepts meant for testing for e.g.-words like invoice, tender, entrepreneur, examples of private sector, public sector, private companies,
- Individual project about Role of business in a growing economy. Faculty members could identify 15 to 20 topics and ask the learners to choose from. For example:
 1. Industrial revolution of 18th century compared with the revolution in the 19th, 20th century.
 2. Trade across the world during different time frame
 3. Banking reforms in India during last 100 years
 4. Retail revolution in the developed countries
 5. Relevance of make In India
 6. Aviation sector – past, present and future
 7. Fruits of Liberalization-A comparison of 20 years prior to 1991 and 20 years
 8. Mergers and demergers in Indian public sector banks-last 50 years
 9. Laws relating to NPAs in India
 10. International trade-what? Why? And How?

As it is individual projects related to the syllabus, the learner may be tested for originality by making them answer one or two questions on the topic while accepting the submission

- Ten marks for group projects-This may cover successful businesses, start up space, Failure of business houses, Unethical practices found in business firms and many more. The evaluation shall be on the basis of project presentation. Rubrics may be developed and communicated
- Ten marks for any other criteria to be specified by the faculty.(including attendance)
It is suggested that 5 marks be given for maintaining a commerce diary where weekly record of business events are recorded and suitable observations are made by the learner.
Five marks for a scrap book which will have a collection of forms and procedure used in every day transactions such as, credit card details, NEFT procedure, Face of cheque, Precaution while using ATM, meaning of banking code, innovative payment mechanisms etc.,
The contents of the scrap book may be divided as per the syllabus of 2 semesters.
- The scheme of marking need to be discussed with all other department members, authorized by the HOD and sanctioned by the Principal
- Scheme of marking need to be elaborate with the rubrics and should be enclosed with the instructions to be given to the students about the CCE programme
- Such document should form part of the teaching methodology
- Such document needs to be given wide publicity amongst the students.
- The document to be submitted to the Exam wing well in advance preferably within 2 to 3 weeks after the commencement of the semester.

Total: 40 marks

Semester End Examination (SEE) - 60 Marks

Maximum Marks: 60

Duration: 2 Hours

Note: (1) All questions are Compulsory.

Question No.	Particulars (Nature of Questions)	Marks
Q-1 (Module-I)	Answer the following a) b) OR Descriptive Question	12
Q-2 (Module-II)	Answer any 2 out of 3 a) b) OR Descriptive Question	12
Q-3 (Module-III)	Answer any 2 out of 3 a) b) OR Descriptive Question	12
Q-4 (Module-IV)	Answer any 2 out of 3 a) b) OR Descriptive Question	12
Q-5	A) Case Study OR B) Write short notes on(Any 3 out of 4) Based on entire syllabus	12
	Total	60

References:

1. Kew John, Business Environment: Managing in a Strategic Context, Jaico Publications 2006
2. Hanke John K, Business Forecasting, Prentice Hall India, 2002
3. Paul Justin, Business Environment, Tata McGraw Hill, 2008
4. Butter David, Business Planning: A Guide to Business Start-up, Butterworth Heinemann, 2003
5. Pirmal Gita, Business Legends, Penguin Books, 1998
6. Hitt Michael A, Strategic Management, Cengage Learning, 2016
7. Zeithaml, Valarie A, Services Marketing, McGraw Hill Education, 2011
8. Gupta S L, Retailing & E-tailing, International Book House, New Delhi, 2011
9. Raghuram G, Logistics & Supply Chain Management: Cases and Concepts, Macmillan Business Books,
10. Joseph P T, E-Commerce an Indian Perspective, Prentice Hall India, 2015

Syllabus of courses of F.Y.B.Com Programme

With effect from the Academic Year 2019-2020

Discipline Related Elective (DRE) Courses

3. Business Economics (3 Credits)

Preamble:

This paper provides an overall introduction to economics as dealing with the problems of allocation of scarce resources in optimum manner. It aims to build a familiarity with the basic tools of consumer and producer theory, the operation of markets and optimisation in an economic context. In order to explain economic issues and solutions in a practical manner, the concepts are to be discussed with case studies and numerical problems wherever applicable.

Semester I

Modules at a Glance

Business Economics-I		
Sr. No.	Modules	No. of Lectures
1	Demand Analysis	10
2	Consumer Behaviour Theory	15
3	Supply and Production Decisions	10
4	Cost of Production	10
Total No. of Lectures:		45

Sr.No.	Modules
1	Demand Analysis
	<p>Demand Function and determinants of demand - Concept and Importance of Elasticity of Demand: Income, Cross and Promotional.</p> <p>Demand Estimation and forecasting: Meaning and significance - methods of demand estimation</p> <p>survey and statistical methods (numerical examples on trend analysis and simple linear regression)</p>
2	Consumer Behaviour Theory
	<p>Ordinal Utility theory: (Indifference curve approach): Consumer's preferences; Indifference curves; Budget line; Consumer's equilibrium (necessary and sufficient conditions)</p> <p>Income and substitution effect; Price consumption curve.</p> <p>Indifference curves as an analytical tool (Cash subsidy v/s kind subsidy)</p> <p>Consumer surplus</p>
3	Supply and Production Decisions
	<p>Production function: short run analysis with Law of Variable Proportions- Production function with two variable inputs- isoquants, ridge lines and least cost combination of inputs-</p> <p>Long run production function and Laws of Returns to Scale - expansion path - Economies and diseconomies of Scale.</p>
4	Cost of Production
	<p>Cost concepts: accounting cost and economic cost, implicit and explicit cost, social and private cost, historical cost and replacement cost, sunk cost and incremental cost - fixed and variable cost - total, average and marginal cost- Cost Output Relationship in the Short Run and Long Run –(hypothetical numerical problems to be discussed).</p>

