

PROGRAM OUTCOME (PO)

PROGRAM SPECIFIC OUTCOME (PSO)

COURSE OUTCOME (CO)

Programme Outcomes

Acquire Knowledge of management associations, business administration theories and modelling of computer based system.

To provide thorough understanding of nature, scope and application of business administration and use of computer in business.

To develop interdisciplinary approach among the students.

Exhibit clarity on both conceptual and application-oriented skills of Computing, programming for higher studies in Post Graduate programs.

Programme Specific Outcomes

- ✓ To pursue further studies to get specialization in Business Administration , Economics, business values.
- ✓ To pursue the career in corporate sector can opt for MBA ,M.Com. and other management courses.
- ✓ To Work in the MNC's sector as business administrator, executives etc.
- ✓ To work in public sector undertakings/private sectors and Government organizations.
- ✓ For teaching in Schools and Colleges.
- ✓ Students will able to understand, analyse and develop marketing strategies , computer programs in the areas related to business administration,
- ✓ Apply standards for marketing practices and strategies in values development using open source as per present environment to deliver a quality of product/service for business success as per present scenario.
- ✓ Student will able to know various issues, latest trends in Finance & marketing technology development and thereby innovate new ideas and solutions to existing problems in present competition scenario.

COURSE OUTCOMES (COS)

DEPARTMENT: BUSINESS ADMINISTRATION	CLASS: BBA	
SYLLABUS (2020-21) ONWARDS		
UNIT	Course Objectives / Outcomes	Specific Outcome
COURSE CONTENT FOR SEMESTER – I		
PAPER I: FUNDAMENTALS OF MANAGEMENT (BBA-101)		
I	Unit – I: Introduction Concepts, Objectives, Nature Scope and Significance of management Evolution of management thought-Contribution of Taylor, Weber and Fayol management.	In this unit students know about the Introduction Concepts, Objectives, Nature Scope of management.
II	Unit – II: Planning: Concept, Objectives, Nature, Limitation, Process of planning, Importance, Forms, Techniques and Process of decision making.	In this unit students know about the Planning: Concept, Objectives of business.
III	Unit – III: Organizing: Concept, Objectives, Nature of organizing, Types of Organization, delegation of authority, Authority and responsibilities, Centralization and Decentralization, Span of control.	In this unit students know about the organization responsibilities towards society.
IV	Unit – IV: Directing: Concept, Principles & Techniques of directing and Coordination Concept of leadership-Style. Importance, Styles, Supervision, Motivation, Importance & Theory of Motivation, Communication.	In this unit students know about the Directing: Concept, Principles & Techniques of directing and Coordination Concept of leadership-Styles.

V	Unit – V: Controlling: Concept, Principles, Process and Techniques of Controlling, Relationship between planning and controlling.	In this unit students know about the Process and Techniques of Controlling of in the business.
PAPER II: ORGANISATION BEHAVIOUR (BBA-102)		
I	Unit – I: Introduction, nature and scope of OB, Challenges and opportunities for OB, Organization Goals, Models of OB, Impact of Global and Cultural diversity on OB.	In this subject students know about Challenges and opportunities for OB, Organization Goals, Models of OB.
II	Unit – II: Individual Behavior - Individual behavior, Personality, Perception and its role in individual decision making, Learning, Motivation, Hierarchy of needs theory, Theory X and Y, Motivation- Hygiene theory, Vrooms Expectancy theory	In this students know about different type of theories of motivation.
III	Unit – III: Behavior Dynamics: Interpersonal behavior, Communication, Transaction Analysis, The Johari Window, Leadership, Its Theories and Prevailing Leadership styles in Indian Organizations.	In this students know about Interpersonal behavior, Communication, Transaction Analysis, The Johari Window etc.
IV	Unit – IV: Group Behavior: Definition and classification of Groups, Types of Group Structures, Group decision making, Teams Vs Groups, Contemporary issues in managing teams, Inter group problems in organizational group dynamics, Management of conflict.	In this students know about the group decision making of teams and other aspects of business.
V	Unit – V: Management of Change: Change and Organizational development, Resistance to change, Approaches to managing organizational change, Organizational effectiveness, Organizational culture, Power and Politics in Organizational Quality of work life, Recent advances in OB.	In this students know about Approaches to managing organizational change, Organizational effectiveness and other aspects.
PAPER III: MANEGERIAL ECONOMICS (BBA-103)		
I	Unit – I: Definition, Nature, Scope & Limitation of Economics as an art or Science.Relevance of Economics in Business Management, Nature and Scope of Managerial Economics, its relationshipwithother subjects	In this subject students know about the Relevance of Economics in Business Management, Nature
II	Unit – II: Meaning of demand. Demand theory and objectives, Demand analysis.Demand schedule.Demand Curve, Laws of Demand, Elasticity of Demand Types & Measurement, Supply Analysis, Demand Forecasting.	

III	Unit – III: Market analysis-Nature of market, Types of markets and their characteristics Pricing under different market structures-Perfect, Monopoly, oligopoly and Monopolistic completion.	and Scope of Managerial Economics, Economic Growth and Development, Business Cycles in organizations.
IV	Unit – IV: National Income: Concepts and Measurements, instruments of fiscal policy, Tools of monetary policy.	
V	Unit – V: Economic Growth and Development, Business Cycle, The balance of payments, Inflation.	

PAPER IV: ACCOUNTING AND FINANCIAL ANALYSIS (BBA 104)

I	Unit – I: Introduction to course Basic rules. Accounting concepts and conventions, Accounting information system: Mechanism of financial accounting, Accounting records ,Journal ledger, Trial Balance.	In this subject students know about the Mechanism of financial accounting, Accounting records ,Journal ledger, Trial Balance. Cash flow: cash flow statement etc.
II	Unit – II: Concept of balance Sheet, Income statement and basic Accounting equations, Introduction and definition of Income statement ,Comprehensive exercising banking income statement and Balance sheet.	
III	Unit – III: Depreciation: meaning, methods and importance Accounting statement of depreciation.	
IV	Unit – IV: Cash flow: cash flow statement, preparation and interpretation of cash flow statement.	
V	Unit –V: Introduction of financial statement analysis. Cost value profit analysis. Ratio analysis: using Ratio in financial assessment, manufacturing firms, preparation of financial statements.	

PAPER V: BUSINESS LAW (BBA-105)

I	Unit – I: Indian Contract Act: Offer, Acceptance, Agreement and Contract; Capacity of parties; Essentials of Contract; Performance of Contracts; Termination of Contract, Consequence and Remedies for Termination of Contract.	In this subject students know about the Indian Contract Act: Offer, Acceptance,
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II	Unit – II: Void Contracts; Contingent Contracts; Quasi Contract; Contract of Indemnity and Guarantee; Bailment, Lien, Pledge and Agency.	Agreement and Contract; Capacity of parties; Essentials of Contract; Performance of Contracts; Termination of Contract, Sales of Goods Act: Definition, Features, and Formation of Sale Contract; Condition and Warranty, Negotiable Instruments: Definition, Features, Types, Recognition, Crossing And Endorsement of Nis for business .
III	Unit – III: Sales of Goods Act: Definition, Features, and Formation of Sale Contract; Condition and Warranty, Ownership of Goods; Performance of Sale Contract; Rights of Unpaid Sellers; Auction Sale.	
IV	Unit – IV: Limited liability Partnership: Definition; Incorporation; Eligibility to be Partner, Relationship of partners, Partners as a agent, Penalty for False statement; winding up	
V	Unit – V: Negotiable Instruments: Definition, Features, Types, Recognition, Crossing And Endorsement of NIs.	

PAPER VI: BUSINESS ORGANIZATION AND ETHICS (BBA-106)

I	Unit –I : Meaning and definition of business essentials & scope of business Classification of Business Activities, Meaning, Definition, Characteristics and objectives of Business Organization, Evolution of Business Organization . Modern Business, Business & Profession.	In subject unit students know about the Business Unit, Establishing a new business unit, Meaning of Promotion. Features for business, Plant location, Plant Layout & size of business unit Gandhian Philosophy, Organizational Culture, Technological Development and Social Change, Social Responsibility of Business towards society.
II	Unit – II: Business Unit, Establishing a new business unit. Meaning of Promotion. Features for business, Plant location, Plant Layout & size of business unit.	
III	Unit – III: Forms of Business Organization. Sole Proprietorship, Partnership, Joint Stock Companies & Co-operatives.	
IV	Unit – IV: Business Ethics- An overview-Concept, nature, evolving ethical values, Arguments against business Ethics. Relationship between Ethics & Corporate excellence – Corporate mission and statement, Code of Ethics and culture	
V	Unit – V: Business and Society Changing Concepts and Objectives of Business, Professionalization, Business ethics, Gandhian Philosophy, Organizational Culture, Technological Development and Social Change, Social Responsibility of Business, Social Audit	

PAPER VII: ENVIRONMENTAL STUDIES (CODE (BBA-008))

I	<p>Unit-1: The Multidisciplinary Nature of Environmental Studies: Definition, Scope and Importance, Need for Public Awareness.</p>	
II	<p><u>Unit-2: Natural Resources</u></p> <p>❖ Renewable and Non-renewable Resources:</p> <p><u>Natural resources and associated problems: -</u></p> <ul style="list-style-type: none">a) Forest Resources: use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.b) Water Resources: use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.c) Mineral Resources: use and exploitation, environmental effects of extracting and using mineral resources, case studies.d) Food Resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.	<p>In this subject students know about the Different sources of natural problems, pollutions, energy resources, Biodiversity And Its Conservation etc.</p>

	<p>e) Energy Resources: Growing energy needs, renewable and nonrenewable energy sources, use of alternate energy sources, case studies</p> <p>f) Land Resources: Land as a resource; land degradation, man induced landslides, soil erosion and desertification.</p> <ul style="list-style-type: none"> ❖ Role of an individual in conservation of natural resources. ❖ Equitable use of resources for sustainable lifestyles 	
III	<p>Unit-3: Ecosystems</p> <ul style="list-style-type: none"> ❖ Concept of an ecosystem ❖ Structure and function of an ecosystem ❖ Producers, consumers and decomposers ❖ Energy flow in the ecosystem ❖ Ecological succession ❖ Food chains, food webs and ecological pyramids ❖ Introduction, types, characteristic features, structure and function of the following ecosystem:- <ul style="list-style-type: none"> a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) 	
IV	<p>Unit-4: Biodiversity And Its Conservation</p> <ul style="list-style-type: none"> ❖ Introduction – Definition: genetic, species and ecosystem diversity. 	

	<ul style="list-style-type: none"> ❖ Bio geographical classification of India ❖ Value of biodiversity: Consumptive use, productive use, social, ethical, and aesthetic and option values. ❖ Biodiversity at global, National and local levels. ❖ India as a mega-diversity nation ❖ Hot-spots of biodiversity. ❖ Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts. ❖ Endangered and endemic species of India ❖ Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. 	
V	<p>Unit-5: Environmental Pollution Definition:</p> <ul style="list-style-type: none"> ❖ Causes, effects and control measures of:- <ul style="list-style-type: none"> a) Air pollution b) Water pollution c) Soil pollution d) Marine pollution e) Noise pollution f) Thermal pollution g) Nuclear pollution ❖ Solid waste Management: Causes, effects and control measures of urban and industrial wastes. ❖ Role of an individual in prevention of pollution ❖ Pollution case studies ❖ Disaster Management: Floods, earthquake, cyclone and land slides. 	

VI	<p><u>Unit-6: Social Issues And The Environment</u></p> <ul style="list-style-type: none"> ❖ From Unsustainable to Sustainable development ❖ Urban problems related to energy. ❖ Water conservation, rain water harvesting, watershed management ❖ Resettlement and rehabilitation of people; its problems and concerns. CaseStudies ❖ Environmental Ethics: Issues and possible solutions. ❖ Climate change, global warming, acid rain, ozone layer depletion, nuclearaccidents and holocaust. Case Studies. ❖ Wasteland reclamation. ❖ Consumerism and waste products ❖ Environment Protection Act. ❖ Air (Prevention and Control of Pollution)Act ❖ Water (Prevention and Control of Pollution)Act ❖ Wildlife Protection Act ❖ Forest Conservation Act ❖ Issues involved in enforcement of environmental legislation ❖ Public awareness 	
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VII	<p><u>Unit-7: Human Population And The Environment</u></p> <ul style="list-style-type: none"> ❖ Population growth, variation among nations. ❖ Population explosion: Family Welfare Programme. ❖ Environment and human health ❖ Human Rights ❖ Value Education ❖ Women and Child Welfare ❖ Role of Information Technology in Environment and human health ❖ Case Studies 	
VIII	<p><u>Unit-8: Field Work</u></p> <ul style="list-style-type: none"> ❖ Visit to a local area to document environmental assets-river / forest / grassland /hill /mountain. ❖ Visit to a local polluted site – Urban / Rural / Industrial /Agricultural ❖ Study of common plants, insects ,birds. ❖ Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5lecture hours 	

COURSE CONTENT FOR SEMESTER – II

PAPER I: QUANTATUVE TECHNIQUES FOR BUSINESS (BBA-201)

I	UNIT – I: Matrix: Introduction, Types of Matrix, Addition, Subtraction & Multiplication of Matrix, Inverse of Matrix, Solution of Linear equations by matrix inversion Method.	<p>In this subject students know about the Statistics: Types of Data, Classification & Tabulation of Data, Frequency Distribution, Graphical Presentation, Measures of Central Tendency, Sampling: Methods of sampling, sampling and non-sampling errors.</p> <p>Testing of Hypothesis, Type I and Type II Errors, Large Sample tests for better productions solutions in business.</p>
II	UNIT – II: Statistics: Types of Data, Classification & Tabulation of Data, Frequency Distribution, Graphical Presentation, Measures of Central Tendency (Mean, Median & Mode) Measures of Dispersion (Range, Mean Deviation & Standard Deviation).	
III	UNIT – III: Correlation : significance of Correlation, Types of Correlation, Scatter Diagram Method, Karl Pearson coefficient of correlation, Spearman’s coefficient of Rank correlation. Regression: Introduction, Regression Lines and Regression Equations & Regression Coefficients	
IV	UNIT – IV: Probability: Definitions of Probability, Additive and Multiplicative Rules of probability, Bay’s Theorem (Simple numerical) Probability Distributions: Binomial, Poisson and Normal.	
V	UNIT – V: Sampling: Methods of sampling, sampling and non-sampling errors. Testing of Hypothesis, Type I and Type II Errors, Large Sample tests.	

PAPER II: BUSINESS COMMUNICATION(BBA-202)

I	Unit – I: Meaning and objective of Business communication, Forms of Communication, Communication model and process, Principles of Effective Communication	<p>In this subject students know about the Corporate Communication: Formal and Informal Communication, Network Grapevine, Barriers in Communication, Ora l& Non-verbal communication: Principles of Oral Presentation Factors affecting Presentation, effective Presentation skills in business.</p>
II	Unit – II: Corporate Communication: Formal and Informal Communication, Network Grapevine, Barriers in Communication ,Groups discussion, Mock Interviews, Seminars, Individual and Group Presentations.	
III	Unit – III : Essential of effective Business letters, Writing Important Business letters including correspondence with Bank and Insurance companies	
IV	Unit – IV: Ora l& Non-verbal communication: Principles of Oral Presentation Factors affecting Presentation, effective Presentation skills, conducting Surveys. Body Language, Para Language	

	,Effective Listening, Interviewing skill, Writing resume and Letter or application	
V	Unit – V: Modern forms of communication, International communication, Cultural sensitiveness and cultural context, Writing and presenting in international Situations. Importance of business language, vocabulary words often confused, words often misspelt, common errors in English.	
PAPER III: HUMAN RESOURCE MANAGEMENT (BBA-203)		
I	Unit – I: Introduction to HRM & HRD Concept of HRM, Objectives, Process, HRM vs. Personnel Management, HRM Vs. HRD, Objectives of HRD, focus of HRD System, Structure of HRD System, role of HRD manpower.	In this subject students know about the human resources management its policies, Procurement & Mobility Productivity, Employee Compensation Wage policy, Employee relations Discipline & Grievance handling types of trade unions, problems of trade unions etc.
II	Unit – II: Human Resource Policies & Strategies Introduction, role of HR in strategic management, HR policies & Procedures, HR Program, developing HR policies and strategies, International HRM, Domestic HRM compared to International HRM.	
III	Unit – III: Human Resource Procurement & Mobility Productivity & improvement job analysis & Job design, work measurement, ergonomics. Human Resource planning-objectives, activities, manpower requirement process, Recruitment & Selection, Career planning & development, training methods, basic concept of performance appraisal, Promotion & Transfer.	
IV	Unit – IV: Employee Compensation Wage policy, Wage determination, Wage board, factors affecting wages & Salary, systems of payments, Job evaluation, components of wage/salary-DA, incentives, bonus, fringe benefits etc.	
V	Unit – V: Employee relations Discipline & Grievance handling types of trade unions, problems of trade unions, the e-HRM, Nature, e-activities, recruitment, selection, performance management, compensation	

PAPER IV: MARKETING MANAGEMENT (BBA-204)

I	Unit – I: Marketing: Definition, nature, scope & importance, Marketing Management, Core concepts of marketing, selling concept, production concept, modern marketing concept, Socialmarketing, Understanding of Consumer Behavior, Purchase decision Process.	In this subject students know about the marketing management theories, Core concepts of marketing, selling concept, production concept, modern marketing concept, Marketing Research: Importance, Process and Elementary knowledge of Information system, green marketing, digital marketing, Service marketing etc.
II	Unit – II: Segmentation: Concept, basis of segmentation, Importance in marketing; Targeting: Concept Types, Importance; Positioning: Concept, Importance, Brand positioning, Repositioning.	
III	Unit – III: Marketing Mix: Product: Product Mix, New Product development levels of Product, Product life cycle, Branding and packaging, Distribution: Concept, Importance, different types of distribution channels etc.	
IV	Unit – IV: Price: Meaning, objective, factors influencing pricing, methods of pricing. Promotion: Promotional mix, tools, objectives, media selection & management	
V	Unit – V: Marketing Research: Importance, Process and Elementary knowledge of Information system, green marketing, digital marketing, Service marketing	

PAPER V: BUSINESS ENVIRONMENT (BBA-205)

I	Unit – I: Concept, Significance, Components of Business environment, Factor affecting Business Environment, Social Responsibilities of Business.	In this subject students will understand about the Economic Systems, Factor affecting Business Environment, Social Responsibilities of Business, Monetary and Fiscal Policy; EXIM Policy, FEMA, Start-ups, Skill development, Thrust on make in India.
II	Unit – II: Economic Systems: Capitalism, Socialism, Communism, Mixed Economy-Public Sector & Private Sector	
III	Unit – III: Industrial Policy – Its historical perspective (In brief); Socio-economic implications of Liberalisation, Privatisation, Globalisation	
IV	Unit – IV: Role of Government in Regulation and Development of Business; Monetary and Fiscal Policy; EXIM Policy, FEMA, Start-ups, Skill development, Thrust on make in India	
V	Unit – V: Overview of International Business Environment, Trends in World Trade: WTO- Objectives and role in international trade, Increasing trends of e-commerce with respect to e-platform like flipcart, Amazon, Myntra.	