Semester II

Modules at a Glance

Business Economics-II		
Sr. No.	Modules	No. of Lectures
1	Market Structure	15
2	Factor Markets	10
3	Pricing practices	10
4	Market Failure	10
Total No. of Lectures:		45

Sr. No.	Modules
1	Market Structure
	<p>Perfect Competition: Assumption; Equilibrium of the firm in the short run and long run, The long run industry supply curve.</p> <p>Imperfect Competition:</p> <p>(i) Monopoly: Short-run and long-run equilibrium of monopoly firm; Concept of supply curve under monopoly; Allocation inefficiency and dead-weight loss monopoly.</p> <p>(ii) Monopolistic Competition: Assumption; Short run Equilibrium; Long run Equilibrium; Concepts of excess capacity</p> <p>(iii) Oligopoly and interdependence- Kinked demand curve, collusive oligopoly-price leadership model- dominant firm.</p>
2	Factor Markets
	Factor markets- Factor pricing in the case of short and long run under conditions of perfect and imperfect commodity markets; Determination of factors rewards under conditions of Monopsony, bilateral monopoly and role of labour unions. Economic rent and quasi rent.
3	Pricing practices
	Cost oriented pricing methods: cost –plus (full cost)/mark-up pricing, marginal cost pricing, Mark up pricing, discriminating pricing, multiple – product pricing - transfer pricing (case studies on how pricing methods are used in business world)
4	Market Failure
	Market failure Externalities: Environment and its impact on market, Common property resources and public goods, Asymmetric Information and Signalling, moral hazard, principal-agent problem.

Business Economics:

Semester I & II

Question Paper Pattern *(Academic Year: 2019-2020)*

I. Continuous Assessment (CA) - 40 Marks

- (i) CA-I: Test – (Objective type of questions)- 20 Marks
- (ii) CA-II: Case Studies/Assignments/Industrial Visits- 20 Marks

II. Semester End Examination (SEE) - 60 Marks

Maximum Marks : 60
Duration : 2 Hours

- Note: (1) Question No. 1 is compulsory.
(2) Attempt any **one question out of three** in each question.
(3) All questions carry 15 marks each.

Question No.	Particulars (Nature of Questions)	Marks (To Be Attempted)
Q-1 (Module-I)	A) Full Length Question B) Three Short Notes (5 Marks Each) C) Application/Numerical Question	15
Q-2 (Module-II)	A) Full Length Question B) Three Short Notes (5 Marks Each) C) Application/Numerical Question	15
Q-3 (Module-III)	A) Full Length Question B) Three Short Notes (5 Marks Each) C) Application/Numerical Question	15
Q-4 (Module-IV)	A) Full Length Question B) Three Short Notes (5 Marks Each) C) Application/Numerical Question	15
	Total	60

References:

1. Mehta, P.L.: Managerial Economics – Analysis, Problem and Cases (S. Chand & Sons, N. Delhi)
2. Hirschey.M., Managerial Economics, Thomson South Western
3. Salvatore, D.: Managerial Economics in a global economy (Thomson South Western Singapore)
4. Frank R.H, Bernanke.B.S., Principles of Economics (Tata McGraw Hill)
5. Gregory Mankiw., Principles of Economics, Thomson South Western
6. Samuelson & Nordhas.: Economics (Tata McGraw Hills, New Delhi)
7. Pal Sumitra, Managerial Economics cases and concepts (Macmillan, New Delhi)

Syllabus of courses of F.Y.B.Com Programme

With effect from the Academic Year 2019-2020

Ability Enhancement Courses (AECC)

4. Business Communication (3 Credits)

Objective:

1. To develop learners' awareness of the communication process
2. To develop effective listening skills in students so as to enable them to comprehend instructions and become a critical listener
3. To develop effective spoken language skills so as to enable students to speak confidently, interpersonally as well as in groups
4. To develop effective writing skills so as enable students to write in a clear, concise, domain-specific and audience-centred manner
5. To develop ability to communicate effectively with the help of electronic media
6. To familiarize the learners with the nuances of corporate communication
7. To develop global communication competency in learners
8. To use innovative and progressive evaluation techniques
9. To integrate E-learning and M-learning in instruction and assessment

Course Outcome:

On completion of the course, the learner will have the skill and knowledge of:

1. various types of oral, written and digital communication modes
2. effective business writing
3. effective presentations
4. effective interpersonal communication
5. communication that maximises team effectiveness
6. soft skills and employability skills
7. communication that makes effective personality