PAPER V: FUNDAMENTALS OF COMPUTER (BBA-206)

I	Unit – I: Computer Basic: Introduction, History of Computer, Types of Computer, Generations of Computer, and Basic Components of PC.	In this subject students will understand about the Computer, and Basics and its Components of PC Network, Security and Networking: LAN, WAN, MAN, SAN, CAN, Topology (Ring, Star, Bus, Mesh), Introduction, Filter, Commands for Excel . Power Point: Introduction, Creating a Presentation etc.
II	Unit – II: Hardware and Software: Introduction, Types of Software, Input Devices and Output Devices, Relationship between Hardware and Software, RAM and ROM.	
III	Unit – III: Network, Security and Networking: LAN, WAN, MAN, SAN, CAN, Topology (Ring, Star, Bus, Mesh), Digital Piracy Management, Cyber Security / Cyber Laws, Internet Information, Internet Service, Difference Between Internet, Extranet and Ethernet.	
IV	Unit – IV: Windows (latest Version): Introduction, Features, Installation, Activation, Security Features , MS Word with all the applications and uses.	
V	Unit – V: Excel(latest Version): Introduction, Filter, Commands for Excel . Power Point: Introduction, Creating a Presentation, Using Templates, Inserting Charts, Inserting Tables.	

PAPER V ASSESSMENT ON SOFT SKILL BASED ON PRESENTATION/G.D./P.D (BBA-207)

I	Unit – I: Group discussion: Group Discussion improves verbal communication nonverbal behavior, Decision making ability and cooperation.	In this subject students will learn about the Its improves Team Work, Internships, Volunteering, Leadership Skills, Communication Skills
II	Unit – II: Management Games: It improves Team Work, Internships, Volunteering, Leadership Skills	

III	Unit – III: Grooming Sessions: It improves Communication, Interaction, helps in admitting your flaws and Weakness, helps in discovering things and new ideas. It makes you more adaptable and accommodative	Leadership, Interpersonal Skills etc.
IV	Unit – IV: Presentation skills: It helps in making clear objectives, Well-rehearsed, Information clearly featured and it includes call to action	
V	Unit – V: Communication Skills <ol style="list-style-type: none"> 1. Verbal Communication 2. Body Language 3. Physical Communication 4. Writing 5. Visual Communication 6. Listening 7. Presentation Skills 8. Public Speaking 9. Interviewing 	
VI	Unit – VI: Leadership <ol style="list-style-type: none"> 1. Team Building 2. Mentoring 3. Delegation 4. Dispute Resolution 5. Giving Feedback 6. Decision Making 7. Supervising 8. Managing 	
VII	Unit – VII: Interpersonal Skills <ol style="list-style-type: none"> 1. Networking 2. Interpersonal Relationships 	

	<ol style="list-style-type: none"> 3. Dealing with Difficult People 4. Conflict Resolution 	
VIII	<p>Unit – VIII: Personal Skills</p> <ol style="list-style-type: none"> 1. Stress Management 2. Tolerance of Change and Uncertainty 3. Taking Criticism 4. Self Confidence 5. Adaptability 6. Resilience 7. Self Leadership 8. Self Assessment 9. Enthusiasm 10. Empathy 	
IX	<p>Unit – IX: Professional Skills</p> <ol style="list-style-type: none"> 1. Time Management Technology 2. Meeting Management 3. Technology Savvy 4. Trend Awareness 5. Business Trend Awareness 6. Business Etiquette 	
X	<p>Unit – X: Creativity</p> <ol style="list-style-type: none"> 1. Problem Solving 2. Critical Thinking 3. Innovation 4. Troubleshooting 5. Design Sense 	

COURSE CONTENT FOR SEMESTER – III

PAPER I: ADVERTISING MANAGEMENT(BBA-301)

I	Unit – I: Advertising: Introduction, Scope, importance in business: Role of advertising, function of advertising, key players in advertising, types of advertising.	In this subject students will learn about the advertising management, Public Relation and Publicity Meaning of Public Relation, Difference between public relations and advertising, Media Planning and Strategies Of business.
II	Unit – II: Public Relation and Publicity: Meaning of Public Relation, Difference between public relations and advertising, Role of Public Relations, Process of Public Relation, Advantages and disadvantages of Public Relations, Publicity, Advantages and disadvantages of publicity.	
III	Unit-III: Sales Management and Sales Promotional: Defining Sales Management, Objectives of Sales Management, Sales Management Strategies, Functions of Sales Executive, Scope and Role of sales promotion.	
IV	Unit – IV: Print Media and Broadcasting: Characteristics of the press, Basic media concepts, newspapers, magazines, Factors to be considered for print media advertising,, Meaning of Broadcasting, Radio as a medium, television as a medium, internet advertising.	
V	Unit –V: Media Planning and Strategies: Growth and Importance of Media, Meaning and role of media planning, Media Plan, Market Analysis, Media Objectives, Developing and implementing Media Strategies.	

PAPER II: TEAM BUILDING &LEADERSHIP (BBA-302)

I	UNIT – I: Team Building Process: Overview of team; Difference between Groups and Teams.Types of Teams- Problem-solving Teams, Self-Managed Teams, Cross-functional teams, Virtual Teams	Team building has always been found to have a lot of positive impacts on the productivity of employees. Knowing this as a fact, many corporate houses look forward to organising team building events that bring a lot of positivity and confidence in the team. These events need to be organised on a regular
II	UNIT – II: Evaluating team performance, Goal Setting of Team, Defining roles and Responsibility of team members; External and Internal factors affecting team building.	
III	UNIT – III: Leadership – Meaning, Concepts and Myths about Leadership, Components of Leadership, Leadership Skills – Basic Leadership Skills, Building Technical Competency, Advanced Leadership Skills, Building High Performance Teams.	

IV	UNIT – IV: Personality: Meaning & Concept of Personality; Types of personality; Personality Determinants; Evaluation of Personality	basis helping employees to maintain their high confidence and productivity levels. High-spirited employees bring amazing results which do a lot well for the business.
V	UNIT -V: Meaning of Group; Formation of group; Roles, Structure, and Size of Group; Types of Group; Characteristics of an Effective Group.	

PAPER III: INDIAN ECONOMY (BBA-303)

I	Unit – I: Meaning of Economy, Economic growth & development, characteristics of Indian Economy, Factors affecting economic development.	To enable students to understand how optimum real life decisions are taken by individuals under situations of scarcity. To enable students to understand how optimum decisions are taken by firms in the economy. Analyze the decisions taken by firms and households due to scarcity of resources. 2. Calculate the elasticity of demand and supply. 3. Describe the laws and various concepts in production and costs
II	Unit – II: An overview of Economic Resources of India, Human Resources of India, Concept of Population Explosion Interrelation of Population and Economic Development, Population policy of India, Problem of Unemployment in India.	
III	Unit – III: Agriculture: Land Reforms and land tenure system, Green Revolution and capital formation in agriculture industry, trends in composition and growth, role of public and private sector, small scale and cottage industries.	
IV	Unit – IV: Problems and prospects of Indian Agriculture, Plan period Position, Problems and Prospects of Large Scale Industries. (Iron, Steel, Sugar, Cotton, Textile).Role of small scale industry in Indian economy.	
V	Unit – V: Indian Banking System : Structure and organization of banks; Reserve bank of India; Apex banking institutions; Commercial banks; Regional rural banks; Co-Operative banks; Development banks .NITI Aayog: formation ,Function and contribution of NITI Aayog.	

PAPER IV: CUSTOMER RELATIONSHIP MANAGEMENT (BBA-304)

I	UNIT – I Introduction to CRM: Definition and concepts of CRM, Components of CRM, Understanding the goal of CRM and Customer Touch Points	To make the students understand the organizational need, benefits and process of creating long-term value for individual
II	UNIT – II CRM Process: Introduction and Objectives of a CRM Process; an Insight into CRM and e-	

	CRTA/online CRM, The CRM cycle i.e. Assessment Phase; Planning Phase; The Executive Phase; Modules in CRM, 4C's (Elements) of CRM Process, CRM Process for Marketing Organization, CRM Affiliation in Retailing Sector.	customers . To disseminate knowledge regarding the concept of e-CRM and e-CRM technologies.
III	UNIT – III Developing CRM Strategy: Role of CRM in business strategy, Understanding Service Quality: Technical, Functional, and dimensions of service quality, Managing Customer communications.	
IV	UNIT – IV CRM Implementation: Choosing the right CRM Solution; Framework for Implementing CRM: a Step-by-Step Process: Five Phases of CRM Projects: Development Customizations; Beta Test and Data Import; Train and Retain; Roll out and System Hand-off Support.	To enable the students understand the technological and human issues relating to implementation of Customer Relationship Management in the organizations
V	UNIT – V Sales Force Automation - Sales Process, Activity, Contact, Lead and Knowledge Management: Field Force Automation.CRM Links in E-Business: E-Commerce and Customer Relationships on the Internet, Supplier : Role and Importance.	

PAPER V: MANAGEMENT INFORMATION SYSTEM(BBA-305)

I	Unit – I: Management Information System(MIS): Concept & definition, Role of MIS, Process of Management, MIS-A tool for management process, Impact of MIS, MIS & computers, MIS & the user, IMS- a support to the Management.	In this subject students try to know about the the role of information technology and information systems in business.
II	Unit – II: Planning & Decision making: The concept of corporate planning, Strategic planning Type of strategic, Tools of Planning, MIS-Business Planning; Decision making concepts, Methods, tools and procedures, Organizational Decision making, MIS & Decision making concepts.	Record the current issues of information technology and relate those issues to the firm.
III	Unit – III: Information &System: Information concepts, Information: A quality product classification of the information, Methods of data & information collection, Value of information, MIS &System concept, MIS & System analysis ,Computer System Design.	Develop the necessary skills to construct a theoretical database model given a specific application case study, Develop the skills necessary to recognize potential vulnerabilities and threats and be able to counteract those vulnerabilities with a secure system design
IV	Unit – IV: Development of MIS: Development of long range plans of the MIS. Ascertaining the class of information, determining the Information requirement, Development and implementation of the MIS, Management of quality in the MIS, organization for development of the MIS, MIS: the factors of success and failure.	

V	Unit – V: Decision Support System (DSS): Concept and Philosophy, DSS: Deterministic Systems, Artificial intelligence(AI) System, Knowledge based expert system(KBES), MIS & the role of DSS, Transaction Processing System(TPS), Enterprise Management System(EMS), Enterprise Resource Planning (ERP) System, Benefits of ERP, EMS & ERP	
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PAPER VI: INCOME TAX LAW & PRACITCE (BBA-306)

I	Unit – I: Basic Concept: Income, Agriculture Income, Casual Income, and Assessment Year. Previous Year. Gross Total Income, Total Income, Person, Tax Evasion, Avoidance and Tax Planning	<p>In this subject students try to know about the Describe the rules applicable in clubbing and aggregation of income and identify the order of set off of losses.</p> <p>Compute the income from capital gains of an individual.</p> <p>Prepare the statement showing computation of income from other sources of an individual.</p> <p>Compute Gross Total Income, Total Income and the tax liability of an individual.</p> <p>Identify and fill the different types of return.</p>
II	Unit – II: Charge: Scope of Total Income, Basis of Residence and Tax Liability, Income whichdoes not form part of Total Income	
III	Unit – III: Heads of Income: Income from Salaries, Income from House Properties.	
IV	Unit – IV: Heads of Income: Profit and Gains of Business or Profession, Including Provisions relating to specific business, Capital Gains, Income from other sources.	
V	Unit – V: Aggregation of Income, Set off and Carry forward of losses, deduction from gross total Income.	

COURSE CONTENT FOR SEMESTER – IV

PAPER I: CONSUMER BEHAVIOUR (BBA-401)

I	Unit – I: Consumer Behaviour: Nature, characteristics, Scope, Relevance & Application; Importance of consumer behaviour in marketing decisions; Consumer Vs Industrial Buying Behaviour	<p>Identify the major influences in consumer behavior,Distinguish between different consumer behaviour influences and their relationships</p> <p>Establish the relevance of consumer behaviour theories and concepts to marketing decisions</p> <p>Implement appropriate combinations of theories and concepts,Recognise social and ethical</p>
II	Unit – II: Determinants of Consumer Behaviour: Role of Motivation; Personality and Self Concept; Attention and Perception; Consumer Learning; Consumer Attitudes- Formation and Change; Consumer Values and Lifestyles	

	External Determinants of Consumer Behaviour: Influence of Culture and Sub Culture; Social Class; Reference Groups and Family Influences; Basic models of consumer behaviour	implications of marketing actions on consumer behavior. Use most appropriate techniques to apply market solutions
III	Unit – III: Consumer Decision Making Process: Problem Recognition- methods of problem solving; Pre-Purchase search influences- information search; alternative evaluation and selection; outlet selection and purchase decision; Post Purchase Behaviour; Situational Influences; Cognitive Dissonance. Diffusion of Innovation: Definition of innovation, product characteristics influencing diffusion, resistance to innovation, adoption process	Assess and evaluate the factors, internally and externally, through which we understand consumer behavior, Apply relevant consumer behaviour theories in understanding the impact of marketing strategies, Develop critical and reflexive understandings of the nature of consumption, markets and culture, Apply appropriate research techniques , Appreciate the complexity of consumer behavior.
IV	Unit – IV: Consumer Involvement: Role of Consumer Involvement; Customer Satisfaction; Consumer behaviour- interdisciplinary approach	
V	Unit – V: Researching Consumer Behaviour: Online Customer Behaviour; Diversity of Consumer Behaviour; Role of Consumer Behaviour in Marketing Strategy	

PAPER II: FINANCIAL MANAGEMENT (BBA-402)

I	Unit – I: Introductory: Concept of Financial management, Finance functions, objectives of financial management- Profitability vs. shareholder wealth maximization. Time value of Money- Compounding & Discounting.	In this subject students try to know about the Demonstrate understanding of the finance function
II	Unit – II: Capital Structure Planning: capitalization Concept, basis of capitalization, consequences and remedies of over and under capitalization. Determinants of Capital structure, Capital structure theories, Financial& Operating leverage.	Demonstrate understanding of the goals of the finance manager, Identify the basic financial environment and institutions, Perform analytical reviews of financial results, proposals, and plans Identify funding sources, instruments, and markets
III	Unit – III: Management of Fixed Capital: Cost of Capital, Nature & Scope of Capital budgeting- payback NPV, IRR and ARR methods and their practical applications. Analysis of risk & uncertainty.	Demonstrate knowledge of the value of money over time and its uses, Demonstrate knowledge of a basic financial vocabulary,
IV	Unit – IV: Management of Working Capital: Concepts of working Capital, Approaches to the financing of current Assets determining capital (with numerical problems) Management of different components of working capital.	

V	Unit – V: Management of Earning: Concept & relevance of Dividend decision. Dividend Models- Walter, Gordon's, MM Hypothesis. Dividend policy-determinants of dividend policy.	Recognize the importance of ethics in finance.
PAPER III: PRODUCTION & OPERATON MANAGEMENT (BBA-403)		
I	Unit – I: Nature & Scope of Production Management, Functions of Production Management, Production Systems, responsibilities of Production manager. Production Planning & Control (PPC), Objectives of PPC.	In this subject students try to know about the concept of operations management in manufacturing and service sector and will be able to plan and implement production and service related decisions. students can design maintenance schedules in manufacturing units, identify and propose material handling equipments and implement industrial safety rules regarding employees.
II	Unit – II: Types of manufacturing Systems: Intermitted & Continuous Systems etc, Product design & development.	
III	Unit – III: Plant Location & Plant layout. Introduction to method study and work study.	
IV	Unit – IV: Materials Management & Inventory Control: Purchasing Economic lot quality/Economic order quantity (EOQ), Lead time, Reorder level. Brief of ABC analysis, Stock Keeping. Quality	
V	Unit – V: Control: Quality, Quality assurance, Quality Circles, TQM, JIT, Statistical Quality Control	
PAPER IV: SALES & DISTRIBUTION MANAGEMENT (BBA-404)		
I	Unit – I: Sales Management :- Evolution of sales function- Objectives of sales management positions - Functions of Sales executives- Relation with other executives	In this subject students try to know about the Course should be able to understand & appreciate the diverse variables affecting the sales & distribution function . Be able to develop sales and distribution plans Course participants should be able to link distribution with other marketing variables .
II	Unit – II: Sales Organization and relationship: Purpose of sales organization - Types of sales organization structures - Sales department external relations Distributive Network relations.	
III	Unit – III: Salesmanship: Theories of personal selling, Types of Sales executives, Qualities of sales executives, prospecting, pre-approach and post-approach- Organizing display, showroom & exhibition	
IV	Unit – IV: Distribution network Management, Types of Marketing Channels, Factors affecting the	

	choice of channel, Types of middleman and their characteristics, Concept of physical distribution system Sales	
V	Unit – V: Force Management, Recruitment and Selection, Sales Training, Sales Compensation	
PAPER V: RESEARCH METHODOLOGY (BBA-405)		
I	Unit – I: Introduction – Meaning of Research; Objectives of Research; Types of Research; Research Process; Research Problem formulation, various problems encountered by researchers	In this subject students try to know about the different methodologies and techniques used in research work, basic computer skills necessary for the conduct of research.
II	Unit – II: Methods of Data Collection, Research Design; Features of a Good design; Different Research Designs ; Measurement in Research; Construction of Questionnaire.	
III	Unit – III: Sampling Design- Census & Sample Surveys; Steps in Sampling Design; Types of Sample designs-Probability & Non Probability sampling.	Assess the basic function and working of analytical instruments used in research.
IV	Unit – IV: Processing & Analysis of Data- Processing operations; problems in processing; types of analysis Hypothesis Testing-Chi-square test, Z test, t-test, f-test. Elementary Knowledge of SPSS.	Propose the required numerical skills necessary to carry out research.
V	Unit – V: Presentation-; Graphs; charts. Report writing; Layout of Research report; Types of Reports; Mechanism of writing a Research report; Precaution For writing report, Oral report, Formulation of business problems in research, Writing a research paper	
PAPER VI: ENTREPRENEURSHIP & SMALL BUSINESS MANAGEMENT (BBA-406)		
I	Unit – I: Introduction : concept of entrepreneurship, theories of entrepreneurship traits of entrepreneur , Different types of entrepreneurs, problems faced by entrepreneurs.	Demonstrate knowledge on the dynamic role of entrepreneurship and small businesses.
II	Unit – II: Entrepreneurial Development, Role and functions of measure support institutions such as SIB,CSIO,SSDO,SISIs etc., EDPs and Role of Women Entrepreneurs	Explain the stages of the entrepreneurial process and the resources needed for the successful development of entrepreneurial ventures.
III	Unit – III: Concept, definition, and framework of Small Business, Social benefits and incentives for small industry in India; application for registration and organizational structure of a small business.	Perform key steps in the elaboration of business idea. Demonstrate and present successful work, collaboration and division of tasks in a
IV	Unit –IV: Transformation of Idea into Reality :Project classification ,identification and selection, Project formulation and Project Appraisal plant Lay out	

		multidisciplinary and multicultural team.
V	Unit – V: Organizational locations, steps in starting a small industry, incentives and subsidies available, export possibilities. Teething problem in setting small units: location, technology, marketing, recoveries, labour and planning	
PAPER VII: Computer oriented Practical & Viva-Voce (BBA-407)		
I	Unit I: Network: Services and its classification : Knowledge management using internet search engines, techniques to use search engine effectively: <i>practical</i> use of <i>MS Office, MS Word, MS Excel, MS PowerPoint, MS Paint etc.</i> web page designing using any software: application of computers in project management: features, capabilities and limitation of project management software (with reference to popular software viz.ms-project), Official use of Blogs, Face book, LinkedIn, Twitter, Poster making using canvas	This a basic course for students to familiarize them with the computer and its applications in the relevant fields and also to make them aware of other related papers of IT. Technical Expertise: Implement fundamental knowledge of core courses for developing domain 1,2 ,4 , 7,8 , 10 effective computing solutions by incorporating creativity and logical reasoning.
II	Unit II: Digitization: Digital signature, e-Governance, Application of Digital Financial Services, Basics of E- mail, Electronic payment system, Digital signature, Mobile app based operations, Modern functions of smart phones, Android phone applications etc.	
III	Unit III: Mobile computing & its application: Introduction, issues in mobile computing, overview of wireless telephony: cellular concept, GSM: air-interface, channel structure, location management, CDMA, GPRS.	
IV	Unit IV: Online Transaction and Trading: Understand the E-Commerce and E-Commerce Transition in India Recognize the benefits and limitations of E-Commerce Analyze different E-Commerce business models Understand E-Marketing and E-CRM	
V	Unit V: Network security & its application: Application security (Database, E-mail and Internet), Data Security Considerations Backups, Archival Storage and Disposal of Data, Security Technology- Firewall and VPNs, Intrusion Detection, Access Control. <i>Security Threats-Viruses, E-mail viruses, Macro viruses, Network and Security Threats to E-Commerce Electronic Payment System, e- Cash, Credit/Debit Cards. Digital Signature, public Key</i>	