Semester I
Modules at a Glance

Business Communication-I		
Sr. No.	Modules	No. of Lectures
1	Theory of Communication	12
2	Obstacles to Communication in Business World	12
3	Business Correspondence	12
4	Writing Skills	09
Total No. of Lectures:		45

Note: One tutorial per batch per week in addition to number of lectures stated above (Batch size as per the University norms)

Sr. No.	Modules
1	Theory of Communication
	<p>Concept of Communication: Meaning, Definition, Process, Need, Feedback, and impact of technological advancements on communication</p> <p>Channels and Objectives of Communication: Channels: Formal and Informal, Vertical, Horizontal, Diagonal and Grapevine</p> <p>Objectives of Communication: Information, Advice, Order and Instruction, Persuasion, Motivation, Education, Warning, and Boosting the Morale of Employees.</p> <p>Methods and Modes of Communication: Methods: Verbal and Nonverbal, Characteristics of Verbal Communication Characteristics of Non-verbal Communication Modes: Telephone, Computers and E- communication, Video and Satellite Conferencing, Social media.</p>
2	Obstacles to Communication in Business World, Listening and Communication Etiquette
	<p>Problems in Communication /Barriers to Communication: Physical/ Semantic/Language / Socio-Cultural / Psychological Barriers, ways to overcome these barriers</p> <p>Listening: Importance of Listening Skills, Process of listening, Cultivating good Listening Skills, types of listening skills</p> <p>Communication etiquette: Etiquette of letter writing, E-mail etiquette, Telephone etiquette, Social media etiquette, Corporate etiquette.</p>

3	Business Correspondence
	<p>Theory of Business Letter Writing and Email: Parts, Structure, Layouts—Full Block, Principles of Effective Letter Writing, Principles of effective Email Writing, Email Drafting- regular office correspondence.</p> <p>Personnel Correspondence: Statement of Purpose, Job Application Letter and Resume, Letter of Acceptance of Job Offer, Letter of Resignation [Letter of Appointment, Promotion and Termination, Letter of Reference, Letter of Refusal, office circular, office order, Memo - to be taught but not to be tested in the examination]</p>
4	Language and Writing Skills
	<p>A. Paragraph Writing: Developing an idea, using appropriate linking devices, etc Cohesion and Coherence, self-editing, etc [Interpretation of technical data, Composition on a given situation etc.]</p> <p>B. Activities (Tutorial)</p> <ul style="list-style-type: none"> • Speaking Skills: Telephonic communication, Debate, Dialogue and Speeches • Paragraph Writing: Preparation of the first draft, Revision and Self – Editing, Rules of spelling and punctuation • Use of mobile-based dictionary

Semester II
Modules at a Glance

Business Communication-II		
Sr. No.	Modules	No. of Lectures
1	Group Communication	15
2	Business Correspondence	15
3	Presentation Skills	05
4	Language and Writing Skills	10
Total No. of Lectures:		45

Note: One tutorial per batch per week in addition to number of lectures stated above (Batch size as per the University norms)

Sr. No.	Modules
1	Group Communication
	<p>Interviews: Definition of interview, types of Interviews – Selection – face to face, telephonic/online, Appraisal, Grievance, Exit, Basics of job interview, preparing for a job Interview, how to use social media – job portal like timesjobs, naukari etc., professional portals like LinkedIn etc.</p> <p>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</p> <p>Conference: Meaning and Importance of Conference, Organizing a Conference, Modern Methods: Video and Tele-Conferencing</p> <p>Public Relations: Meaning, Functions of PR Department, External and Internal Measures of PR</p>
2	Business Correspondence
	<p>Trade Letters: Precautions to be taken while drafting trade letters. Order, Credit and Status Enquiry, Purchase order.</p> <p>Only following to be taught in detail: -</p> <ol style="list-style-type: none"> 1. Letters of Inquiry and reply to inquiry 2. Letters of Complaints, Claims, Adjustments 3. Letters under Right to Information (RTI) Act 4. Consumer Grievance and Redressal Letters 5. Promotional leaflets, fliers and Sales letter

3	Presentation Skills
	Selection of topics, structure of presentation, Use of PPT, Body language and non-verbal cues
4	Language and Writing Skills
	<p>A. Reports: Parts, Types, Feasibility Reports, Investigative Reports, Project Report, Business Proposal.</p> <p>B. Summarisation: Identification of main and supporting/sub points. Presenting these points in a cohesive manner.</p>

Business Communication
Paper I and Paper II
Question Paper Pattern
(Academic Year: 2019-2020)

I. Tutorial Activity: 40 Marks

Vocabulary building exercises (scrabble, crosswords, word games etc.)

Scrap book of all the letters

Making of a dictionary / Creating functional dictionary

1. Speech (10 marks)
2. Debate (10 marks)
3. Role Play (10 marks)
4. SWOC – Self Analysis of the student (05 Marks) – online submission
5. Paragraph Writing- (05 Marks) – online submission

II. Semester End Examination (SEE): 60 Marks

Maximum Marks : 60

Duration : 2 Hours

Note: (1) All questions are compulsory.