	Cryptography	
COURSE CONTENT FOR SEMESTER – V		
PAPER I: ARITHMATIC APTITUDE (BBA-501)		
I	Unit – I: Ratio & Proportion, Logarithm, Simple Interest, Compound Interest, Profit & Loss, true Discount, Partnership, Permutation & Combination.	In this subject students try to know about the Different. Understand and practice quantitative aptitude Understand and practice Logical reasoning . Understand and practice verbal reasoning Understand different placement practice techniques.
II	Unit – II: Problem on Age, Problem on Numbers, Calendar, Clock, Time & Work, Time & Distance Area. Sets, Function & Relation	
III	Unit – III: H.C.F., L.C.M., Decimal Fraction, Problem on Trains, Boat & Stream Syllogism Direction Tests, Seating Arrangements.	
IV	Unit – IV: Data Interpretation :Description of Data, Tabulation, Bar Diagrams, Pie Chart, Line Graph, Sequence& series, Number Series.	
V	Unit – V: Probability, Definitions of Probability, Mutually Exclusive Events, Equally Likely Events, Favourable & Unfavourable Events, Joint Events.	
PAPER II: APTITUDE REASONING (BBA-502)		
I	Unit – I : Emotional & Social Intelligence, Critical Thinking, Non-Verbal Reasoning, Verbal reasoning, Series, Data Structures	The main aim of introducing “Quantitative Aptitude”for mathematics students is to develop skill to meet the competitive examinations for better job opportunity. Effort has been made to accommodate fundamental, mathematical aspects to instill confidence among students. Enrich their knowledge and to develop their logical reasoning thinking ability.
II	Unit – II: Blood Relations, Venn Diagram, Word Formation, Matrix, Puzzle, Coding-Decoding, logical sequences, Proposition, Direction Sense, Sets &subsets.	
III	Unit – III : Analogy, Classification, Calendars, Cubes and Clocks, Syllogisms, Logical sequences statement conclusion, Syllogistic reasoning, Data Arrangement ,Family Tree ,Binary Logic, Seating Arrangement	
IV	Unit – IV: Similarities and Differences, Space visualization, Spatial orientation, Problem solving, Analysis, Judgment, Decision making	
V	Unit – V: Visual memory, Discrimination, Observation, Arithmetical reasoning and figural classification, Arithmetic number series, Tables & Pie Charts, Data Sufficiency, Bars & Line Graphs	

PAPER III: GENERAL BUSINESS AWARENESS (BBA-503)

I	<p>UNIT I: International Organizations (IMF, World Bank, IMO etc): Major world organizations including economic organizations like WTO, IMF, and WB are important. Various political global groupings like UN and regional groups like ASEAN, SAARC, etc. are also important. One can expect regarding headquarters, chairpersons, functions of the organization or any other major reform/ event that took place (pertaining to the organization).</p> <p>Business Awareness :Company, chair persons, board members, CEO, MDs, company v/s Industry, profession, logos of companies, branding, company and its product, companies and their origin, basic structure of a company, entrepreneurs, trademarks, globalisation, liberalisation</p> <p>Current Affair and General Knowledge: Population Census ,Important Books and their writers, First sports achievement for India and the world like first Olympic, first Asian Game, etc., State Animals and Symbols, Awards and their importance, Name of the Scientist who got Noble prize for important discoveries, Important Days</p>	<p>Understand diverse cultural perspectives and apply general business knowledge in the global market, Identify and evaluate ethical, social, and environmental impacts in business, Articulate ideas persuasively and logically and collaborate with others toward a common goal, Utilize analytical skills to devise innovative and creative solutions to problems, Integrate core concepts and theories across functional areas of business.</p>
II	<p>UNIT II: Geography: General questions from geographical features from India and across the world. Questions on theoretical aspects of Geography.</p> <p>History: Vedic culture, Name of the Kings who built, important ancient Temples and Institutions and historic monuments, contribution of Indian continent to world in ancient time.</p>	<p>Working of the Indian Political System political parties, pressure groups . Also, as far as the constitution is concerned, further, features of major social schemes launched by the central government recently.</p>
III	<p>UNIT III: Everyday Science: Application of science rather than theoretical aspects of Physics and Chemistry. Further, expect questions on technologies involved in communication, IT, space etc. Questions are generally of the School level.</p>	
IV	<p>UNIT IV: Economy: Questions from theoretical as well as practical aspects of Indian and World Economy, with a special focus on India's macroeconomic indicators, like inflationary trends, GDP etc.</p>	
V	<p>UNIT V: Constitution & Polity: Working of the Indian Political System e.g. political parties, pressure groups etc. Also, as far as the constitution is concerned, further, features of major social schemes launched by the central government recently, Institution of President, the governor, PM, then CM, Parliament and then State Legislature, Supreme Court and then High court, speaker of the house.</p> <p>Current Business Development: Latest events and developments in the business world especially</p>	

Indian subcontinent as mergers, takeovers, and new product launch etc.

PAPER IV: GENERAL ENGLISH (BBA-504)

I	Unit – I: Active and Passive Voice, Cloze Tests, Commonly Misspelled Words, Comprehension, Direct & Indirect Speech.	Read and understand simple texts in English Answer simple comprehension questions and match sentences about texts
II	Unit – II: Editing, Error Spotting, Fill in the Blanks, Grammar, Idioms and Phrases, Jumble Words, Jumbled up sentences.	Reconstruct texts by reordering sentences
III	Unit – III: Multiple Meaning /Error Spotting, Miscellaneous, One word Substitution, Paragraph Completion, Passage Making.	Understand the main idea of a text
IV	Unit – IV: Phrase Substitution, Reading Comprehension, Sentence Correction, Sentence Framing, Sentence Improvement.	Identify specific information in a text
V	Unit – V: Spelling Test, Spotting Errors, Synonyms & Antonyms, Verbal Ability, Vocabulary.	Greetings and introductions Make conversations in familiar situations (e.g. café, chatting about family, weekend) Ask and respond to simple questions with modelling Describe things Talk about past and future events

Elective Paper M-1: RURAL MARKETING

I	Unit: I Definition of Rural Marketing, Indian Rural Market, Environment: Population and its locations, occupation pattern, expenditure pattern, infrastructure facilities.	Rural marketing are gaining importance in emerging economies.
II	Unit II: The Rural Consumer: Characteristics, factors influencing his purchase decision, Rural demand: Nature, types of requirements, hierarchy of markets and rural market index, Problems in rural marketing.	A large number of businesses are involved in the marketing of various products in the rural areas of India and elsewhere.
III	Unit III: Marketing of Agriculture Inputs: Consumable inputs and durable inputs: Marketing of Consumables and Durables: Composition of Products, Price, distribution, promotion, product redesign or modification needs.	The main objective of this programme is to develop a strong foundation of applied knowledge, concepts, approaches and analytical skills in the participants for successful marketing of products and services to rural consumers and users.
IV	Unit IV: Marketing of Agricultural Produce, Formation of Cooperative marketing and processing societies, marketing of rural / cottage industry / artisan products	
V	Unit V: Rural Marketing Strategies: Rural Market Segmentation, Strategies on product, price, promotion and distribution.	

Elective Paper M-2: SERVICE MARKETING

	UNIT-1:INTRODUCTION TO SERVICES MARKETING: Introduction: Definition, Characteristics and Classification of Services, Difference between Product and Services marketing, Paradigms in Services Marketing, Present Marketing Environment, Services Marketing Mix: Understanding the 7 P's OF SERVICE MARKETING &UPCOMING CONCEPTS, Difficulties & Challenges in Service Marketing	Demonstrate an extended understanding of the similarities and differences in service-based and physical product based marketing activities; Demonstrate a knowledge of the extended marketing mix for services;
	UNIT- 2 UNDERSTANDING CONSUMER BEHAVIOR AND SERVICE DESIGN: Strategies forServices Marketing: Segmentation, Targeting &Positioning, Differentiation. Understanding ConsumerBehaviour: Services vis-à-vis goods, Consumer Behaviour in Services, Customer Expectations and Perceptions of Services .	Develop and justify marketing planning and control systems appropriate to service-based activities; Specify, analyse and select markets for specific service products;

		<p>Prepare, communicate and justify marketing mixes and information systems for service-based organisations;</p> <p>Demonstrate integrative knowledge of marketing issues associated with service productivity, perceived quality, customer satisfaction and loyalty</p> <p>Exhibit the capability to work effectively within a team environment.</p> <p>Apply relevant services marketing theory, research and analysis skills to contemporary case studies and communicate outcomes employing professional discourse and formats.</p>
	<p>UNIT- 3 DELIVERING, PRICING AND MANAGING SERVICE PROMISE (7 hrs): Service Development Design & Standards: New Service Development Process Service Standards, Demand and Capacity Management in Delivering Services: Role of Employees and Customers in service delivery; Quality in Service marketing</p>	
	<p>UNIT- 4 SERVICE PROCESS: Service process – Blue printing – Physical evidence. Pricing of Services: Pricing Considerations and Strategies, Revenue Management, Managing Service Promise: Role of Advertising, Personal Selling, Sales Promotion, Publicity and Public Relations in service marketing</p>	
	<p>UNIT- 5 SERVICE PERFORMANCE: Evaluating Success of Service Offering: Service quality and measurement, Complaint handling, Recovery management, Service Guarantees. Role of CRM, The Gaps Model Of Service Quality, Latest issues in service marketing with reference to Uber, Ola, OYO, Swiggy, Zomato.</p>	

Elective Paper: BBA-F-1:CORPORATE DIRECT TAX AND INDIRECT TAX

I	Unit-I: Income Tax Act 1961-special provisions relating to assessment of companies only.	In this subject students try to know about the special provisions relating to assessment of companies, Basis for changing indirect tax, constitutional framework of indirect tax before GST, structure of GST, Custom law: introduction levy and collection.
II	Unit- II: Concept of tax planning, tax avoidance and tax evasions, tax planning for new business with reference to location, nature and form of business.	
III	Unit-III: Introduction of Indirect tax, definition and nature, Basis for changing indirect tax, constitutional framework of indirect tax before GST, structure of GST, slab of GST,GST council, GST Network.	
IV	Unit-IV: Levy and collection of GST: Taxable event – supply of goods and services, place of supply, within state, interstate, import and export, time of supply, valuation for GST- Valuation rules, excess tax, refund, TDS, registration of GST.	
V	Unit-V: Custom law: introduction levy and collection, taxable event, valuation of import and export, refund & recovery.	

Elective Paper: BBA-F-2: FINENCIAL INSTITUTIONS AND INVESTMENT MANAGEMENT

I	Unit I: Overview of Capital Market: Market of securities, Stock Exchange and New Issue Markets – their nature, structure, functioning and limitations; Trading of securities: equity and debentures/bonds. Regulatory Mechanism: SEBI and its guidelines.	In this subject students try to know about the demonstrate the applicability of the concept of Financial Management to understand the managerial Decisions and Corporate Capital Structure.Apply the Leverage and EBIT ,EPS Analysis associate with Financial Data in the corporate . Analyse the complexities associated with management of cost of funds in the capital Structure. Demonstrate how the concepts of financial
II	Unit II: Portfolio Analysis and Selection: Portfolio concept, Portfolio risk and return, Selection of Portfolio: Capital market theorem, CAPM (Capital Asset Pricing Model) and Arbitrage Pricing Theory. Portfolio Management and Mutual Fund Industry	
III	Unit III: DFIs in India - IDBI, ICICI, IFCI, NABARD, RRBs, State Level Institutions; NBFCs – Their status, types, working and strategies for commercial viability ; Insurance organizations – Their status , types, working and strategies for commercial viability.	
IV	Unit IV: Leasing and Hire Purchase: Industry. Size and scope. Parties involved, Evaluation of Lease transaction, Types of lease and their implications, Hire purchase and lease - differences and implications for the business. Consumer Credit and Plastic Money – concept, working uses of each.	
V	Unit V: Mutual Funds : Concept, Types, Significance of Mutual Funds, NAV, Evolution &	

	Growth of Mutual Funds, Role of Registrar, Underwriter according to SEBI guidelines.	management and investment, financing and dividend policy decisions could integrate while identification and resolution of problems pertaining to LSCM Sector. Demonstrate how risk is assessed.
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Summer Training Project Report based Viva-voce

Note:- Paper code BBA-501, BBA-502, BBA-503 and BBA-504 will be of multiple-choice objective type questions.

COURSE CONTENT FOR SEMESTER – VI

PAPER I: STRATEGIC MANAGEMENT & BUSINESS POLICY (BBA-601)

I	Unit – I: Nature & importance of Business Policy, Development & Classification of Business Policy; Mechanism or Policy making.	Critically analyse the internal and external environments in which businesses operate and assess their significance for strategic planning. Apply understanding for the theories, concepts and tools that support strategic management in organizations. Build understanding of the nature and dynamics of strategy formulation and implementation processes at corporate and business level. Enhanced ability to identify strategic issues and design appropriate courses of action.
II	Unit – II: Responsibilities & tasks of Top Management: objectives of Business Characteristics, Classification, Types of objectives and their overall Hierarchy, Setting of objectives, Key areas involved.	
III	Unit – III: Corporate Planning; Concept of long term planning, Strategic Planning, Nature, Process & Importance.	
IV	Unit – IV: Corporate Strategy: Concept, Components, Importance, and Strategy Formulation: Concept, Process & Affecting Factors. Strategy Evaluation: Process, Criteria, Environmental Analysis, Resource Analysis	
V	Unit – V: Porter’s Five Forces Model, Concept of Synergy: Types, Evaluation of Synergy. Capability Profiles, Synergy as a Component of Strategy & its relevance	

PAPER 2: OPERATION RESEARCH (BBA-602)

I	Unit – I: Nature, Definition & characteristics of operations research, Methodology of OR, Models in OR; OR & managerial Decision making, OR techniques.	One or more advanced courses on applications in: supply chain and manufacturing systems; data analysis; information engineering; financial engineering; or service systems.
II	Unit – II: Linear programming: Introduction, Advantages of Linear Programming, Applications	

	areas of Linear Programming. LPP-problem formulation, Graphic Method, Simplex Method (including Big M method)	<p>A collaborative systems design experience.</p> <p>Collaborative project experiences involving both written and oral presentations.</p> <p>Courses with significant experiential learning components.</p> <p>Experiences with identifying, accessing, evaluating, and interpreting information and data in support of assignments, projects, or research.</p> <p>Course experiences with large-scale datasets.</p>
III	Unit – III: Transportation-North West Corner Rule, Method of matrix Minima & VAM Methods, Degenerating, MODI Method. Assignment Problems	
IV	Unit – IV: Decision making under Uncertainty-Criteria of Maximax, Maximin, Minimax Regret, Decision making under Risk-Criteria of EMV & EOL, Decision Tree approach & its applications.	
V	Unit – V: PERT & CPM-Introduction, Network Analysis, Time Estimates in Network Analysis, Critical Path Method; Programme Evaluation & Review Technique.	
PAPER III: FUNDAMENTAL OF E-COMMERCE (BBA-603)		
I	Unit – I: E-Commerce: Introduction, meaning and concept; Needs and advantages of e-commerce; Traditional commerce; Types of E-Commerce, Basic requirements of E-Commerce.	Analyze the impact of E-commerce on business models and strategy.
II	Unit – II: Internet: Concept & evaluation, Characteristics of Internet: email, WWW. Ftp, telnet, Intranet & Extranet, Limitation of internet, Hardware & Software requirement of Internet, searches Engines.	Describe the major types of E-commerce.
III	Unit – III : Customer relationship with business via e-commerce Electronic Payment Systems: E-Cash, e-cheque, credit cards, debit cards, smart cards, E-Banking, Manufacturing information systems.	<p>Explain the process that should be followed in building an E-commerce presence.</p> <p>Identify the key security threats in the E-commerce</p>

		environment. Describe how procurement and supply chains relate to B2B E-commerce.
IV	Unit – IV: EDI introduction, networking infrastructure of EDI, Functions & Components of EDI File types of EDI.	
V	Unit – V: Security issues of e-commerce: Firewall, E-locking, Encryption; Cyber laws-aims salient provisions; PKI (Public key infrastructure)	
PAPER IV: ECONOMIC AND INDUSTRIAL LAW (BBA-604)		
I	Unit I: Factory act 1948: Definitions, Inspecting Staff, Provisions Regarding Health, Safety & Welfare, Hazardous Process, Working Hours of Adults & Holidays, Employment of Young Persons, Employment of Women, Annual Leave with Wages. Workmen compensation act 1923:Definitions, Aims & Object, Determination of Amount of Compensation, Appointment & Powers of Commissioner, Latest provisions of Workmen's Compensation (Amendment) Act, 2009.	Develop ideas of the basic characteristics of Indian economy, its potential on natural resources. Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.
II	Unit II: Industrial dispute act 1947: Scope of Industry, Industrial Disputes machineries, Authorities under the Act, Procedure, Power and Duties of Authorities, Courts or Tribunal. Minimum wages act 1948: Meaning of wage under the Act Procedure for fixing Minimum wage, Obligation of employer to pay minimum wage, Authorities and Remedies under the Act	Grasp the importance of planning undertaken by the government of India, have knowledge on the various objectives, failures and achievements as the foundation of the ongoing planning and economic reforms taken by the government.
III	Unit III: Employee state insurance act 1948: Object and Scope, Definitions under the act, Benefits under the Act: Sickness benefit, Maternity Benefit, Disablement Benefit, Dependent's Benefit, Medical Benefit, Employee's State Insurance Corporation - Dispute and Claim Settlement under the Act, Latest provisions of Employee state insurance (amendment) Act, 2010	Understand agriculture as the foundation of economic growth and development, analyse the progress and changing nature of agricultural sector and its contribution to the economy as a whole
IV	Unit IV: Employee provident fund act 1952: Employee's pension scheme and fund, Employee's deposit linked insurance scheme, administration of the schemes, Recovery of money from employer and contractor, Appellate tribunal, penalties and offences.	

V	Unit V: Payment of gratuity act 1972: Scope of the Act Meaning of Employee, Employer, Continuous Service, etc., Conditions for Payment and Forfeiture of Gratuity, Authorities under the Act and their powers and functions. IBC law and Arbitration	
PAPER V: RETAIL MANAGEMENT (BBA-605)		
I	Unit I: Introduction to Retailing: Concept of retailing, Functions of retailing, Terms & Definition, Retail formats and types, Retailing Channels, Retail Industry in India, Importance of retailing, changing trends in retailing.	In this subject students will know about the Organised retail sector and its operations.
II	Unit II: Understanding the Retail Consumer: Retail consumer behaviour, Factors influencing the Retail consumer, Customer decision making process, Types of decision making, Market research for understanding retail consumer.	Understand the various strategies involved with the retail sector.
III	Unit III: Retail Market Segmentation and Strategies: Market Segmentation and its benefits, Kinds of markets, Definition of Retail strategy, Strategy for effective market segmentation, Strategies for penetration of new markets, Growth strategies, Retail value chain.	Learn how to deal with customers and understand their needs to sustain in the market.
IV	Unit IV: Merchandise Management: Meaning of Merchandising, Factors influencing Merchandising, Functions of Merchandising Manager, Merchandise planning, Merchandise buying, Analysing Merchandise performance.	Understanding how to manage retail during crisis.
V	Unit V: Merchandise Management: Meaning of Merchandising, Factors influencing Merchandising, Functions of Merchandising Manager, Merchandise planning, Merchandise buying, Analysing Merchandise performance.	
Elective Paper M-4: DIGITAL MARKETING		
I	UNIT-1: Introduction of Digital Marketing, Importance of Digital Marketing, General Overview of Web Concept and Hosting Domain, Website Planning.	Translate some of the key marketing and business models that will help to shape your digital marketing strategy
II	UNIT-2: What is Search Engine Optimization (SEO), What is Black HAT and White HAT SEO, Importance of Search Engine Optimization (SEO), What is SEO On Page, What is SEO Off Page, What is Local SEO, How to do SEO, Importance of Google Webmaster Tool.	Review the history of digital marketing to give

III	UNIT -3: What is Social Media Marketing, How to Promote Brand through Social Media Marketing (SMM), Importance of Social Media Marketing, How to Optimize Social Media, How Many Platform of Social Media, How to Make Business Pages or Profile on Social Media (Facebook, Twitter, Instagram, LinkedIn, Pinterest etc.) How to Create Paid Advertising on Social Media.	some perspective to your digital strategic plan. Describe online market presence, segmentation and the 4 Ps of marketing and their implications for digital marketing.
IV	UNIT-4: What is Google Adwords, Importance of Google Paid Campaign, How many type of Google Advertisement, What is Search Display Mobile Shopping Video Advertisement, How to Create Paid Campaign on Google Adwords, Bing Advertisement, Tracking Performance and Measurement with Google Analytics.	The opportunities and risks of integrated digital marketing Outline an approach to developing a digital marketing plan.
V	UNIT-5: Email Marketing, Lead Generation, Content Marketing, Importance of Content Writing, How to Promote Brand through Content, Online Reputation Management and Review Management, Affiliate Marketing, Internet Entrepreneurship with Google Adsense, How to get Project from USA UK CA and other Country, How to do Freelancing, Internet Marketing Planning and Strategy.	The key digital marketing activities needed for competitive success.

Elective Paper BBA-F-3: ACCOUNTING FOR MANAGERIAL DECISION AND ANALYSIS

I	Unit-I: Introduction: Nature and Scope of Cost Accounting, Cost, concepts and Classification, Methods and Techniques, Installation of Costing System.	Demonstrate the applicability of the concept of Accounting to understand the managerial Decisions and financial statements .
II	Unit -II: Budgetary Control, Standard costing, Fund flow & Cash flow analysis.	
III	Unit -III: Element of Cost, Assessment of Cost-Preparation of Cost Sheet and Statement of Cost. Management Accounting - Meaning, Nature, Scope, Functions Relationship of Management Accounting,	Apply the Financial Statement Analysis associate with Financial Data in the organization. Analyse the complexities associated with management of cost of product and services in the Organization .
IV	Unit-IV: Financial Accounting and Cost Accounting. Marginal Costing and Absorption Costing, ratio analysis, responsibility accounting	
V	Unit-V: Financial derivative: Definition, evolution and features of derivatives, Types of derivatives, futures and options market. forward contracts and forward market in India.	Demonstrate how the concepts of accounting and

		costing could integrate while identification and resolution of problems pertaining to LM Sector.
	Elective Paper BBA-F-4: GOODS AND SERVICE TAX	
I	Unit- I: Introduction, indirect tax, definition & nature, Basis for changing indirect tax, constitutional frame work of indirect tax before GST. Structure of GST, GST council, GST network, Slab of GST.	To acquaint the students with basic principles underlying the provisions of indirect tax laws and to develop a broad understanding of the tax laws and accepted tax practices.
II	Unit-II: Levy and collection of GST: Taxable event – supply of goods and services, place of supply, within state, interstate, import and export, time of supply, valuation for GST- Valuation rules, Taxability of reimbursement of expense, exemption from GST: Small supplier and composition scheme, classification of goods and service.	To give an understanding of the relevant provisions of Goods & Service Tax.
III	Unit-III: Input tax credit and value of supply: eligible and ineligible input tax credit, apportionments of credit and blocked credit, tax credit in respect of capital goods, recovery of excess tax credit. Payment of tax: refund, TDS, TCS, job work valuation procedure.	Expose the participants to real life situations involving taxation and to equip them with techniques for taking tax-sensitive decisions.
IV	Unit-IV: Registration, tax invoice, credit and debit notes, audit GST, GST Return assessment: self assessment, summary and security: offence and penalties, appeal.	
V	Unit-V: Custom law: introduction levy and collection, taxable event, valuation of import and export, refund & recovery.	Students will learn to define various aspect of indirect taxes (GST) like, Registration, Concept of Supply etc. Students will acquaint with the sources of revenues of the government. Students will learn to analyse and evaluate the effect of an indirect tax on consumers, producers and the government.

		Student will learn to differentiate between GST and VAT. Student's Capability to apply theoretical knowledge in practical situation will be increased.
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Comprehensive Viva-Voce BBA-607

Marketing:

- M-1 Rural Marketing
- M-2 Service Marketing
- M-3 Retail Management
- M-4 Digital Marketing \

Finance:

- F-1 Corporate Taxes-Direct and Indirect Tax
- F-2 Financial Institutions & Investment Management
- F-3 Cost and Management Accounting
- F-4 Company Accounts

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SYLLABUS (2017-2018) ONWARDS

UNIT	Course Objectives / Outcomes	Specific Outcome
COURSE CONTENT FOR SEMESTER – I		
PAPER I: Business Organisation (BBA-101)		
I	UNIT-I Meaning and definition of business essentials & scope of business Classification of Business Activities, Meaning, Definition, Characteristics and objectives of Business Organisation, Evolution of Business Organisation . Modern Business,Business &Profession.	Stand the different types businesses. <ul style="list-style-type: none"> • Different ways of classifying businesses: by size, industry sector and ownership type • Apply these ideas to a real business through a video case study.
II	UNIT-II Business Unit, Establishing a new business unit. Meaning of Promotion. Featuresfor business, Plant location, Plant Layout & size of business unit.	
III	UNIT-III Forms of Business Organisation. Sole Proprietorship, Partnership, Joint StockCompanies & Co-operatives.	
IV	UNIT-IV Business Combination Meaning Causes, Objectives, Types and Forms Mergers,Takeovers and Acquisitions.	
V	UNIT-V Business Finance: Financial need of Business methods & sources of finance. SecurityMarket, MoneyMarket, StudyofStockExchange& SEBI.	
PAPER II: Business Mathematics (BBA-102)		
I	UNIT-I Matrix: Introduction, Square Matrix, Row Matrix, Column Matrix, Diagonal Matrix, Identity Matrix, Addition, Subtraction & Multiplication of Matrix, Use of Matrix in Business Mathematical Induction	Students have the versatility to work effectively in a broad range of analytic, scientific, government, financial, health, technical and other positions.
II	UNIT-II Inverse of Matrix, Rank of Matrix, Solution to a system of equation by theadjoint matrix methods & Guassian Elimination Method.	A broad background in Mathematics and Statistics, an appreciation of how its various sub-disciplines are related, the ability to use techniques from different areas, and an in-depth
III	UNIT-III Percentage, Ratio and Proportion, Average, Mathematical Series-Arithmetic, Geometric & Harmonic, Simple Interest & Compound Interest.	

		<p>knowledge about topics chosen from those offered through the department.</p> <p>Be mathematically, statistically and numerically literate. In particular, graduates will: recognize the importance and value of mathematical and statistical thinking, training, and approach to problem solving, on a diverse variety of disciplines; be familiar with a variety of examples where mathematics or statistics helps accurately explain abstract or physical phenomena; recognize and appreciate the connections between theory and applications; be able to independently read mathematical and statistical literature of various types, including survey articles, scholarly books, and online sources; and be life-long learners who are able to independently expand their mathematical or statistical expertise when needed, or for interest's sake.</p>
IV	UNIT-IV Set theory- Notation of Sets, Singleton Set, Finite Set, Infinite Set, Equal Set Null Set, Subset, Proper Subset, Universal Set, Union of Sets, Inter-section of Sets, Use of set theory in business, Permutation & Combination	
V	UNIT-V Concept of Differentiation and Integration, Maxima and Minima in Differentiation, Application of Differentiation & Integration in Business (No proof of theorems. Etc)	
PAPER III: Principles of Economics (BBA-103)		
I	UNIT-I Definition, Nature, Scope & Limitation of Economics as an art or Science. Relevance of Economics	Use employment and national income statistics to

	in Business Management, Utility analysis, Marginal Theory of utilities and Equi-Marginal theory of utility.	describe and analyze the economy in quantitative terms.
II	UNIT-II Meaning of demand. Demand theory and objectives, Demand analysis. Demand schedule. Demand Curve and Nature of Curves, Laws of Demand Elasticity of Demand Types & Measurement, Indifference curves analysis Consumer Equilibrium & Consumer Surplus. Price, Income and substitution effect.	Describe the contemporary banking and monetary system, and analyze the role of money, credit, and Federal Reserve monetary policy.
III	UNIT-III Production-Meaning and Analysis Production function. Laws of production, Laws of increasing returns & Laws of constant returns. Equal product curves and Producer equilibrium.	Interpret macroeconomic events using aggregate demand and aggregate supply model, describe the interrelationships among prices, income and interest rates as they affect consumption, savings and investment.
IV	UNIT-IV Market analysis-Nature of market, Types of markets and their characteristics Pricing under different market structures-Perfect Monopoly, oligopoly and Monopolistic completion. Price discrimination under monopoly competition.	Apply the principle of comparative advantage to international trade and evaluate the impact of exchange rates to domestic economic activity. Analyze fiscal and monetary policy decisions to counter business cycle swings by using macro-economic models.
V	UNIT-V Theories of factor pricing, factor pricing v/s product pricing. Theories of rent theories of interest theories of wages theories of profit, Concept of profitmaximization	
PAPER IV: Book Keeping and Basic Accounting (BBA-104)		
I	UNIT-I Meaning of book keeping. Process of book keeping and accounting, Basic terminology of accounting, subsidiary books of accounts, Difference between accounting &	Analyze transactions to determine which accounts are involved and the subsequent effects on the

	book keeping, Importance & Limitations of Accounting, Various users of Accounting Information, Accounting Principles, conventions & Concepts.	basic accounting equation and financial statements.
II	UNIT-II Accounting Equation, Dual Aspect of Accounting Types of accounting Rules of debit & Credit, Preparation of Journal and Cash book including banking transaction, Ledger and Trial balance	Journalize, Post to Ledger, Trial Balance, Adjusting Entries, Adjusted Trial Balance, preparation of Financial Statements (income statement, balance sheet and statement of cash flows).
III	UNIT-III Rectification of errors preparation of bank reconciliation Statement, Bills of Exchange And promissory notes.	Timely reporting and better measurement of a company's economic performance (Double-entry system, effects of credit and delayed cash receipts).
IV	UNIT-IV Valuation of stocks, Accounting treatment of depreciation. Reserve and provision, Preparation of final accounts along with adjustment entries.	
V	UNIT-V Issue of shares and debentures, Issue of bonus shares and right issue, Redemption preference shares and debentures	
PAPER V: Business Law (BBA-105)		
I	UNIT-I Indian Contract Act: Definition and essentials, Contracts agreements, Offer & Acceptance Consideration, Capacity of parties Free Consent, Performance of Contracts, Terminal of Contract, Consequence and Remedies of Contract terminal.	On completion of this course, learners will be able to: appreciate the relevance of business law to individuals and businesses and the role of law in an economic, political and social context. Identify the fundamental legal principles behind contractual agreements. Examine how businesses can be held liable in tort for the action of their employees. Understand the legal and fiscal structure of different forms of business organizations and their responsibilities as an employer.
II	UNIT-II Contingent contract, Implied, Quasi contract, Indemnity Contract, Guarantee contract, Bailment, Lien, Pledge contract, Agency contract.	
III	UNIT-III Sales of Goods Act: Sale contract-Definition, Features, Formation of Contract Contents of sale contract-Goods, Price, Condition and Warranty, Ownership of goods and transfer, Performance of sale contract, Delivery, Rights of unpaid sellers, Auction Sale.	
IV	UNIT-IV Indian Partnership Act: Definition and Nature of Partnership, Partnership deed Mutual and Third parties relation of Partners, Registration of Partnership Dissolution of Partnership.	
V	UNIT-V Definition Features Types Recognition And Endorsement of Negotiable Instruments	

PAPER VI: Fundamental of Management (BBA-106)		
I	UNIT-I Introduction Concepts, Objectives, Nature Scope and significance of management Evolution of management thought- Contribution Taylor, Weber and Fayol management.	The influence of historical forces on the current practice of management.
II	UNIT-II Planning: Concept, Objectives, Nature, Limitation, Process of planning, Importance, Forms, Techniques and Process of decision making.	Identify and evaluate social responsibility and ethical issues involved in business situations and logically articulate own position on such issues.
III	UNIT-III Organizing: Concept, Objectives, Nature of organizing, Types of Organization, Delegation of authority, Authority and responsibilities, Centralization and Decentralization Span of Control.	Explain how organizations adapt to an uncertain environment and identify techniques managers use to influence and control the internal environment.
IV	UNIT-IV Directing: Concept, Principles & Techniques of directing and Coordination Concept of leadership-Meaning. Importance, Styles, Supervision, Motivation Communication	Describe the process of management's four functions: planning, organizing, leading, and controlling.
V	UNIT-V Controlling: Concept, Principles, Process and Techniques of Controlling, Relationship between planning and controlling.	Identify and properly use vocabularies within the field of management to articulate one's own position on a specific management issue and communicate effectively with varied audiences. Evaluate leadership styles to anticipate the consequences of each leadership style.

PAPER VII: Business Ethics (BBA-107)

I	UNIT-I Business Ethics- An overview-Concept, nature, evolving ethical values,Arguments against business Ethics.	Understand the importance of ethics and CSR in the day-to-day working of organizations . Learn the issues involved in maintaining ethics and how to deal with such situations. Learn scope of business ethics in Compliance, finance, Human resources, marketing, and production.
II	UNIT-II Work life in Indian Philosophy: Indian ethos for work life, Indian values for the work place, Work-life balance.	
III	UNIT-III Relationship between Mission Statement, TQM. Ethics Code of & Corporate Excellence-Corporate Ethics, Organizational Culture,	
IV	UNIT-IV Gandhian Philosophy of Wealth Management-Philosophy of Trusteeship, Gandhiji's Seven Greatest Social Sins	
V	UNIT-V : Corporate Social Responsibility-Social Responsibility of business with respect to different stakeholders, Arguments for and against Social responsibility of business, Social Audit.	

COURSE CONTENT FOR SEMESTER – II

PAPER I: Organisation Behaviour (BBA-201)

I	Unit – I : Introduction, nature and scope of OB, Challenges and opportunities for OB, Organization Goals, Models of OB, Impact of Global and Cultural diversity on OB.	At the end of the course students will be able to have clarity of fundamentals of organizational behaviour, individual behaviour, group behaviour, behavioural dynamics in organization, organizational culture and structure, organizational change, conflict and power. Thus, at the end of the course student will be able to understand different dynamism in organization.
II	Unit – II : Individual Behavior - Individual behavior, Personality, Perception and its role in individual decision making, Learning, Motivation, Hierarchy of needs theory, Theory X and Y, Motivation- Hygiene theory, Vrooms Expectancy theory	
III	Unit – III : Behavior Dynamics: Interpersonal behavior, Communication, Transaction Analysis, The Johari Window, Leadership, Its Theories and Prevailing Leadership styles in Indian Organisations.	
IV	Unit – IV : Group Behavior: Definition and classification of Groups, Types of Group Structures, Group decision making, Teams Vs Groups, Contemporary issues in managing teams, Inter group problems in organizational group dynamics, Management of conflict.	

V	Unit – V : Management of Change: Change and Organisational development, Resistance to change, Approaches to managing organizational change, Organisational effectiveness, Organisational culture, Power and Politics in Organisational Quality of work life, Recent advances in OB.	
PAPER II: Business Communication (BBA-202)		
I	Unit – I : Meaning and objective of Business communication, Forms of Communication, Communication model and process, Principles of Effective Communication	To be familiar with the complete course outline/Course Objectives/Learning Outcomes/ Evaluation Pattern & Assignments.
II	Unit – II : Corporate Communication: Formal and Informal Communication, Networks, Grapevine, Barriers in Communication, Groups discussion, Mock Interviews, Seminars, Individual and Group Presentations	To participate in an online learning environment successfully by developing the implication-based understanding of Paraphrasing, deciphering instructions, interpreting guidelines, discussion boards & Referencing Styles.
III	Unit – III : Essential of effective Business letters, Writing Important Business letters including correspondence with Bank and Insurance companies.	
IV	Unit – IV : Oral & Non-verbal communication: Principles of Oral Presentation Factors affecting Presentation, effective Presentation skills, conducting Surveys. Body Language, Para Language, Effective Listening, Interviewing skill, Writing resume and Letter or application	
V	Unit – V : Modern forms of communication, International communication, Cultural sensitiveness and cultural context, Writing and presenting in international situations.	To demonstrate his/her ability to write error free while making an optimum use of correct Business Vocabulary & Grammar. To distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization. To draft effective business correspondence with brevity and clarity.