Question No.	Particulars (Nature of Questions)	Marks (To Be Attempted)
Q-1 (Module-I & II)	Short Notes – Any 3 out of 5	15
Q-2 (Module -I & II)	Essay type question – Any 2 out of 4	20/15
Q-3 (Module -III)	*Job Application and Resume Writing (Fresher/Experience) –Any 1 out of 2 **Letter of inquiry Letters of Complaints, Claims, Adjustments Letters under Right to Information (RTI) Act Consumer Grievance and Redressal Letters	10/15
Q-4 (Module -IV)	*Letter Writing (SOP, Job Acceptance, Job Resignation, e-mail) – Any 2 out of 4 **Report Writing/ Business Proposal & Summarization	15
Total		60

*Semester I **Semester II

References:

1. Raman Meenakshi and Singh Prakash. *Business Communication*. Oxford University Press , 2007. 24x19 - 275 PB 0-19-567695-5, Meenakshi X45.
2. Deshmukh Sandeep. *Group Communication: Theory and Methods*. Ane Books India, 2008. 22x15 - 495 HB 81-8052-146-X, Sandeep X45
3. Riel Cees B.M. *Essentials of Corporate Communication: Implementing Practices for Effective Reputation Management*. 23x15 - 495 PB 0-415-32826-8, Riel, Cees B.M. X45
4. Bhatia R.C. *Business Communication*. Ane Books India, 2008. 24x18 - 250 PB 81-8052-016-1, Bhatia, R. C. X45.
5. Ober Scat. *Contemporary Business Communication (with CD)*. Bizatantra , 2005. 26x20 - 349 PB 81-7722-522-7. Scat X45.
6. Kumar Raj. *Basic Business Communication (With CD # C01130) : Concepts, Applications and Skills*. Excel Books, 2010. 295 PB 978-81-7446-866-6, Kumar Raj X45.
7. Lesikar, Raymond.V., Pettit John D and Flatley Marie . *Basic Business Communication*. Richard D. Irwin, INC. 1993. 26x20c.m. HB 0 256 10936 2, Lesikar, R.V. X:8(22).
8. Naterop, B. Jean and Revell, Rod. *Telephoning in English*. Cambridge University. 2007. 24x18 + C00942 - C00943 - 375 PB 0-521-70893-1, B. Jean X45.

Suggested List of MOOCs

1. <https://www.mooc-list.com/tags/communication-skills>
2. <https://www.mooc-list.com/.../effective-communication>
3. <https://www.mooc-list.com/tags/business-communication>
4. <https://www.skilledup.com/.../learn-communications-online-free>
5. <http://www.about.com/Communication+Skills+List>

Courses:

1. <https://www.coursera.org/learn/management-leadership-english#>
2. <https://www.coursera.org/learn/business#>
3. <https://www.coursera.org/learn/powerpoint-presentations>

Syllabus of courses of F.Y.B.Com Programme

With effect from the Academic Year 2019-2020

Ability Enhancement Compulsory Courses (AECC)

5. Environmental Studies (3 Credits)

Course Outcome

1. The successful completion of the course will create an environmental awareness among Commerce students.
2. It will make students aware about various environmental factors and their relation to the field of Commerce.
3. The course will highlight functional and spatial links between environment, economy and society.
4. The course will create an insight into various environmental issues at various levels and environmental movements towards making environment sustainable.

Semester I

Modules at a Glance

Environmental Studies-I		
Sr. No.	Modules	No. of 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 No. of Lectures:		60

Sr. No.	Modules
1.	Environment and Ecosystem
	Environment: Meaning, definition, scope; Various spheres of environment (Atmosphere, lithosphere, hydrosphere and biosphere), Layers of atmosphere; 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 utilisation; Resource conservation-meaning and methods - conventional 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 environment- 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 land use, 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, Choropleth and Flow map, Picograms- Only reading and interpretation. Map Filling: (4 Lectures) Map filling of World (Environmentally significant features) using point, line and polygon segment.

Semester II

Modules at a Glance

Environmental Studies-II		
Sr. No.	Modules	No. of Lectures
1	Solid Waste Management for Sustainable Society	13
2	Agriculture and Industrial Development	13
3	Tourism and Environment	13
4	Environmental Movements and Management	13
5	Map Filling	08
Total No. of Lectures:		60

Sr. No.	Modules
1.	Solid Waste Management for Sustainable Society
	Classification of solid wastes–Types and Sources of Solid Waste; Effects of Solid Waste Pollution-Health hazards, Environmental Impacts; Solid Waste Management–solid waste management in Mumbai- Schemes and initiatives run by MCGM- Role of citizens in Waste Management in Urban and Rural areas.
2.	Agriculture and Industrial Development
	Environmental Problems Associated with Agriculture: Loss of Productivity, Land Degradation, desertification- Uneven Food Production– Hunger, Malnutrition and Food Security–Sustainable Agricultural practices, GMO/Crops, Environmental Problems Associated with Industries- pollution- Global warming, Ozone Layer Depletion, Acid rain, Sustainable Industrial practices– Green Business and Green Consumerism, Corporate Social Responsibility towards environment
3.	Tourism and Environment
	Tourism: Meaning, Nature, Scope and importance– Typology of tourism with special reference to Ecotourism; Tourism potentials in India and challenges before India; Consequences of tourism: Positive and Negative Impacts on Economy, Culture and environment- Ecotourism
4.	Environmental Movements and Management
	Environmental movements in India: Save Narmada Movement, Chipko Movement, Appiko Movement, Save Western Ghats movement and other contemporary environmental movements; Environmental Management: Concept, need and relevance; Concept of ISO 14000; Concept of Carbon Bank and Carbon Credit, EIA, ecological footprint; Environment Protection Acts; Concept and components of Geospatial Technology- Applications of GST in Environmental Management
5.	Map Filling
	Map filling of Konkan (4 Lectures) and Mumbai (4 Lectures) (Environmentally significant features)