PAPER III: Indian Economy (BBA-203)		Develop ideas of the basic characteristics of Indian economy, its potential on natural resources.
I	Unit – I: Meaning of Economy, Economic growth & development, characteristics of India Economy, Concepts of Human development, Factors affecting economic development.	Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.
II	Unit – II : An overview of Economic Resources of India, Human Resources of India: Concept of Population Explosion Interrelation of Population and economic development, Population policy of India, Problem of Unemployment in India.	Grasp the importance of planning undertaken by the government of India, have knowledge on the various objectives, failures and achievements as the foundation of the ongoing planning and economic reforms taken by the government.
III	Unit – III: Economic planning in India; Planning commission, Critical evaluation of current Five Year Plan.	
IV	Unit – IV: Problems and prospects of Indian Agriculture, agriculture development during plan period. Position, Problems and Prospects of Large Scale Industries. (Iron, Steel, Sugar, Cotton, Textile)	
V	Unit – V: Service and Entrepreneurial Sector, role of Commercial Bank and Financial Institutions, Role of Small Scale Industries in Indian Economy.	
PAPER IV: Business Statistics (BBA-204)		
I	Unit – I: Statistics: Concept, significance & Limitation Type of Data, Classification & Tabulation, Frequency Distribution & graphical representation.	Calculate and apply measures of location and measures of dispersion -- grouped and ungrouped data cases.
II	Unit – II: Measures of Central Tendency (Mean, Median, Mode) Measures of Variation: Significance & Properties of a good measure of variation: Range, Quartile Deviation, Mean Deviation and Standard Deviation, Measures of Skewness & Kurtosis	How to apply discrete and continuous probability distributions to various business problems.
III	Unit – III: Correlation: Significance of Correlation, Types of correlation, Simple correlation, Scatter Diagram method, Karl Pearson Coefficient of Correlation. Regression: Introduction, Regression lines, and Regression Equation & Regression coefficient.	Perform Test of Hypothesis as well as calculate confidence interval for a population parameter for single sample and two sample cases. Understand the concept of p-values.
IV	Unit – IV : Probability: Concept, Events, Addition Law, Conditional Probability, Multiplication Law & Baye's theorem [Simple numerical], Probability Distribution: Binomial, Poisson and Normal.	
V	Unit – V: Sampling Method of sampling, Sampling and Non-sampling errors. Test of Hypothesis, Type- I and Type -II Errors, Large sample tests	Learn non-parametric test such as the Chi-Square

		<p>test for Independence as well as Goodness of Fit.</p> <p>Compute and interpret the results of Bivariate and Multivariate Regression and Correlation Analysis, for forecasting and also perform ANOVA and F-test. Further, understand both the meaning and applicability of a dummy variable and the assumptions which underline a regression model. Be able to perform a multiple regression using computer software.</p>
	PAPER V: Business Environment (BBA-205)	
I	Unit – I: Concept, Significance, Components of Business environment, Factor affecting Business Environment, Social Responsibilities of Business.	Examine how different factors and trends in the external environment are likely to impact upon a proposed business venture.
II	Unit – II: Economic Systems: Capitalism, Socialism, Communism, Mixed Economy-Public Sector & Private Sector	Conduct a business analysis of the local and national environment.
III	Unit – III: Industrial Policy - Its historical perspective (In brief); Socio-economic implications of Liberalisation, Privatisation, Globalisation.	Employ business models and tools to evaluate changes in an organization's business environment.
IV	Unit – IV: Role of Government in Regulation and Development of Business; Monetary and Fiscal Policy; EXIM Policy, FEMA	<p>Present a business environmental analysis and recommendations to reduce the risk of the identified issues.</p> <p>Describe what business operations encompass. Explain the structure, process and function of business management.</p> <p>Explore the role of marketing in business.</p>
V	Unit – V: Overview of International Business Environment, Trends in World Trade: WTO- Objectives and role in international trade.	

PAPER VI: Principles of Accounting (BBA-206)		
	Unit – I : Accounting standards in India, Concept of GAAP (Generally Accepted Accounting Principles) International Accounting Standards, Accounting for Price level changes.	Articulate the language of business by demonstrating the ability to translate economic events into journal entries and accounting documents using accrual accounting concepts. Analyze and prepare financial statements for service or merchandising companies in accordance to generally accepted accounting principles. Illustrate an understanding of ethics and internal control.
	Unit – II: Accounting of Non-trading Institutions, Joint Venture and Consignment.	
	Unit – III : Accounts of banking companies and General Insurance companies, Department and Branch account.	
	Unit – IV: Accounts related to Hire Purchase and Installment payment transactions, Royalty Accounts	
	Unit – V : Partnership Accounts: Final Account, Reconstitution of Partnership firms- admission, retirement and death of a partner, Dissolution of Partnership (Excluding insolvency of Partner).	
COURSE CONTENT FOR SEMESTER – III		
PAPER I: Advertising Management (BBA-301)		
I	Unit – I : Advertising: Introduction, Scope, importance in business: Role of advertising in social and economic development of India: Ethics and truths in Indian Advertising	Understand the basic concepts in Marketing, Marketing environment and develop an understanding about communication, Marketing Communication and its usage. Understand the various types of Advertising, its applications and its usage with effect to marketing scenario, Role of advertising on the global marketing, usage of advertising campaign
II	Unit – II : Integrated Communication Mix (IMC)-meaning, importance; Communication meaning, importance, process, communication mix- components, role in marketing, Branding-meaning, importance in advertising.	
III	Unit – III : Promotional objectives - importance determination of promotional objectives, setting objective DAGMAR; Advertising Budget importance, establishing the budget-approaches allocation of budget.	
IV	Unit – IV : Advertising Copy-meaning components types of advertising copy, importance of creativity in advertising; Media planning-importance, strategies, media mix.	

		<p>and estimation of advertising budget.</p> <p>Analyses the critical aspects of ad-agency ,explaining the history of ad-agency, understand the applicability of advertising media, media planning, media scheduling, and evaluation of advertng effectiveness.</p> <p>Analyse the importance of personal selling and salesmanship, process of effective selling and involment of salesmen in sales organization.</p> <p>Development and usage of management of sales force, methodology for Recruitment, selection, training, motivational and moral of sales force activity.</p>
V	Unit – V : Advertising research - importance, testing advertising effectiveness market testing for ads; International Advertising-importance, international Vs localadvertising.	
PAPER II: Indian Banking System (BBA-302)		
I	Unit – I : Indian Banking System : Structure and organization of banks; Reserve bank of India; Apex banking institutions; Commercial banks; Regional rural banks; Co- operative banks; Development banks.	<p>Students discuss the impact of government policy and regulations on the banking industry.</p> <p>Evaluate the performance of the banking industry.</p>
II	Unit – II : State Bank of India: Brief History; Objectives Functions; Structure and organization; Working and progress	Discuss bank lending policies and procedures.
III	Unit – III : Banking Regulation Act, 1949: History; Social Control; Banking Regulation Act as applicable to banking companies and public sector banks; Banking Regulation Act as applicable to Cooperative banks.	To elucidate the broad functions of banks.
IV	Unit – IV : Regional Rural and Co-operative banks in India: Functions; Role of regionalrural and co-operative bank in rural India; Progress and performance.	To understand the working of the Reserve Bank

		<p>of India.</p> <p>To grasp the conduct of monetary policy and its effect on the interest rate, credit availability, prices, and the inflation rate.</p> <p>To express opinions about banking in written and oral form, based on the basic knowledge and skills acquired.</p>
V	Unit – V : Reserve Bank of India; Objectives; Organization; functions and working; monetary policy credit control measures and their effectiveness.	
	PAPER III: Human Resources Management (BBA-303)	Ritically assess existing theory and practice in the field of HRM
I	Unit – I : Introduction to HRM & HRD Concept of HRM, Objectives, Process, HRM vs. Personnel Management, HRM Vs. HRD, Objectives of HRD, focus of HRD System, Structure of HRD System, role of HRD manpower.	<p>Develop an ability to undertake qualitative and quantitative research</p> <p>Apply knowledge about qualitative and quantitative research to an independently constructed piece of work</p> <p>Respond positively to problems in unfamiliar contexts</p> <p>Identify and apply new ideas, methods and ways of thinking</p>
II	Unit – II : Human Resource Policies & Strategies Introduction, role of HR in strategic management, HR policies & Procedures, HR Programme., developing HR policies and strategies, Strategic control, Types of Strategic control, Operational Control System, Functional and grand strategies, Strategy factors.	
III	Unit – III : Human Resource Procurement & Mobility Productivity & improvement job analysis & Job design, work measurement, ergonomics. Human Resource planning-objectives, activities, manpower requirement process Recruitment & Selection Career planning & development, training methods, basic concept of performance appraisal. Promotion & Transfer.	
IV	Unit – IV : Employee Compensation Wage policy, Wage determination, Wage board, factors affecting wages & Salary, systems of payments, Job evaluation, components of wage/salary-DA, incentives, bonus, fringe benefits etc., Minimum Wages Act 1948, Workmen Compensation Act 1923, Payment of bonus Act 1965.	<p>Demonstrate competence in communicating and exchanging ideas in a group context</p> <p>Be able to advance well-reasoned and factually</p>

		<p>supported arguments in both written work and oral presentations</p> <p>Work effectively with colleagues with diverse skills, experience levels and way of thinking</p> <p>Be able to evaluate HRM related social, cultural, ethical and environmental responsibilities and issues in a global context</p>
V	Unit – V : Employee relations Discipline & Grievance handling types of trade unions, problems of trade unions	
	PAPER IV: Marketing Management (BBA-304)	
I	Unit – I : Marketing: Definition, nature, scope & importance, Marketing Management, Core concepts of marketing, selling concept, production concept, modern marketing concept, Societal marketing.	<p>Students of HRM will be able to possess the skill set required by today's HR professionals.</p> <p>Students are enabled make an appropriate staffing decision which includes recruitment and selection. They will be able to design, implement and evaluate training programmes.</p>
II	Unit – II : Segmentation: Concept, basis of segmentation, Importance in marketing; Targeting: Concept Types, Importance; Positioning: Concept, Importance, Brand positioning, Repositioning.	<p>Students are empowered to understand HR compensation subjects including employee benefits, incentives and regulations governing</p> <p>They will be able to apply the policies and practices governing the undertaking.</p>

III	<p>Unit – III: Marketing Mix:</p> <p>Product: Product Mix, New Product development, levels of product, types of product, Product life cycle, Branding and packaging.</p> <p>Distribution: Concept, importance, different types of distribution channels etc.</p>	
IV	<p>Unit – IV: Price: Meaning, objective, factors influencing pricing, methods of pricing.</p> <p>Promotion: Promotional mix, tools, objectives, media selection & management.</p>	
V	<p>Unit – V: Marketing Research: Importance, Process & Scope</p> <p>Marketing Information Systems: Meaning Importance and Scope</p> <p>Consumer Behavior: Concept, Importance and factors influencing consumer behavior</p>	
PAPER V: Company Accounts (BBA-305)		
I	<p>Unit – I : Joint Stock Companies- its types and share capital, Issue, For future and Re- issue of shares, Redemption of preference shares, Issue and Redemption of Debenture.</p>	To apply basic terms of integration in solving practical problems field of as of business.
II	<p>Unit – II: Final Accounts: Including Computation of managerial Remuneration and disposal of profit.</p>	To explain basic methods of business calculus, types and methods of interest account and their basic applications in practice.
III	<p>Unit – III: Accounting for Amalgamation of companies as per Accounting Standard 14</p> <p>Accounting for Internal reconstruction.</p>	
IV	<p>Unit – IV: Consolidated Balance Sheet of Holding Companies with one Subsidiary Only.</p>	To solve problems in the areas of business calculus, simple and compound interest account, use of compound interest account, loan and consumer credit.
V	<p>Unit – V: Liquidation of Company, Statement of Affairs and Deficiency/Surplus, Liquid for final statement of A/c Receivers Receipt and Payment A/c.</p>	To discuss effects of various types and methods

		of interest account. connect acquired knowledge and skills with practical problems in economic practice
	PAPER VI: Company Law (BBA-306)	
I	Unit – I: Corporate Personality: Kinds of Company, Promotion and Incorporation ofCompanies.	Gain basic knowledge of the provisions of the Companies Act, 2013 in relation to types of
II	Unit – II: Memorandum of Association, Articles of Association Prospectus.	companies, Memorandum of Association, Articles of Association, Administration of
III	Unit – III: Shares; Share Capital, Members, Share Capital- Transfer and Transmission, Directors-Managing Director, Whole Time Director.	Company Law CO . Comprehend the classification of Directors, key managerial personnel, Meetings of
IV	Unit – IV: Capital Management-Borrowing powers, mortgages and charges, debentures, Company Meetings-kinds quorum, voting resolutions, minutes.	Companies and the Committees connected with the affairs of a Company. Gain insight on the law related to maintenance of Books of Accounts, Auditor’s and Auditors Report. Be familiarized with the concept of winding up of a company and the modes of winding up along with the legal provisions related to Insider Trading and Whistle Blowing . Understand the varied forms of Intellectual Property and procedures with regard to registration of Patent, Design, Copyright and

		Trading. Get acquainted with the remedies available for violation of Intellectual Property Rights
V	. Unit – V: Majority Powers and minority Rights Prevention oppress andmismanagement, winding up-Kinds and Conduct.	

COURSE CONTENT FOR SEMESTER – IV

BBA Semester Four IV CONSUMER BEHAVIOUR BBA- 401				
27	Consumer Behaviour	BBA-401	<p>Unit – I:Introduction to consumer Behavior (CB)- Importance, Scope, need for studyingCB, Consumer research process.</p> <p>Unit – II:Consumer models: Economic model, Psychoanalytic model, Sociological model, Howard & Seth model, Nicosia model, Engel-kollat-Blackwell model.</p> <p>Unit – III : Individual determinates: Perceptual process, consumer learning process, consumer attitude formation, attitude measurement, meaning and nature ofpersonality, self concept.</p> <p>Unit – IV:Influences & Consumer Decision making : Family, reference group, personal, social and cultural influence on CB, Consumer Decision making process, Consumer Communication process, consumer satisfaction.</p>	<p>Demonstrate how knowledge of consumer behaviour can be applied to marketing.</p> <p>Identify and explain factors which influence consumer behaviour.</p> <p>Relate internal dynamics such as personality, perception, learning motivation and attitude to the choices consumers make.</p> <p>Use appropriate research approaches including sampling, data collection and questionnaire design for specific</p>

			<p>Unit – V: Industrial Buying Behaviour : Participants, characteristics of industrial markets, factors influencing industrial markets, stages of industrial buying process, Customer and marketing of services.</p>	<p>marketing situations.</p> <p>In a team, work effectively to prepare a research report on consumer behaviour issues within a specific context. Catalogue Description.</p>
			<p>FINANCIAL MANAGEMENT BBA- 402</p>	
28	Financial Management	BBA-402	<p>Unit – I :Introductory: Concept of Financial management, Finance functions, objectives of financial management- Profitability vs. shareholder wealth maximization. Time value of Money-Compounding & Discounting.</p> <p>Unit – II : Capital Structure Planning: capitalization Concept, basis of capitalization, consequences and remedies of over and under capitalization. Determinants of Capital structure, Capital structure theories.</p> <p>Unit – III : Management of Fixed Capital: Cost of Capital, Nature & Scope of Capital budgeting-payback NPV, IRR and ARR methods and their practical applications. Analysis of risk & uncertainty.</p> <p>Unit – IV : Management of Working Capital: Concepts of working Capital, Approaches to the financing of current Assets determining capital (with numerical problems) Management of different components of working capital.</p> <p>Unit – V :Management of Earning: Concept & relevance of Dividend decision. Dividend Models-Water, Gordons, MM Hypothesis. Dividend</p>	<p>Demonstrate the applicability of the concept of Financial Management to understand the managerial Decisions and Corporate Capital Structure .</p> <p>Apply the Leverage and EBIT EPS Analysis associate with Financial Data in the corporate .</p> <p>Analyse the complexities associated with management of cost of funds in the capital Structure.</p> <p>Demonstrate how the concepts of financial management and investment, financing and dividend policy decisions could integrate while identification and resolution of problems pertaining to LSCM Sector .</p> <p>Demonstrate how risk is assessed.</p>

			policy-determinants of dividend policy.	
			PRODUCTION & OPERATION MANAGEMENT BBA-403	
29	Production Management	BBA-403	<p>Unit – I : Nature & Scope of Production Management, Functions of Production Management, Production Systems, responsibilities of Production manager. Production Planning & Control (PPC), Objectives of PPC.</p> <p>Unit – II:Types of manufacturing Systems: Intermittent & Continuous Systems etc.,Product design & development.</p> <p>Unit – III:Plant Location & Plant layout.</p> <p>Unit – IV : Materials Management & Inventory Control : Purchasing Economic lot quality/Economic order quantity(EOR), Lead time, Rorder level. Brief of ABC analysis, Stock Keeping. Quality</p> <p>Unit – V:Control: Quality, Quality assurance, Quality Circles, TQM, JIT, StatisticalQuality Control</p>	<p>Students will learn ‘operations’ and ‘operations management’.</p> <p>Identify the roles and responsibilities of operations managers in different organisational contexts.</p> <p>Apply the ‘transformation model’ to identify the inputs, transformation processes and outputs of an organisation.</p> <p>Identify operational and administrative processes.</p> <p>Describe the boundaries of an operations system, and recognise its interfaces with other functional areas within the organisation and with its external environment.</p>
			SALES & DISTRIBUTION MANAGEMENT BBA-404	
30	Sales & Distribution Management	BBA-404	<p>Unit – I: Sales Management :</p> <ul style="list-style-type: none"> - Evolution of sales function - Objectives of sales management positions - Functions of Sales executives 	<p>Identify issues related to design and implementation of Sales Strategy.</p> <p>Apply concepts related to improving performance of Sales Team Analyze</p>

			<ul style="list-style-type: none"> - Relation with other executives <p>Unit – II: Sales Organisation and relationship: - Purpose of sales organization - Types of sales organization structures - Sales department external relations Distributive network relations.</p> <p>Unit – III:Salesmanship :</p> <ul style="list-style-type: none"> - Theories of personal selling - Types of Sales executives - Qualities of sales executives - Prospecting, pre-approach and post-approach- Organising display, showroom& exhibition <p>Unit – IV:Distribution network Management</p> <ul style="list-style-type: none"> - Types of Marketing Channels - Factors affecting the choice of channel - Types of middleman and their characteristics - Concept of physical distribution system Sales <p>Unit – V:Force Management</p> <ul style="list-style-type: none"> - Recruitment and Selection - Sales Training - Sales Compensation 	roles and responsibilities of a Sales and Marketing Manager Design and implement channel strategies.
			RESEARCH METHODOLOGY BBA-405	
31	Research Methodology	BBA-405	<p>Unit – I: Introduction - Meaning of Research ; Objectives of Research; Types</p> <p>Unit – II : The Design of Research-Research Design; Features of a Good</p>	Identify and discuss the role and importance of research in the social sciences.