Environmental Studies
Semester I & II
Question Paper Pattern
(Academic Year: 2019-2020)

- I. Class test : 10 marks**
II. Map practice work/ Exhibition : 10 marks
III. Project / Field Work : 20 marks

Project/Field Work shall include:

- a. Composting
- b. E-waste management
- c. Tetra pack management
- d. Field tours/ Nature trails
- e. Beach clean up
- f. Group assignments/projects
- g. Case studies
- h. Article review
- i. Book review
- j. visit to a solid waste/ medical waste/ e-waste recycling unit
- k. Industrial visit
- l. Visit to an NGO
- m. Debate club
- n. Documentary review
- o. Plastic waste management
- p. Case studies related to other projects mentioned above (National/International level)
- q. Swachh Bharat Abhiyaan (in different areas)
- r. Develop a game for waste management/green campus/environmental conservation
- s. Best out of Waste Project
- t. Environmental / Green Audit.

Total: 40 marks

IV.Semester End Examination (SEE)- 60 Marks

Maximum Marks : 60

Duration : 2 Hours

- Note: (1) All questions are compulsory, subject to internal choice.
(2) Draw diagrams wherever necessary.
(3) Figures to the right indicate full marks.

Question No.	Particulars (Nature of Questions)	Marks (To Be Attempted)
Q-1	* A) Reading and interpretation of World thematic map (05 Marks) B) Map filling-World map (05 Marks) ** A) Map filling- Mumbai Map (05 Marks) B) Map filling- Konkan Map (05 Marks)	10
Q-2 (Module-I)	A) Full length question OR B) Full length question	10
Q-3 (Module-II)	A) Full length question OR B) Full length question	10
Q-4 (Module-III)	A) Full length question OR B) Full length question	10
Q-5 (Module IV)	A) Full length question OR B) Full length question	10
Q-6	Write a short notes (Any Two) a. From Unit-I b. From Unit-II c. From Unit-III d. From Unit-IV	10
	Total	60

*Semester-I **Semester-II

References:

1. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner
2. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India, Email:mapin@icenet.net
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6. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
7. Gleick, H.P. 1993. Water in crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute Oxford Univ. Press. 473p
8. Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay
9. Heywood, V.H &Waston, R.T. 1995. Global Biodiversity Assessment. Cambridge Univ. Press 1140p.
10. Jadhav, H &Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284 p.
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12. Mhaskar A.K., Matter Hazardous, Techno-Science Publication
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15. Rao M N. &Datta, A.K. 1987. Waste Water treatment. Oxford & IBH Publ. Co. Pvt. Ltd. 345p.
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18. Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Standards, Vol I and II, Enviro Media (R)
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20. Ecotourism Economics and Environment” by Nagarajan K and Alex K Thottunkel
21. Indian Ecotourism: Environmental Rules and Regulations” by Ratandeep Singh
22. Ecotourism and Sustainable Development” by Ravishanker Singh
23. K. Agarwal et al (1996) Biodiversity and Environment, APH, Dehra Dun.
24. S.S. Negi (1993) Biodiversity and its Conservation in India, Indus Publications, New Delhi.
25. W.W. Collins and C.O. Qualset (1998) Biodiversity in Agro-ecosystem, CRC, Boston.
26. V.K. Krishnamurthy (2003) Text Book of Biodiversity, Science Publisher, Chennai
27. Bharucha Erach, Textbook of Environmental Studies for Undergraduate Courses, Universities Press, 2005.

Syllabus of courses of F.Y.B.Com Programme

With effect from the Academic Year 2019-2020

Skill Enhancement Course (SEC)

6. Foundation Course (2 Credits)

Objectives (for the learners):

- 1) To help the learner understand the inter-disciplinary approach of social fabric.
- 2) To sensitize learners on the socio-economic concerns in India with specific focus on the issues of the youth
- 3) To help learners articulate their views on the contemporary social issues.

Course Outcome:

- 1) The successful completion of course will enable the learner to understand factual aspects of Indian society.
- 2) It will help create awareness and empathy among learners about various issues faced by youth
- 3) It will help ingrain sense of social responsibility and participatory approval towards society.