			<p>design; Different Research Designs ; Measurement in Research; Data types; Sources of Error.</p> <p>Unit – III : Sampling Design- Census & Sample Surveys; Steps in Sampling Design; Types of Sample designs-Probability & Non Probability sampling.</p> <p>Unit – IV : Processing & Analysis of Data- Processing operations; problems in processing; types of analysis Hypothesis Testing- Chi-square test, Z test, t-test, f-test.</p> <p>Unit – V : Presentation- Diagrams; graphs; charts. Report writing; Layout of Research report; Types of Reports; Mechanism of writing a Research report; Precaution for writing report.</p>	<p>Identify and discuss the issues and concepts salient to the research process.</p> <p>Identify and discuss the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project.</p> <p>Identify and discuss the concepts and procedures of sampling, data collection, analysis and reporting.</p>
			OPERATION RESEARCH	
32	Operation Research	BBA-406	<p>Unit – I : Nature, Definition & characteristics of operations research, Methodology of DR, Models in OR; OR & managerial Decision making, OR techniques.</p> <p>Unit – II : Linear programming: Introduction, Advantages of Linear Programming, Applications areas of Linear Programming. LPP- problem formulation, Graphic Method, Simplex Method (including Big M method)</p> <p>Unit – III : Transportation-North West Corner Rule, matrix Minima & VAM Methods, Degenerating, MODI Method. Assignment Problems</p> <p>Unit – IV : Decision making under Uncertainty-Criteria of Maximax, maximin, Maximax Regret, laplace & Hurwinz. Decision making under Risk-Criteria of EMV & EOL, Decision Tree approach & its applications.</p>	<p>Formulate and solve problems as networks and graphs. develop linear programming (LP) models for shortest path, maximum flow, minimal spanning tree, critical path, minimum cost flow, and transshipment problems. solve the problems using special solution algorithms</p>

			<p>Unit – V : PERT & CPM-Introduction, Network Analysis, Time Estimates in Network Analysis, Critical Path Method; Programme Evaluation & Review Technique.</p>	
BBA Semester- V			MANAGERIAL ECONOMICS	BBA-501
35	Managerial Economics	BBA-501	<p>Unit – I : Nature and Scope: Nature and Scope of Managerial Economics, its relationship with other subjects. Fundamental Economic Tools- Opportunity cost concept, Intermental concept, Principle of time perspective, Discounting principle and Equimarginal principle.</p> <p>Unit – II : Demand Analysis: Concept and importance of Demand & its determinants Income & Substitution effects. Various elasticities of demand, using elasticities in managerial decisions, revenue concepts, and relevance of demandforecasting and methods of demand forecasting.</p> <p>Unit – III : Cost Concept: Various cost concepts and classification, Cost output relationship in short run & long run cost curves). Economics and diseconomies of scale, Cost control and Cost reduction, Indifferent curves.</p> <p>Unit – IV : Pricing: Pricing methods, Price and output decisions under different market structures-perfect competition, Monopoly and Monopolistic Competition,Oligopoly.</p> <p>Unit – V : Profit Management & Inflation: Profit, Functions of profit, Profit maximization, Break Even analysis. Elementary idea of Inflation.</p>	<p>To increase students understanding of economic way of thinking to business decision making problems .</p> <p>To develop students critical thinking and analytical abilities is resolving business problems by employing various tools. and techniques of managerial economics</p> <p>To make students understand the rigors of various economic models and their applications.</p>

			ENTREPRENEURSHIP & SMALL BUSINESS MANAGEMENT BBA-502	
36	Entrepreneurship & Small Business Management	BBA-502	<p>Unit – I : Name & Scope Role & Importance in Indian Economy, Theories of Entrepreneurship traits of entrepreneur, entrepreneurs Vs professional managers, problems faced by entrepreneurs.</p> <p>Unit – II: Entrepreneurial Development Entrepreneurial Development, Significance and role of environment infrastructural network, environmental analysis, E.D. programmes (EDP), problems of EDP.</p> <p>Unit – III:Transportation-North West Corner Rule, matrix Minima & VAM Methods,Degenerating, MODI Method. Assignment Problems</p> <p>Unit – IV : Project & Reports Search for business idea, transformation of idea into reality: projects and classification. Identification of projects, project design and network analysis, project appraisal plant layout.</p> <p>Unit – V: Small industry setup Types of organization-sole proprietorship, partnership,joint stock company, co-operative organization, their merits, limitations, suitability. Organisational locations, steps in starting a small industry, incentives and subsidies available, export possibilities.</p>	<p>Demonstrate an understanding of basic concepts in organizational behavior .</p> <p>Demonstrate an understanding of the intricacies of marketing planning and overall marketing.</p> <p>Demonstrate an understanding of the concepts underlying corporate financial decision making.</p> <p>Demonstrate an understanding of the role of entrepreneurship and small business in the FSM economy.</p> <p>Demonstrate basic knowledge of international business</p> <p>Demonstrate an understanding of economic development issues.</p> <p>Demonstrate an understanding of statistical methods of sampling and estimating population statistics.</p>
			INCOME-TAX BBA-503	
37	Income Tax	BBA-503	<p>Unit – I : Basic Concept: Income, Agriculture Income, Casual Income, Assessment Year. Previous Year. Gross Total Income, Total Income, Person,</p>	Build a strong foundation in accounting, management and business subjects .

		<p style="text-align: center;">Tax Evasion, Avoidance and Tax Planning.</p> <p>Unit – II: Basis of Charge: Scope of Total Income, Residence and Tax Liability, Income which does not form part of Total Income.</p> <p>Unit – III: Heads of Income: Income from Salaries, Income from House Properties.</p> <p>Unit – IV : Heads of Income: Profit and Gains of Business or Profession, Including Provisions relating to specific business, Capital Gains, Income from other sources.</p> <p>Unit – V: Aggregation of Income, Set off and Carry forward of losses, deduction from gross total Income.</p>	<p>Seek variety of career options in accounting, management and business related fields.</p> <p>Equip with skills and knowledge to excel in their future careers .</p> <p>Develop critical thinking skills in students</p>
		<p style="text-align: center;">COST AND MANAGEMENT ACCOUNTING BBA- 504</p>	<p>Describe the three fundamental purposes of cost and management accounting. As part of this learning, students will be able to appreciate the <i>use of different costs for different purposes</i>.</p> <p>Explain traditional and contemporary approaches to cost allocation.</p> <p>Describe different product costing scenarios in job-order and process environments.</p> <p>Identify relevant information for decision making purposes in order to produce financial analyses for a range of decisions such as product-mix, pricing, outsourcing and special orders.</p>

				Use standard costs to prepare budgets for planning and control purposes.
38	Cost and Management Accounting	BBA-504	<p>Unit – I : Introduction: Nature and Scope of Cost Accounting, Cost, concepts and Classification, Methods and Techniques, Installation of Costing System.</p> <p>Unit – II : Accounting for Material, Labour and Overheads.</p> <p>Unit – III : Element of Cost, Assessment of Cost-Preparation of Cost Sheet and Statement of Cost.</p> <p>Unit – IV : Management Accounting - Meaning, Nature, Scope, Functions Relationship of Management Accounting, Financial Accounting and Cost Accounting.</p> <p>Unit – V : Marginal Costing and Absorption Costing.</p>	
			INDUSTRIAL LAW BBA- 505	
39	Industrial Law	BBA-505	<p>Unit – I: Factory act 1948.</p> <p>Unit – II: Workmen compensation act 1923</p>	<p>Students should be able to elaborate the concept of Industrial Relations.</p> <p>The students should be able to illustrate the role of trade union in the</p>

			<p>Unit – III:Industrial dispute act 1947, Minimum wages act 1948</p> <p>Unit – IV:Employee state insurance act 1948.</p> <p>Unit – V:Employee provident fund act 1952 Payment of gratuity act 1972.</p>	<p>industrial setup.</p> <p>Students should able to disputes. Outline the important causes & impact of industrial Students should able to elaborate Industrial Dispute settlement procedures.</p>
			FUNDAMENTAL OF COMPUTER BBA- 506	
40	Fundamental of Computer	BBA-506	<p>Unit – I : History of computing, Characteristics of computers, Limitations of computers, Basic computer organization, Generations of computers.</p> <p>Unit – II: Input-Output Devices : Keyboard, Mouse, Light pen, touch screens, VDU, Scanners, MICR, OCR, OMR, Printers and its type, Plotters, Microfilm, Microfiche, Voice Recognition and Reponse Devices.</p> <p>Unit – III : Storage Devices : Primary and Secondary Storage devices- RAM, ROM, Cached Memory, Registers, Storage Concept, Hard disk, Floppy disk, CD-ROM, Magnetic tapes and cartridges, comparison of sequential and direct- Access devices.</p> <p>Unit – IV:Computer Software : Relationship between hardware and software, Computer languages-Machine language Assembly language, High-level languages, Compilers & interpreters, Characteristics of good language.</p> <p>Unit – V:Operating System & Internet: Definition and functions of O.S. Batch Processing, Multipurposing, Multiprogramming, time sharing, On-line process, Real time process. Introduction to window-98, Internet & its uses, terminology of internet, Browser, Search engines, E-Mail, Video conferencing.</p>	<p>Bridge the fundamental concepts of computers with the present level of knowledge of the students.</p> <p>Familiarise operating systems, programming languages, peripheral devices, networking, multimedia and internet.</p> <p>Understand binary, hexadecimal and octal number systems and their arithmetic.</p> <p>Understand how logic circuits and Boolean algebra forms as the basics of digital computer.</p> <p>Demonstrate the building up of Sequential and combinational logic from basic gates.</p>

41	BBA Semester Sixth VI		INTERNATIONAL TRADE BBA- 601	
42	International Trade	BBA-601	<p>Unit – I : Basics of international trade: Basics of international trade, international trade theories, drivers of international trade, restraining forces, recent trends in world trade.</p> <p>Unit – II:Foreign trade & economic growth: Foreign trade & economic growth, balance of trade, balance of payments, free trade, forms and restrictions.</p> <p>Unit – III:International economic institutions: International economic institutions, IMF, World Bank, WTO (in brief), Regional economic groupings NAFTA, EU, ASEAN, SAARC.</p> <p>Unit – IV : Recent trends in India’s foreign trade: Recent trends in India’s foreign trade, institutional infrastructure for export promotion in India, projects & consultancy exports.</p> <p>Unit – V:India’s Trade Policy: India’s Trade policy, export assistance, marketing plan for exports.</p>	The purpose of this course is to provide students with a thorough grounding in the theory of international trade as well as international trade policy and to demonstrate the relevance of the theory in the analysis of (a) existing patterns of international trade and what determines them, (b) the conduct of trade policy and (c) the economic implications of international trade and trade policy both for individual economies such as India and the wider intern.
			STRATEGIC MANAGEMENT & BUSINESS POLICY BBA-602	

43	Strategic Management and Business Policy	BBA-602	<p>Unit – I: Nature & importance of Business Policy, Development & Classification of Business Policy; Mechanism or Policy making.</p> <p>Unit – II : Responsibilities & tasks of Top Management: objectives of Business Characteristics, Classification, Types of objectives and their overall Hierachy, Setting of objectives, Key areas involved.</p> <p>Unit – III: Corporate Planning; Concept of long term planning, Strategic Planning, Nature, Process & Importance.</p> <p>Unit – V : Corporate Strategy: Concept, Components, Importance, and Strategy Formulation: Concept, Process & Affecting Factors. Strategy Evaluation: Process, Criteria, Environmental Analysis, Resource Analysis</p> <p>Unit – V: Concept of Synergy: Types, Evaluation of Synergy. Capability Profiles, Synergy as a Component of Strategy & its relevance</p>	<p>Students will be able to describe major theories, background work, concepts and research output in the field of strategic management.</p> <p>Students will demonstrate a clear understanding of the concepts, tools & techniques used by executives in developing and executing strategies and will appreciate its integrative and interdisciplinary nature.</p> <p>Students will be able to demonstrate effective application of concepts, tools & techniques to practical situations for diagnosing and solving organisational problems.</p> <p>Students will be able to demonstrate capability of making their own decisions in dynamic business landscape.</p> <p>Students will be able to develop their capacity to think and execute strategically.</p>
44	Vat & Service	BBA-	<p style="text-align: center;">VAT & SERVICE TAX BBA-603</p> <p>Unit – I : Legislative background, Basic concept of VAT-white paper on VAT,</p>	<p>In this subject students will know about the VAT, Importance Definition under</p>

	Tax(GST)	603	<p>Report of Empowered Committee of State Finance Ministers, constitutional provisions, liability under VAT, Importance Definition under VAT, Difference between Sales Tax System and VAT</p> <p>Unit – II : Computation(VAT Variants), Procedural aspects including registration, Rates of tax, Assessment, Input Tax Credit, Filling of Returns, Refunds, Audit, Appeals, Revision and Appearances.</p> <p>Unit – III: Appointment, jurisdiction and powers of authorities under VAT, Concept ofVAT on Services, Central Sales Tax; Goods and Service Tax.</p> <p>Unit – IV : Background, Statutory provisions, Taxable services, valuation, administrative mechanism and registration under service tax, rate and computation of service tax.</p> <p>Unit – V:Assessment, levy, collection and payment of service tax, exemptions CENVAT credit for service tax, Filing of Returns, Appeals, Revisions.</p>	<p>VAT, Difference between Sales Tax .</p> <p>System, Statutory provisions, Taxable services, valuation, administrative mechanism and registration under service tax, rate and computation of Service Tax.</p>
		MANAGEMENT INFORMATION SYSTEM BBA- 604		
45	Management Information System	BBA-604	<p>Unit – I : Management Information System(MIS): Concept & definition, Role of MIS, Process of Management, MIS-A tool for management process, Impact of MIS, MIS & computers, MIS & the user, IMS- a support to the Management.</p> <p>Unit – II: Planning & Decision making: The concept of corporate planning, Strategic planning, Type of strategic, Tools of Planning, MIS-Business Planning; Decision making concepts, Methods, tools and procedures, Organizational Decision making, MIS & Decision making concepts.</p>	<p>Relate the basic concepts and technologies used in the field of management information systems;</p> <p>Compare the processes of developing and implementing information systems.</p> <p>Outline the role of the ethical, social, and</p>

			<p>Unit – III : Information & System: Information concepts, Information: A quality product classification of the information, Methods of data & information collection, Value of information, MIS & System concept, MIS & System analysis, Computer System design.</p> <p>Unit – IV : Development of MIS: Development of long range plans of the MIS. Ascertaining the class of information, determining the information requirement, Development and implementation of the MIS, Management of quality in the MIS, organization for development of the MIS, MIS: the factors of success and failure.</p> <p>Unit – V :Decision Support System (DSS): Concept and Philosophy, DSS: Deterministic Systems, Artificial intelligence(AI) System, Knowledge based expert system(KBES), MIS & the role of DSS, Transaction Processing System(TPS), Enterprise Management System(EMS), Enterprise Resource Planning (ERP) System, Benefits of ERP, EMS & ERP</p>	<p>security issues of information systems.</p> <p>Translate the role of information systems in organizations, the strategic management processes, with the implications for the management.</p> <p>Apply the understanding of how various information systems like DBMS work together to accomplish the information objectives of an organization.</p>
			AUDITING BBA- 605	
46	Auditing	BBA-605	<p>Unit – I : Introduction: Meaning and objectives of Auditing, Types of Audit, Internal Audit, Audit Programme, Audit Notebook, Routine Checking and Test Checking.</p> <p>Unit – II: Internal Check System: Internal Control, audit Procedure: Vouching Verification of Assets and Liabilities.</p> <p>Unit – III: Audit of Limited Companies: Company Auditor- Appointment, Powers, Duties and Liabilities. Auditor’s Report and Audit Certificate.</p>	<p>Demonstrate an understanding of the nature and scope of auditing and related services.</p> <p>Students will Describe and discuss the regulatory framework of auditing and related services.</p> <p>Show understanding and explain the</p>

			<p>Unit – IV : Special Audit, Audit of Banking Companies, Audit of Insurance Companies, Audits of Educational Institutions, Audit of Cooperative Societies, Efficiency Audit, Social Audit etc.</p> <p>Unit – V : Recent trends in Auditing: Nature and Significance of Cost Audit, Tax Audit, Management Audit.</p>	<p>ethical standards of an auditor.</p> <p>Students will explain the stages of an audit and methods of gathering audit evidence.</p> <p>Students will show understanding and be able to interpret different types of audit reports.</p>
			FUNDAMENTAL OF E-COMMERCE BBA-606	
47	Fundamental of E-Commerce	BBA-606	<p>Unit – I : E-Commerce: Introduction, meaning and concept; Needs and advantages of e-commerce; Traditional commerce; Types of E-Commerce, Basic requirements of E-Commerce.</p> <p>Unit – II : Internet: Concept & evaluation, Characteristics of Internet: email, WWW. Ftp, telnet, Intranet & Extranet, Limitation of internet, Hardware & Software requirement of Internet, searches Engines.</p> <p>Unit – III : Electronic Payment Systems: E-Cash, e-cheque, credit cards, debit cards, smart cards, E-Banking, Manufacturing information systems.</p> <p>Unit – IV : EDI introduction, networking infrastructure of EDI, Functions & Components of EDI File types of EDI.</p> <p>Unit – V : Security issues of e-commerce: Firewall, E-locking, Encryption; Cyber infrastructure)</p>	<p>Analyze the impact of E-commerce on business models and strategy.</p> <p>Describe the major types of E-commerce. Explain the process that should be followed in building an E-commerce presence.</p> <p>Identify the key security threats in the E-commerce environment.</p> <p>Describe how procurement and supply chains relate to B2B E-commerce.</p>

			<p align="center">QUALIFYING PAPER : Environmental Studies BBA-008</p>	
48	<p>QUALIFYING PAPER Environmental Studies</p>	<p>BBA-008</p>	<p>Unit-1: The Multidisciplinary Nature of Environmental Studies: Definition, Scope and Importance, Need for Public Awareness.</p> <p>Unit-2: Natural Resources</p> <p>❖ Renewable and Non-renewable Resources:</p> <p align="center">Natural resources and associated problems: -</p> <p>a) Forest Resources: use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.</p> <p>b) Water Resources: use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams- benefits and problems.</p> <p>c) Mineral Resources: use and exploitation, environmental effects of extracting and using mineral resources, case studies.</p> <p>d) Food Resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.</p> <p>e) Energy Resources: Growing energy needs, renewable and nonrenewable energy sources, use of alternate energy sources, case studies</p> <p>f) Land Resources: Land as a resource; land degradation,</p>	<p>Gaining in-depth knowledge on natural processes that sustain life and govern economy.</p> <p>Predicting the consequences of human actions on the web of life, global economy and quality of human life.</p> <p>Developing critical thinking for shaping strategies (scientific, social, economic and legal) for environmental protection and conservation of biodiversity, social equity and sustainable development.</p> <p>Acquiring values and attitudes towards understanding complex environmental- economic-social challenges, and participating actively in solving current environmental problems and preventing the future ones.</p> <p>Adopting sustainability as a practice in life, society and industry.</p>

man induced landslides, soil erosion and desertification.

- ❖ Role of an individual in conservation of natural resources.
- ❖ Equitable use of resources for sustainable lifestyles

Unit-3: Ecosystems

- ❖ Concept of an ecosystem
- ❖ Structure and function of an ecosystem
- ❖ Producers, consumers and decomposers
- ❖ Energy flow in the ecosystem
- ❖ Ecological succession
- ❖ Food chains, food webs and ecological pyramids
- ❖ Introduction, types, characteristic features, structure and function of the following ecosystem: -
 - a) Forest ecosystem
 - b) Grassland ecosystem
 - c) Desert ecosystem
 - d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit-4: Biodiversity And Its Conservation

- ❖ Introduction – Definition: genetic, species and ecosystem diversity.
- ❖ Biogeographical classification of India
- ❖ Value of biodiversity: Consumptive use, productive use, social, ethical, and aesthetic and option values.
- ❖ Biodiversity at global, National and local levels.
- ❖ India as a mega-diversity nation
- ❖ Hot-spots of biodiversity.
- ❖ Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts.

- ❖ Endangered and endemic species of India
- ❖ Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

Unit-5:

Environmental

Pollution Definition:

- ❖ Causes, effects and control measures of: -
 - a) Air pollution
 - b) Water pollution
 - c) Soil pollution
 - d) Marine pollution
 - e) Noise pollution
 - f) Thermal pollution
 - g) Nuclear pollution
- ❖ Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
- ❖ Role of an individual in prevention of pollution
- ❖ Pollution case studies
- ❖ Disaster Management: Floods, earthquake, cyclone and landslides.

Unit-6: Social Issues And The Environment

- ❖ From Unsustainable to Sustainable development
- ❖ Urban problems related to energy.
- ❖ Water conservation, rain water harvesting, watershed management
- ❖ Resettlement and rehabilitation of people; its problems and concerns. Case Studies
- ❖ Environmental Ethics: Issues and possible solutions.