Semester I

Modules at a Glance

Foundation Course – I		
Sr. No.	Modules	No. of Lectures
1	Indian Society- Unity in Diversity and Conflicts	9
2	Social issues and problems	9
3	The Indian Constitution	9
4	Significant Aspects of Political Processes	9
5	Project	9
Total No. of Lectures:		45

Sr. No.	Modules
Unit I	Indian Society- Unity in Diversity and Conflicts
	Concept of diversity vs disparity. Understand the multi -cultural diversity of Indian society; understand the regional variations: Rural, Urban and tribal. Inequalities and Inter group conflicts arising due to: Linguistic differences- Linguistic Regionalism; Religion – Communal Violence; Caste- Social unrest; Socio-Political – Naxalism; Affirmative action by the government to the address the conflicts
Unit II	Social issues and problems
	Explore the disparities arising out of gender with specific reference to violence against women and Psycho social and economic inequalities arising thereafter; Measures to enhance Status of women Understand the issues of people with physical and mental disabilities and role of society and government in facilitating their rehabilitation.
Unit III	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.
Unit IV	Significant Aspects of Political Processes
	The party system in Indian politics; Local self-government in urban and rural areas; the 73 rd and 74 th Amendments and their implications for inclusive politics; Role and significance of women in politics.

Foundation Course–II

Objectives:

- 1) To understand the current economic reforms in India
- 2) To understand the genesis and present form of Human rights.
- 3) To understand oneself and manage personal stress and conflict for harmonious interpersonal relationships.

Course Outcome:

- 1) The successful completion of the course will help learners to understand the impact of globalization on Indian Economy.
- 2) It will create awareness about the current status and Human Rights.
- 3) It will help learners to understand the cause and effect relationship with respect to stress and conflict thus enabling them to cope up with growing anxiety and stress in society.

Semester II

Modules at a Glance

Foundation Course – II		
Sr. No.	Modules	No. of Lectures
1	Globalisation and Indian Society	9
2	Human Rights	9
3	Understanding oneself	9
4	Stress and conflict management	9
5	Project	9
Total No. of Lectures:		45

Sr.No.	Modules / Units
Unit I	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.
Unit II	Human Rights
	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
Unit III	Understanding oneself
	Defining self and Personality development; determinants of Personality development; agents of socialisation and roles played by them in Individual development, Maslow's theory of self-actualisation. Aggression and Violence as the public expression of internal conflict .
Unit IV	Stress and conflict management
	Meaning of stress ; it's causes and Coping mechanisms for managing stress, Meaning of conflict; It's causes and response in society; Individual Conflict – resolution and efforts towards building peace and harmony in society.

Foundation Course
Semester I & II
Question Paper Pattern
(Academic Year: 2019-2020)

I. Continuous Assessment (CA)– 40 Marks

- 1) Project I (20 Marks)
- 2) Project II (20 Marks)

II. Semester End Examination (SEE)- 60 Marks

Maximum Marks : 60
Duration : 2 Hours

Note: (1) All questions are compulsory.
(2) Attempt **any two out of three sub questions** from each question.

Question No.	Particulars (Nature of Questions)	Marks (To Be Attempted)
Q-1 (Module-I)	A) Full Length Question B) Full Length Question C) Reflective Question	15
Q-2 (Module-II)	A) Full Length Question B) Full Length Question C) Reflective Question	15
Q-3 (Module-III)	A) Full Length Question B) Full Length Question C) Reflective Question	15
Q-4 (Module-IV)	A) Full Length Question B) Full Length Question C) Reflective Question	15
	Total	60

References:

Semester I:

1. Indian Society and Culture, Vinita Padey, Rawat Pub (2016)
2. Social Problems in India, Ram Ahuja, Rawat Pub (2014)
3. Faces of Feminine in Ancient, medieval and Modern India, Mandakranta Bose Oxford University Press
4. National Human rights commission- disability Manual
5. Rural, Urban Migration: Trends, challenges & Strategies, S Rajagopalan, ICFAI- 2012
6. Regional Inequalities in India Bhat L SSSRD- New Delhi
7. Urbanisation in India: Challenges, Opportunities & the way forward, I J Ahluwalia, Ravi Kanbur, P K Mohanty, SAGE Pub (2014)
8. The Constitution of India, P M Bakshi (2011)
9. The Problems of Linguistic States in India, Krishna Kodesia Sterling Pub
10. Politics in India: structure, Process and Policy Subrata Mitra, Routledge Pub
11. Politics in India, Rajani Kothari, Orient Blackswan
12. Problems of Communalism in India, Ravindra Kumar Mittal Pub
13. Combating communalism in India: Key to National Integration, Kawal Kishor Bhardwaj, Mittal Pub

Semester II:

1. A decade of economic reforms in India (The past, the present, the future)-Edited by Raj Kapila and Uma Kapila, Academic Foundation (2002)
2. Impact of the policies of WTO on Indian agriculture - S. Nehru, Serial Pub. (2012)
3. Privatisation of public enterprises – Emerging dimensions – Edited by G.S. Batra, Narinder Kaur, Anmol Pub. (1995)
4. Economics of development – Dwight Perkins, Steven Radelet, David Lindauer, Norton company (2006)
5. Industrial Policy and economic development in India (1947 -2012) – Anup Chatterjee New Century Pub.(2012)
6. Globalisation and development of backward areas – Edited by G. Satyanarayana New Century Pub. (2007)
7. Contemporary issues in globalisation – An introduction to theory and policy in India Soumyen Sikder, Oxford University Press (2002)
8. Universal Human Rights: In theory and practice, Jack Donnelly, (2014)
9. Stress Management – Dr. N. Tejmani Singh, Maxford books (2011)
10. Stress blasters – Brian Chichester, Perry Garfinkel and others, Rodale Press (1997)

Syllabus of courses of F.Y.B.Com Programme

With effect from the Academic Year 2019-2020

Core Courses (CC)

7. Mathematical and Statistical Techniques (3 Credits)

Objective:

The main objective of this course is to introduce mathematics and statistics to undergraduate students of commerce, so that they can use them in the field of commerce and industry to solve the real life problems.

Semester I

Modules at a Glance

Mathematical and Statistical Techniques-I		
Sr. No.	Modules	No. of Lectures
1	Linear Programming Problems	15
2	Interest, Annuity and Perpetuity	15
3	Summarization Measures	15
4	Elementary Probability Theory	15
5	Decision Theory	15
Total No. of Lectures:		75

Total number of lectures 75 +Notional75 = 150 lectures = 3 CREDITS

Sr. No.	Modules
1	Linear Programming Problems
	<p>Co-ordinate Geometry:</p> <ul style="list-style-type: none"> • Linear equations $Ax + By = C$ • $Y = A + Bx$, concept of slope & Y-intercept • Slope point form • Sketching of graphs of i) linear equation $Ax + By = C$, ii) linear inequalities. <p>Linear Programming Problem: Mathematical Formulation of Linear Programming Problems up to 3 variables. Solution of Linear Programming Problems using graphical method up to two variables</p>
2	Interest, Annuity and Perpetuity
	<p>Interest: Compound interest, Accumulated value and Present Value</p> <p>Annuity and Perpetuity: Annuity Immediate and its Present value, Future value. Equated Monthly Installments (EMI) using reducing balance method & amortization of loans. Stated Annual Rate & Affective Annual Rate Perpetuity and its present value. Simple problems involving up to 4 time periods.</p>
3	Summarization Measures:
	<p>(Prerequisites: Collection of Data, Tabulation, Graphs.)</p> <p>Measures of Central Tendencies: Definition of Average, Types of Averages: Arithmetic Mean, Median, and Mode for grouped as well as ungrouped data. Quartiles, Deciles and Percentiles. Using Ogive locate median and Quartiles. Using Histogram locate mode. Combined, Weighted and Geometric mean.</p> <p>Measures of Dispersions: Concept and idea of dispersion. Various measures Range, Quartile Deviation, Mean Deviation, Standard Deviation, Variance, Combined Variance, Coefficient of Variance.</p>
4	Elementary Probability Theory:
	<p>Prerequisites: Factorial Notation, Fundamental principle of counting, Permutation as arrangement, Simple examples, combination as selection, Simple examples, Relation between ${}^n C_r$ and ${}^n P_r$ Examples on commercial application of permutation and combination.</p> <p>Probability Theory: Concept of random experiment/trial and possible outcomes; Sample Space and Discrete Sample Space; Events their types, Algebra</p>

	<p>of Events, Mutually Exclusive and Exhaustive Events, Complimentary events. Classical definition of Probability, Addition theorem (without proof), conditional probability. Independence of Events: $P(A \cap B) = P(A) P(B)$. Simple examples.</p> <p>Random Variable: Probability distribution of a discrete random variable; Expectation and Variance of random variable, simple examples on probability distributions.</p>
5	Decision Theory
	<p>Decision making situation, Decision maker, Courses of Action, States of Nature, Pay-off and Pay-off matrix; Decision making under uncertainty, Maximin, Maximax, Minimax regret and Laplace criteria; simple examples to find optimum decision. Formulation of Payoff Matrix. Decision making under Risk, Expected Monetary Value (EMV); Decision Tree; Simple Examples based on EMV. Expected Opportunity Loss (EOL), simple examples based on EOL.</p>

Semester II

Modules at a Glance

Mathematical and Statistical Techniques-II		
Sr. No.	Modules	No. of Lectures
1	Shares and Mutual Funds	15
2	Functions, Derivatives and Their Applications	15
3	Bivariate Linear Correlation and Regression	15
4	Time series and Index Numbers	15
5	Elementary Probability Distributions	15
Total No. of Lectures:		75

Total number of lectures 75 + Notional 75 = 150 lectures = 3 CREDITS

Sr. No.	Modules
1	Shares and Mutual Funds
	<p>Shares: Concept of share, face value, market value, dividend, equity shares, preferential shares, bonus shares. Simple examples.</p> <p>Mutual Funds: Simple problems on calculation of Net income after considering entry load, dividend, change in Net Asset Value (N.A.V.) and exit load. Averaging of price under the Systematic Investment Plan (S.I.P.)</p>
2	Functions, Derivatives and Their Applications
	<p>Concept of real functions: constant function, linear function, x^n, a^x and constant functions. Demand, Supply, Total Revenue, Average Revenue, Total cost, Average cost and Profit function. Equilibrium Point, Break-even point.</p> <p>Derivative of functions:</p> <ul style="list-style-type: none"> • Derivative as rate measure, Derivative of x^n, a^x, constant functions. • ii. Rules of derivatives: Scalar multiplication, sum, difference, product, quotient (Statements only), Simple problems. Second order derivatives.