- ❖ Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies.
- ❖ Wasteland reclamation.
- ❖ Consumerism and waste products
- ❖ Environment Protection Act.
- ❖ Air (Prevention and Control of Pollution) Act
- ❖ Water (Prevention and Control of Pollution) Act
- ❖ Wildlife Protection Act
- ❖ Forest Conservation Act
- ❖ Issues involved in enforcement of environmental legislation
- ❖ Public awareness

Unit-7: Human Population And The Environment

- ❖ Population growth, variation among nations.
- ❖ Population explosion: Family Welfare Programme.
- ❖ Environment and human health
- ❖ Human Rights
- ❖ Value Education
- ❖ Women and Child Welfare
- ❖ Role of Information Technology in Environment and human health
- ❖ Case Studies

Unit-8: Field Work

- ❖ Visit to a local area to document environmental assets-river / forest / grassland /hill / mountain.
- ❖ Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- ❖ Study of common plants, insects, birds.

			❖ Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5lecture hours).	
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C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

SEMESTER-I

Course Code	Course Name
BCA-101	Mathematics-I
BCA-102	Programming Principle & Algorithm
BCA-103	Computer Fundamental and Office Automation
BCA-104	Principle of Management
BCA-106	Business Communication
BCA-108	Environmental Studies
BCA-105	Computer Laboratory and Practical Work of Computer Fundamental and Office Automation
BCA-107	Computer Laboratory and Practical Work of Programming Principle & Algorithm

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-101 Mathematics -I

UNIT-I

DETERMINANTS:

Definition, Minors, Cofactors, Properties of Determinants MATRICES: Definition, Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices, Adjoint, Inverse, Cramers Rule, Rank of Matrix Dependence of Vectors, Eigen Vectors of a Matrix, Caley-Hamilton Theorem (without proof).

UNIT-II

LIMITS & CONTINUITY:

Limit at a Point, Properties of Limit, Computation of Limits of Various Types of Functions, Continuity at a Point, Continuity Over an Interval, Intermediate Value Theorem, Type of Discontinuities

UNIT-III

DIFFERENTIATION:

Derivative, Derivatives of Sum, Differences, Product & Quotients, Chain Rule, Derivatives of Composite Functions, Logarithmic Differentiation, Rolle's Theorem, Mean Value Theorem, Expansion of Functions (Maclaurin's & Taylor's), Indeterminate Forms, L' Hospitals Rule, Maxima & Minima, Curve Tracing, Successive Differentiation & Liebnitz Theorem.

UNIT-IV

INTEGRATION:

Integral as Limit of Sum, Fundamental Theorem of Calculus(without proof.), Indefinite Integrals, Methods of Integration Substitution, By Parts, Partial Fractions, Reduction Formulae for Trigonometric Functions, Gamma and Beta Functions(definition).

UNIT-V

VECTOR ALGEBRA:

Definition of a vector in 2 and 3 Dimensions; Double and Triple Scalar and Vector Product and physical interpretation of area and volume.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-102 Programming Principle Algorithm

UNIT-I

Introduction to 'C' Language History, Structures of 'C' Programming, Function as building blocks.

Language Fundamentals Character set, C Tokens, Keywords, Identifiers, Variables, Constant, Data Types, Comments.

UNIT-II

Operators

Types of operators, Precedence and Associativity, Expression, Statement and types of statements

Build in Operators and function Console based I/O and related built in I/O function: printf(), scanf(), getch(), getchar(), putchar(); Concept of header files, Preprocessor directives: #include, #define.

UNIT-III

Control structures

Decision making structures: If, If-else, Nested If-else, Switch; Loop Control structures: While, Do-while, for, Nested for loop; Other statements: break, continue, goto, exit.

UNIT-IV

Introduction to problem solving

Concept: problem solving, Problem solving techniques (Trail & Error, Brain Storming, Divide & Conquer) Steps in problem solving (Define Problem, Analyze Problem, Explore Solution) Algorithms and Flowcharts (Definitions, Symbols), Characteristics of an algorithm Conditionals in pseudo-code, Loops in pseudo code Time complexity: Big-Oh notation, efficiency Simple Examples: Algorithms and flowcharts (Real Life Examples)

UNIT-V

Simple Arithmetic Problems

Addition / Multiplication of integers, Determining if a number is +ve / -ve / even / odd, Maximum of 2 numbers, 3 numbers, Sum of first n numbers, given n numbers, Integer division, Digit reversing, Table generation for n, a^b , Factorial, sine series, cosine series, ${}^n C_r$, Pascal Triangle, Prime number, Factors of a number, Other problems such as Perfect number, GCD numbers etc (Write algorithms and draw flowchart), Swapping

UNIT-VI

Functions

Basic types of function, Declaration and definition, Function call, Types of function, Parameter passing, Call by value, Call by reference, Scope of variable, Storage classes, Recursion.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-103 Computer Fundamental & Office Automation

UNIT-I

Introduction to Computers

Introduction, Characteristics of Computers, Block diagram of computer. Types of computers and features, Mini Computers, Micro Computers, Mainframe Computers, Super Computers. Types of Programming Languages (Machine Languages, Assembly Languages, High Level Languages). Data Organization, Drives, Files, Directories. Types of Memory (Primary And Secondary) RAM, ROM, PROM, EPROM.

Secondary Storage Devices (FD, CD, HD, Pen drive)

I/O Devices (Scanners, Plotters, LCD, Plasma Display)

Number Systems

Introduction to Binary, Octal, Hexadecimal system Conversion, Simple Addition, Subtraction, Multiplication

UNIT-II

Algorithm and Flowcharts

Algorithm: Definition, Characteristics, Advantages and disadvantages, Examples, Flowchart: Definition, Define symbols of flowchart, Advantages and disadvantages, Examples

UNIT-III

Operating System and Services in O.S.

Dos – History, Files and Directories, Internal and External Commands, Batch Files, Types of O.S.

UNIT-IV

Windows Operating Environment

Features of MS – Windows, Control Panel, Taskbar, Desktop, Windows Application, Icons, Windows Accessories, Notepad, Paintbrush.

UNIT-V

Editors and Word Processors

Basic Concepts, Examples: MS-Word, Introduction to desktop publishing.

UNIT-VI

Spreadsheets and Database packages

Purpose, usage, command, MS-Excel, Creation of files in MS-Access, Switching between application, MS-PowerPoint.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-104 Principle of Management

UNIT-I

Nature of Management:

Meaning, Definition, it's nature purpose, importance & Functions, Management as Art, Science & Profession- Management as social System Concepts of management-Administration-Organization, Management Skills, Levels of Management.

UNIT-II

Evolution of Management Thought:

Contribution of F.W.Taylor, Henri Fayol, Elton Mayo, Chester Barhard & Peter Drucker to the management thought. Business Ethics & Social Responsibility: Concept, Shift to Ethics, Tools of Ethics.

UNIT-III

Functions of Management: Part-I

Planning – Meaning- Need & Importance, types, Process of Planning, Barriers to Effective

Planning, levels – advantages & limitations. Forecasting- Need & Techniques

Decision making-Types - Process of rational decision-making & techniques of decision-making

Organizing – Elements of organizing & processes: Types of organizations, Delegation of authority – Need, difficulties Delegation – Decentralization

Staffing – Meaning & Importance, Direction – Nature – Principles, Communication – Types & Importance

UNIT-IV

Functions of Management: Part-II

Motivation – Importance – theories

Leadership – Meaning –styles, qualities & function of leader Controlling - Need, Nature, importance, Process & Techniques, Total Quality Management Coordination – Need – Importance

UNIT – V

Management of Change: Models for Change, Force for Change, Need for Change, Alternative Change Techniques, New Trends in Organization Change, Stress Management.

UNIT-VI

Strategic Management

Definition, Classes of Decisions, Levels of Decision, Strategy, Role of different Strategist, Relevance of Strategic Management and its Benefits, Strategic Management in India

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-106 Business Communication

UNIT-I

Means of Communication:

Meaning and Definition – Process – Functions – Objectives – Importance – Essentials of good communication – Communication barriers, 7C's of Communication

UNIT-II

Types of Communication:

Oral Communication:

Meaning, nature and scope – Principle of effective oral communication – Techniques of effective speech – Media of oral communication (Face -to-face conversation – Teleconferences – Press Conference – Demonstration – Radio Recording – Dictaphone – Meetings – Rumour – Demonstration and Dramatisation – Public address system – Grapevine – Group Discussion – Oral report – Closed circuit TV). The art of listening – Principles of good listening.

UNIT-III

Written Communication

Purpose of writing, Clarity in Writing, Principle of Effective writing, Writing Techniques, Electronic Writing Process.

UNIT-IV

Business Letters & Reports:

Need and functions of business letters – Planning & layout of business letter – Kinds of business letters – Essentials of effective correspondence, Purpose, Kind and Objective of Reports, Writing Reports.

UNIT-V

Drafting of business letters:

Enquiries and replies – Placing and fulfilling orders – Complaints and follow-up Sales letters – Circular letters Application for employment and resume

UNIT-VI

Information Technology for Communication:

Word Processor – Telex – Facsimile(Fax) – E-mail – Voice mail –Internet – Multimedia – Teleconferencing – Mobile Phone Conversation – Video Conferencing –SMS – Telephone Answering Machine – Advantages and limitations of these types.

Topics Prescribed for workshop/skill lab

Group Discussion, Mock Interview, Decision Making in a Group

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

SEMESTER -II

Course Code	Course Name
BCA-201	Mathematics-II
BCA-202	C-Programming
BCA-203	Organization Behavior
BCA-204	Digital Electronics and Computer Organisation
BCA-205	Financial Accounting and Management
BCA-206	Computer Laboratory and Practical Work of C

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-201 Mathematics II

UNIT-I

SETS

Sets, Subsets, Equal Sets Universal Sets, Finite and Infinite Sets, Operation on Sets, Union, Intersection and Complements of Sets, Cartesian Product, Cardinality of Set, Simple Applications.

UNIT-II

RELATIONS AND FUNCTIONS

Properties of Relations, Equivalence Relation, Partial Order Relation Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions, Introduction of Trigonometric, Logarithmic and Exponential Functions.

UNIT-III

PARTIAL ORDER RELATIONS AND LATTICES

Partial Order Sets, Representation of POSETS using Hasse diagram, Chains, Maximal and Minimal Point, Glb, lub, Lattices & Algebraic Systems, Principle of Duality, Basic Properties, Sublattices, Distributed & Complemented Lattices.

UNIT-IV

FUNCTIONS OF SEVERAL VARIABLES

Partial Differentiation, Change of Variables, Chain Rule, Extrema of Functions of 2 Variables, Euler's Theorem.

UNIT-V

3D COORDINATE GEOMETRY

3D Coordinate Geometry: Coordinates in Space, Direction Cosines, Angle Between Two Lines, Projection of Join of Two Points on a Plane, Equations of Plane, Straight Lines, Conditions for a line to lie on a plane, Conditions for Two Lines to be Coplanar, Shortest Distance Between Two Lines, Equations of Sphere, Tangent plane at a point on the sphere.

UNIT-VI

MULTIPLE INTEGRATION

Double Integral in Cartesian and Polar Coordinates to find Area, Change of Order of Integration, Triple Integral to Find Volume of Simple Shapes in Cartesian Coordinates

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Bachelors of Computer Application
Semester - wise

<u>Course Code</u>	<u>Course Name</u>
<u>BCA-202</u>	<u>C Programming</u>

UNIT-I

Arrays

Definition, declaration and initialization of one dimensional array; Accessing array elements; Displaying array elements; Sorting arrays; Arrays and function; Two-

Dimensional array: Declaration and Initialization, Accessing and Displaying, Memory representation of array [Row Major, Column Major]; Multidimensional array

UNIT-II

Pointers

Definition and declaration, Initialization; Indirection operator, address of operator; pointer arithmetic; dynamic memory allocation; arrays and pointers; function and pointers

UNIT-III

Strings

Definition, declaration and initialization of strings; standard library function: strlen(), strcpy(), strcat(), strcmp(); Implementation without using standard library functions

UNIT-IV

Structures

Definition and declaration; Variables initialization; Accessing fields and structure operations; Nested structures; Union: Definition and declaration; Differentiate between Union and structure

UNIT-V

Introduction C Preprocessor

Definition of Preprocessor; Macro substitution directives; File inclusion directives; Conditional compilation

Bitwise Operators

Bitwise operators; Shift operators; Masks; Bit field

UNIT-VI

File handling

Definition of Files, Opening modes of files; Standard function: fopen(), fclose(), feof(), fseek(), fwind(); Using text files: fgetc(), fputc(), fscanf()

Command line arguments

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

BCA-203 Organization Behavior

Course Code Course Name

UNIT-I

Fundamentals of Organizational Behaviour

Nature, Scope, Definition and Goals of Organizational Behaviour; Fundamental Concepts of Organizational Behaviour; Models of Organizational Behaviour; Emerging aspects of Organizational Behaviour: Meaning Cultural Diversity, Managing the Perception Process

UNIT-II

Perception, Attitude, Values and Motivation

Concept, Nature, Process, Importance, Management Behavioural aspect of Perception. Effects of employee attitudes; Personal and Organizational Values; Job Satisfaction; Nature and Importance of Motivation; Achievement Motive; Theories of Work Motivation: Maslow's Need Hierarchy Theory McGregers's Theory 'X' and Theory 'Y'

UNIT-III

Personality

Definition of Personality, Determinants of Personality; Theories of Personality- Trait and Type Theories, The Big Five Traits, Mytes-Briggs Indicator; Locus of Control, SType A and Type B Assessment of Personality

UNIT-IV

Work Stress

Meaning and definition of Stress, Symptoms of Stress; Sources of Stress: Individual Level, Group Level, Organizational Level; Stressors, Extra Organizational Stressors; Effect of Stress – Burnouts; Stress Management – Individual Strategies, Organizational Strategies; Employee Counselling

UNIT-V

Group Behaviour and Leadership

Nature of Group, Types of Groups; Nature and Characteristics of team; Team Building, Effective Teamwork; Nature of Leadership, Leadership Styles; Traits of Effective Leaders

UNIT-VI

Conflict in Organizations

Nature of Conflict, Process of Conflict; Levels of Conflict – Intrapersonal, Interpersonal; Sources of Conflict; Effect of Conflict; Conflict Resolution, Meaning and types of Grievances & Process of Grievances Handling.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-204 Digital electronics and Computer Organisation

UNIT-I

Logic gates and circuit

Gates (OR, AND, NOR, NAND, XOR & XNOR); Demorgan's laws; Boolean laws, Circuit designing techniques (SOP, POS, K-Map).

UNIT-II

Combinational Building Blocks

Multiplexes; Decoder; Encoder; Adder and Subtractor.

UNIT-III

Memories

ROMs, PROMs, EPROMs, RAMs, Hard Disk, Floppy Disk and CD-ROM.

UNIT-IV

Sequential Building Blocks

Flip-Flop (RS, D, JK, Master-slave & T flip-flops); Registers & Shift registers; Counters; Synchronous and Asynchronous Designing method.

UNIT-V

Memory Organization: Basic cell of static and dynamic RAM; Building large memories using chips; Associative memory; Cache memory organization and Virtual memory organization

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-205 Financial Accounting & Management

UNIT-I

Overview - Meaning and Nature of Financial Accounting, Scope of Financial Accounting, Financial Accounting & Management Accounting, Accounting concepts & convention, Accounting standards in India.

UNIT-II

Basics of accounting – Capital & Revenue items, Application of Computer in Accounting Double Entry System, Introduction to Journal, Ledger and Procedure for Recording and Posting, Introduction to Trail Balance, Preparation of Final Account, Profit & Loss Account and related concepts, Balance Sheet and related concept.

UNIT-III

Financial statement analysis: Ratio analysis, Funds flow analysis, concepts, uses, Preparation of funds flow statement, simple problem, Cash flow analysis, Concepts, uses, preparation of cash flow statement, simple problem, Break – even analysis.

UNIT-IV

Definition nature and Objective of Financial Management, Long Term Sources of Finance, Introductory idea about capitalization, Capital Structure, Concept of Cost of Capital, introduction, importance, explicit & implicit cost, Measurement of cost of capital, cost of debt.

UNIT-V

Concept & Components of working Capital. Factors Influencing the Composition of working Capital, Objectives of working Capital Management – Liquidity Vs. Profitability and working capital policies. Theory of working capital: Nature and concepts

UNIT-VI

Cash Management, Inventory Management and Receivables Management.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

SEMESTER -III

Course Code	Course Name
BCA-301	Object Oriented Programming Using C++
BCA-302	Data Structure Using C & C++
BCA-303	Computer Architecture & Assembly Language
BCA-304	Business Economics
BCA-305	Elements of Statistics
BCA-306	Computer Laboratory and Practical Work of OOPS
BCA-307	Computer Laboratory and Practical Work of DS

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-301 Object Oriented programming language

UNIT-I

Introduction

Introducing Object – Oriented Approach, Relating to other paradigms {Functional, Data decomposition}.

Basic terms and ideas

Abstraction, Encapsulation, Inheritance, Polymorphism, Review of C, Difference between C and C++ - cin, cout, new, delete, operators.

UNIT-II

Classes and Objects

Encapsulation, information hiding, abstract data types, Object & classes, attributes, methods, C++ class declaration, State identity and behaviour of an object, Constructors and destructors, instantiation of objects, Default parameter value, object types, C++ garbage collection, dynamic memory allocation, Metaclass / abstract classes.

UNIT-III

Inheritance and Polymorphism

Inheritance, Class hierarchy, derivation – public, private & protected, Aggregation, composition vs classification hierarchies, Polymorphism, Categorization of polymorphism techniques, Method polymorphism, Polymorphism by parameter, Operator overloading, Parameteric Polymorphism

UNIT-IV

Generic function

Template function, function name overloading, Overriding inheritance methods, Run time polymorphism, Multiple Inheritance.

UNIT-V

Files and Exception Handling

Streams and files, Namespaces, Exception handling, Generic Classes

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-302 Data Structure Using C & C++

UNIT-I

Introduction to Data Structure and its Characteristics Array

Representation of single and multidimensional arrays; Sparse arrays – lower and upper triangular matrices and Tridiagonal matrices with Vector Representation also.

UNIT-II

Stacks and Queues

Introduction and primitive operations on stack; Stack application; Infix, postfix, prefix expressions; Evaluation of postfix expression; Conversion between prefix, infix and postfix, introduction and primitive operation on queues, D- queues and priority queues.

UNIT-III

Lists

Introduction to linked lists; Sequential and linked lists, operations such as traversal, insertion, deletion searching, Two way lists and Use of headers

UNIT-IV

Trees

Introduction and terminology; Traversal of binary trees; Recursive algorithms for tree operations such as traversal, insertion, deletion; Binary Search Tree

UNIT-V

B-Trees

Introduction, The invention of B-Tree; Statement of the problem; Indexing with binary search trees; a better approach to tree indexes; B-Trees; working up from the bottom; Example for creating a B-Tree

UNIT-VI

Sorting Techniques; Insertion sort, selection sort, merge sort, heap sort, searching Techniques: linear search, binary search and hashing

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-303 Computer Architecture & Assembly Language

UNIT-I

Basic computer organization and design, Instructions and instruction codes, Timing and control/ instruction cycle, Register/ Types of register/ general purpose & special purpose registers/ index registers, Register transfer and micro operations/ register transfer instructions, Memory and memory function, Bus/ Data transfer instructions, Arithmetic logic micro-operations/ shift micro-operations, Input/ Output and interrupts, Memory reference instructions, Memory interfacing memory/ Cache memory.