	<ul style="list-style-type: none"> iii. Applications: Marginal Cost, Marginal Revenue, Elasticity of Demand. Maxima and Minima for functions in Economics and Commerce. <p>(Examination Questions on this unit should be application oriented only.)</p>
3	Bivariate Linear Correlation and Regression
	<p>Correlation Analysis: Meaning, Types of Correlation, Determination of Correlation: Scatter diagram, Karl Pearson's method of Correlation Coefficient and Spearman's Rank Correlation Coefficient, Repetition of Ranks.</p> <p>Regression Analysis: Meaning, Concept of Regression equations, Slope of the Regression Line and its interpretation. Regression Coefficients, Relationship between Coefficient of Correlation and Regression Coefficients, Coefficient of Determination, Finding the equations of Regression lines by method of Least Squares.</p>
4	Time series and Index Numbers
	<p>Time series: Concepts and components of a time series. Representation of trend by Freehand Curve Method, Estimation of Trend using Moving Average Method and Least Squares Method (Linear Trend only). Estimation of Seasonal Component using Simple Arithmetic Mean for Additive Model and Multiplicative Model (For Trend free data only). Concept of Forecasting using Least Squares Method.</p> <p>Index Numbers: Concept and usage of Index numbers (wholesale price index, Sensex index), Types of Index numbers, Aggregate and Relative Index Numbers, Lasperye's, Paasche's, Dorbisch-Bowley's, Marshall-Edgeworth and Fisher's ideal index numbers. Chain Base Index Nos. Shifting of Base year. Cost of Living Index Numbers, Concept of Real Income.</p>
5	Elementary Probability Distributions
	<p>Probability Distributions:</p> <ul style="list-style-type: none"> Discrete Probability Distribution: Binomial Distribution. Continuous Probability distribution: Normal Distribution. (Properties and applications only, no derivations are expected)

Mathematical & Statistical Techniques

Semester I & II

Question Paper Pattern ***(Academic Year: 2019-2020)***

A. Internal Examinations – 40 marks

- I. Tutorial Test I** : 15 marks
- II. Tutorial Test II** : 15 marks
- III. Viva Based on Tutorials** : 05 marks
- IV. Class Participation & Attendance** : 05 marks

B. Semester End Examination (SEE)- 60 Marks

Maximum Marks : 60

Number of Questions to be Set : 5 (Five)

Duration : 2 Hours

Note: (1) All questions are compulsory.

(2) Attempt **any two out of three sub questions** from each question.

Question No.	Particulars (Nature of Questions)	Marks (To Be Attempted)
Q-1 (Module-I)	A) Numerical B) Numerical C) Higher Order Thinking Skills	12
Q-2 (Module-II)	A) Numerical B) Numerical C) Higher Order Thinking Skills	12
Q-3 (Module-III)	A) Numerical B) Numerical	12

	C) Higher Order Thinking Skills	
Q-4 (Module-IV)	A) Numerical B) Numerical C) Higher Order Thinking Skills	12
Q-5 (Module-V)	A) Numerical B) Numerical C) Higher Order Thinking Skills	12
	Total	60

Reference :

1. Mathematics for Economics and Finance Methods and Modelling by Martin Anthony and Norman Biggs, Cambridge University Press, Cambridge low-priced edition, 2000, Chapters 1, 2, 4, 6 to 9 & 10.
2. Applied Calculus: By Stephen Waner and Steven Constenoble, Brooks/Cole Thomson Learning, second edition, Chapter 1 to 5.
3. Business Mathematics By D. C. Sancheti and V. K. Kapoor, Sultan Chand & Sons, 2006, Chapter 1, 5, 7, 9 & 10.
4. Mathematics for Business Economics: By J. D. Gupta, P. K. Gupta and Man Mohan, Tata Mc-Graw Hill Publishing Co. Ltd., 1987, Chapters 9 to 11 & 16.
5. Quantitative Methods-Part-I By S. Saha and S. Mukerji, New Central Book Agency, 1996, Chapters 7 & 12.
6. Mathematical Basis of Life Insurance By S.P. Dixit, C.S. Modi and R.V. Joshi, Insurance Institute of India, Chapters 1 and 2
7. Securities Laws & Regulation of Financial Market : Intermediate Course Paper 8, Institute of Company Secretaries of India, Chapter 11.
8. Investments By J.C. Francis & R.W. Taylor, Schaum's Outlines, Tata Mc-Graw Hill Edition 2000, Chapters 2,4 & section 25.1.
9. Indian Mutual Funds Handbook : By SundarShankaran, Vision Books, 2006, Sections 1.7,1.8.1, 6.5 & Annexures 1.1to 1.3.

10. STATISTICS by Schaum Series.
11. Operations Research by Gupta and Kapoor.
12. Operations Research by Schaum Series.
13. Fundamentals of Statistics - D. N. Elhance.
14. Statistical Methods - S.G. Gupta (S. Chand & Co.
15. Statistics for Management - Lovin R. Rubin D.S. (Prentice Hall of India)
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