UNIT-II

Central Processing Unit

General Register Organization/ stacks organizations instruction formats, addressing modes, Data transfer and manipulation. Program control reduced computer, pipeline/ RISC/ CISC pipeline vector processing/ array processing.

Arithmetic Algorithms: Integer multiplication using shift and add, Booth's algorithm, Integer division, Floating-point representations.

UNIT-III

Computer Arithmetic

Addition, subtraction and multiplication algorithms, divisor algorithms. Floating point, arithmetic operations, decimal arithmetic operations, decimal arithmetic operations.

UNIT-IV

Input – Output Organization

Peripheral devices, Input/output interface, ALU Asynchronous Data transfer, mode of transfer, priority interrupts, Direct memory Address (DMA), Input/ Output processor (IOP), serial communication.

UNIT-V

Evaluation of Microprocessor

Overview of Intel 8085 to Intel Pentium processors Basic microprocessors, architecture and interface, internal architecture, external architecture memory and input/ output interface.

UNIT-VI

Assembly language, Assembler, Assembly level instructions, macro, use of macros in I/C instructions, program loops, programming arithmetic and logic subroutines, Input-Output programming.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-304 Business Economics

UNIT-I

The Scope and Method of Economics, the Economic Problem: Scarcity & Choice, The Price Mechanism, Demand & Supply Equilibrium: The Concept of Elasticity and it's Applications.

The Production Process: output decisions – Revenues Costs and Profit Maximisation

Laws of returns & Returns to Scale: Economics and Diseconomies of scale.

UNIT-II

Market Structure: Equilibrium of a firm and Price, Output Determination under Perfect Competition Monopoly, Monoplastic Competition & Oligopoly

UNIT-III

Macro Economic Concerns

Inflation, Unemployment, Trade-Cycles, Circular Flow upto Four Sector Economy, Government in the Macro Economy: Fiscal Policy, Monetary Policy, Measuring national Income and Output

UNIT-IV

The World Economy – WTO, Globalisation, MNC's, Outsourcing, Foreign Capital in India, Trips, Groups of Twenty (G-20), Issues of dumping, Export-Import Policy 2004-2009

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-305 Elements of Statistics

UNIT-I

Population, Sample and Data Condensation

Definition and scope of statistics, concept of population and sample with Illustration, Raw data, attributes and variables, classification, frequency distribution, Cumulative frequency distribution.

UNIT-II

Measures of Central Tendency

Concept of central Tendency, requirements of a good measures of central tendency, Arithmetic mean, Median, Mode, Harmonic Mean, Geometric mean for grouped and ungrouped data.

UNIT-III

Measures of Dispersion:

Concept of dispersion, Absolute and relative measure of dispersion, range variance, Standard deviation, Coefficient of variation.

UNIT-IV

Permutations and Combinations

Permutations of 'n' dissimilar objects taken 'r' at a time (with or without repetitions). ${}^n P_r = n!/(n-r)!$ (without proof). Combinations of 'r' objects taken from 'n' objects. ${}^n C_r = n!/(r!(n-r)!)$ (without proof) . Simple examples, Applications.

UNIT-V

Sample space, Events and Probability

Experiments and random experiments, Ideas of deterministic and non-deterministic experiments; Definition of sample space, discrete sample space, events; Types of events, Union and intersections of two or more events, mutually exclusive events, Complementary event, Exhaustive event; Simple examples.

Classical definition of probability, Addition theorem of probability without Proof (upto three events are expected). Definition of conditional probability Definition of independence of two events, simple numerical problems.

UNIT-VI

Statistical Quality Control

Introduction, control limits, specification limits, tolerance limits, process and product control; Control charts for X and R; Control charts for number of defective {n-p chart} ,control charts for number of defects {c - chart}

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

SEMESTER -IV

Course Code	Course Name
BCA-401	Computer Graphics & Multimedia Application
BCA-402	Operating System
BCA-403	Software Engineering
BCA-404	Optimization Techniques
BCA-405	Practical Based on Subject Code -401.
BCA-406	Mathematics-III

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code **Course Name**

BCA-401 **Computer Graphics & Multimedia Application**

UNIT-I

Introduction: The Advantages of Interactive Graphics, Representative Uses of Computer Graphics, Classification of Application Development of Hardware and software for computer Graphics, Conceptual Framework for Interactive Graphics, Overview, Scan: Converting Lines, Scan Converting Circles, Scan Converting Ellipses.

UNIT-II

Hardcopy Technologies, Display Technologies, Raster-Scan Display System, Video Controller, Random-Scan Display processor, Input Devices for Operator Interaction, Image Scanners, Working exposure on graphics tools like Dream Weaver, 3D Effects etc,

Clipping

Southland- Cohen Algorithm, Cyrus-Beck Algorithm, Midpoint Subdivision Algorithm

UNIT-III

Geometrical Transformation

2D Transformation, Homogeneous Coordinates and Matrix Representation of 2D Transformations, composition of 2D Transformations, the Window-to-Viewport Transformations, Introduction to 3D Transformations Matrix.

UNIT-IV

Representing Curves & Surfaces

Polygon meshes parametric, Cubic Curves, Quadric Surface;

Solid Modeling

Representing Solids, Regularized Boolean Set Operation primitive Instancing Sweep Representations, Boundary Representations, Spatial Partitioning Representations, Constructive Solid Geometry Comparison of Representations.

UNIT-V

Introductory Concepts: Multimedia Definition, CD-ROM and the multimedia highway, Computer Animation (Design, types of animation, using different functions) UNIT-VI

Uses of Multimedia, Introduction to making multimedia – The stage of Project, hardware & software requirements to make good multimedia skills and Training opportunities in Multimedia Motivation for Multimedia usage

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code **Course Name**
BCA-402 **Operating System**

UNIT-I

Introduction, What is an operating system, Simple Batch Systems, Multi-programmed Batch systems, Time- Sharing Systems, Personal – Computer Systems, Parallel systems, Distributed systems, Real- Time Systems.

Memory Management: Background, Logical versus physical Address space, swapping, Contiguous allocation, Paging, Segmentation

Virtual Memory: Demand Paging, Page Replacement, Page- replacement Algorithms, Performance of Demand Paging, Allocation of Frames, Thrashing, Other Considerations

UNIT-II

Processes: Process Concept, Process Scheduling, Operation on Processes

CPU Scheduling: Basic Concepts, Scheduling Criteria, Scheduling Algorithms, Multiple – Processor Scheduling.

Process Synchronization: Background, The Critical – Section Problem, Synchronization Hardware, Semaphores, Classical Problems of Synchronization

UNIT-III

Deadlocks: System Model, Deadlock Characterization, Methods for Handling Deadlocks, Deadlock prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock

UNIT-IV

Device Management: Techniques for Device Management, Dedicated Devices, Shared Devices, Virtual Devices; Input or Output Devices, Storage Devices, Buffering, Secondary Storage Structure: Disk Structure, Disk Scheduling, Disk Management, Swap- Space Management, Disk Reliability

UNIT-V

Information Management: Introduction, A Simple File system, General Model of a File System, Symbolic File System, Basic File System, Access Control Verification, Logical File System, Physical File system File – System Interface; File Concept, Access Methods, Directory Structure, Protection, Consistency Semantics File – System Implementation: File – System Structure, Allocation Methods, Free- Space Management

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-403 Software Engineering

UNIT-I

Software Engineering: Definition and paradigms, A generic view of software engineering.

UNIT-II

Requirements Analysis: Statement of system scope, isolation of top level processes and entities and their allocation to physical elements, refinement and review.

Analyzing a problem, creating a software specification document, review for correctness, consistency, and completeness.

UNIT-III

Designing Software Solutions: Refining the software Specification; Application of fundamental design concept for data, architectural and procedural designs using software blue print methodology and object oriented design paradigm; Creating design document: Review of conformance to software requirements and quality.

UNIT-IV

Software Implementation: Relationship between design and implementation, Implementation issues and programming support environment, Coding the procedural design, Good coding style and review of correctness and readability.

UNIT-V

Software Maintenance: Maintenance as part of software evaluation, reasons for maintenance, types of maintenance (Perceptive, adoptive, corrective), designing for maintainability, techniques for maintenance.

UNIT-VI

Comprehensive examples using available software platforms/case tools, Configuration Management.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name
BCA-404 Optimization Techniques

UNIT-I

Linear programming

Central Problem of linear Programming various definitions included Statements of basic theorem and also their properties, simplex methods, primal and dual simplex method, transport problem, tic-tac problem, and its solution. Assignment problem and its solution. Graphical Method Formulation, Linear Programming Problem.

UNIT-II

Queuing Theory

Characteristics of queuing system, Classification of Queuing Model Single Channel Queuing Theory, Generalization of steady state M/M/1 queuing models(Model-I, Model-II).

UNIT-III

Replacement Theory

Replacement of item that deteriorates replacement of items that fail. Group replacement and individual replacement.

UNIT-IV

Inventory Theory

Cost involved in inventory problem- single item deterministic model economics long size model without shortage and with shorter having production rate infinite and finite.

UNIT-V

Job Sequencing

Introduction, solution of sequencing problem Johnson s algorithm for n jobs through 2 machines

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-405 Mathematics –III

UNIT-I

COMPLEX VARIABLES: Complex Number System, Algebra of Complex Numbers, Polar Form, Powers and Roots, Functions of Complex Variables, Elementary Functions, Inverse Trigonometric Function.

UNIT-II

SEQUENCE, SERIES AND CONVERGENCE: Sequence, Finite and Infinite Sequences, Monotonic Sequence, Bounded Sequence, Limit of a Sequence, Convergence of a Sequence, Series, Partial Sums, Convergent Series, Theorems on Convergence of Series (statement, alternating series, conditional convergent), Leibnitz Test, Limit Comparison Test, Ratio Test, Cauchy's Root Test, Convergence of Binomial and Logarithmic Series, Raabe's Test, Logarithmic Test, Cauchy's Integral Test (without proof)

UNIT-III

VECTOR CALCULUS: Differentiation of Vectors, Scalar and Vector Fields, Gradient, Directional Derivatives, Divergence and Curl and their Physical Meaning.

UNIT-IV

FOURIER SERIES: Periodic Functions, Fourier series, Fourier Series of Even and Odd Functions, Half Range Series.

UNIT-V

ORDINARY DIFFERENTIAL EQUATIONS OF FIRST ORDER: Variable - Separable Method, Homogeneous Differential Equations, Exact Differential Equations, Linear Differential Equations, Bernoulli's Differential Equations, Differential Equations of First Order and First Degree by Integrating Factor.

UNIT-VI

ORDINARY DIFFERENTIAL EQUATIONS OF SECOND ORDER: Homogenous Differential Equations with Constant Coefficients, Cases of Complex Roots and Repeated Roots, Differential Operator, Solutions by Methods of Direct Formulae for Particular Integrals, Solution by Undetermined Coefficients, Cauchy Differential Equations, (only Real and Distinct Roots) Operator Method for Finding Particular Integrals, (Direct Formulae).

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

SEMESTER -V

Course Code	Course Name
BCA-501	Introduction to DBMS
BCA-502	Java Programming and Dynamic Webpage Design
BCA-503	Computer Network
BCA-504	Numerical Methods
BCA-508	Minor Project
BCA-507	Viva-Voice on Summer Training
BCA-505	Computer Laboratory and Practical Work of DBMS
BCA-506	Computer Laboratory and Practical Work of Java Programming & Dynamic Webpage Design

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

<u>Course Code</u>	<u>Course Name</u>
<u>BCA-501</u>	<u>Introduction to DBMS</u>

UNIT-I

Introduction: Characteristics of database approach, data models, DBMS architecture and data independence.

UNIT-II

E-R Modeling: Entity types, Entity set, attribute and key, relationships, relation types, roles and structural constraints, weak entities, enhanced E-R and object modeling, Sub classes; Super classes, inheritance, specialization and generalization.

UNIT-III

File Organization: Indexed sequential access files; implementation using B & B++ trees, hashing, hashing functions, collision resolution, extendible hashing, dynamic hashing approach implementation and performance.

UNIT-IV

Relational Data Model: Relational model concepts, relational constraints, relational algebra
SQL: SQL queries, programming using SQL.

UNIT-V

EER and ER to relational mapping: Data base design using EER to relational language.

UNIT-VI

Data Normalization: Functional Dependencies, Normal form up to 3rd normal form.

Concurrency Control: Transaction processing, locking techniques and associated, database recovery, security and authorization. Recovery Techniques, Database Security

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code **Course Name**

BCA- 502 **Java Programming and Dynamic Webpage Design**

UNIT-I

Java Programming: Data types, control structured, arrays, strings, and vector, classes (inheritance, package, exception handling) multithreaded programming.

UNIT-II

Java applets, AWT controls (Button, Labels, Combo box, list and other Listeners, menu bar) layout manager, string handling (only main functions)

UNIT-III

Networking (datagram socket and TCP/IP based server socket) event handling,
JDBC:

Introduction, Drivers, Establishing Connection, Connection Pooling.

UNIT-IV

HTML: use of commenting, headers, text styling, images, formatting text with , special characters, horizontal rules, line breaks, table, forms, image maps, <META> tags, <FRAMESET> tags, file formats including image formats.

UNIT-V

Java Servlets: Introduction, HTTP Servlet Basics, The Servlet Lifecycle, Retrieving Information, Sending HTML Information, Session Tracking, Database Connectivity

UNIT-VI

Java Server Pages: Introducing Java Server Pages, JSP Overview, Setting Up the JSP Environment, Generating Dynamic Content, Using Custom Tag Libraries and the JSP Standard Tag Library, Processing Input and Output

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

<u>Course Code</u>	<u>Course Name</u>
<u>BCA-503</u>	<u>Computer Network</u>

UNIT-I

Basic Concepts: Components of data communication, distributed processing, standards and organizations. Line configuration, topology, Transmission mode, and categories of networks.
OSI and TCP/IP Models: Layers and their functions, comparison of models.

Digital Transmission: Interfaces and Modems: DTE-DCE Interface, Modems, Cable modems.

UNIT-II

Transmission Media: Guided and unguided, Attenuation, distortion, noise, throughput, propagation speed and time, wavelength, Shannon capacity, comparison of media

UNIT-III

Telephony: Multiplexing, error detection and correction: Many to one, One to many, WDM, TDM, FDM, Circuit switching, packet switching and message switching.

Data link control protocols: Line discipline, flow control, error control, synchronous and asynchronous protocols, character and bit oriented protocols, Link access procedures.

Point to point controls: Transmission states, PPP layers, LCP, Authentication, NCP. **ISDN:** Services, Historical outline, subscriber's access, ISDN Layers and broadcast ISDN. **UNIT-IV**

Devices: Repeaters, bridges, gateways, routers, The Network Layer; Design issues, Routing algorithms, Congestion control Algorithms, Quality of service, Internetworking, Network-Layer in the internet.

UNIT-V

Transport and upper layers in OSI Model: Transport layer functions, connection management, functions of session layers, presentation layer and application layer.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name
BCA-504 Numerical Methods

UNIT-I

Roots of Equations: Bisections Method, False Position Method, Newton's Raphson Method, Rate of convergence of Newton's method.

UNIT-II

Interpolation and Extrapolation : Finite Differences, The operator E, Newton's Forward and Backward Differences, Newton's dividend differences formulae, Lagrange's Interpolation formula for unequal Intervals, Gauss's Interpolation formula, Starling formula, Bessel's formula, Laplace-Everett formula.

UNIT-III

Numerical Differentiation Numerical Integration : Introduction, direct methods, maxima and minima of a tabulated function, General Quadratic formula, Trapezoidal rule, Simpson's One third rule, Simpson's three- eight rule.

UNIT-IV

Solution of Linear Equation: Gauss's Elimination method and Gauss's Siedel iterative method.

UNIT-V

Solution of Differential Equations: Euler's method, Picard's method, Fourth-order Ranga – Kutta method.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise
SEMESTER -VI

Course Code	Course Name
BCA-601	Computer Network Security
BCA-602	Information System: Analysis Design & Implementation
BCA-603	E-Commerce
BCA-604	Knowledge Management
BCA-605	Major Project
BCA-606	Presentation/Seminar based on Major Project

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-601 Computer Network Security

UNIT-I

Introduction: Attack, Services and Mechanism, Model for Internetwork Security.

Cryptography: Notion of Plain Text, Encryption, Key, Cipher Text, Decryption and cryptanalysis; Public Key Encryption, digital Signatures and Authentication.

UNIT-II

Network Security:

Authentication Application: Kerberos, X.509, Directory Authentication Service, Pretty Good Privacy, S/Mime.

UNIT-III

IP security Architecture: Overview, Authentication header, Encapsulating Security Pay Load combining Security Associations, Key Management.

UNIT-IV

Web Security: Requirement, Secure Socket Layer, Transport Layer Security, and Secure Electronic Transactions.

UNIT-V

Network Management Security: Overview of SNMP Architecture-SMMPV11 Communication Facility, SNMPV3.

UNIT-VI

System Security: Intruders, Viruses and Related Threats, Firewall Design Principles. Comprehensive examples using available software platforms/case tools, Configuration Management.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-602 Information System Analysis Design and Implementation

UNIT-I

Overview of System Analysis and Design: Systems Development Life Cycle; concept and Models: requirements determination, logical design, physical design, test planning, implementation, planning and performance evaluation, communication, interviewing, presentation skills; group dynamics; risk and feasibility analysis; group based approaches, JAD, structures walkthroughs, and design and code reviews; prototyping; database design software quality metrics; application categories software package evaluation and acquisition.

UNIT-II

Information Requirement Analysis: Process modeling with physical logical data flow diagrams, data modeling with logical entity relationship diagrams.

UNIT-III

Developing a Proposal: Feasibility study and cost estimation.

System Design: Design of input and control, design of output and control, file design/database design, process, user interface design, prototyping; software constructors; documentation.

UNIT-IV

Application Development Methodologies and CASE tools: Information engineering structured system analysis and design, and object oriented methodologies for application development data modeling, process modeling, user interface design, and prototyping, use of computer aided software engineering (CASE) tools in the analysis design and implementation of information systems.

UNIT-V

Design and Implementation on OO Platform: Object oriented analysis and design through object modeling technique, object modeling, dynamic modeling and functional object oriented design and object oriented programming systems for implementation, object oriented data bases.

UNIT-VI

Managerial issues in Software Projects: Introduction to software markets; planning of software projects, size and cost estimates; project scheduling; measurement of software quality and productivity, ISO and capability maturity models for organizational growth.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-603 E-Commerce

UNIT-I

Introduction to E-Commerce: The Scope of Electronic Commerce, Definition of Electronic Commerce, Electronic E-commerce and the Trade Cycle, Electronic Markets, Electronic Data Interchange, Internet Commerce, E-Commerce in Perspective.

Business Strategy in an Electronic Age: Supply Chains, Porter's Value Chain Model, Inter Organizational Value Chains, Competitive Strategy, Porter's Model, First Mover Advantage Sustainable Competitive Advantage, Competitive Advantage using E -Commerce, Business Strategy, Introduction to Business Strategy, Strategic Implications of IT, Technology, Business Environment, Business Capability, Exiting Business Strategy, Strategy Formulation & Implementation Planning, E-Commerce Implementation, E-Commerce Evaluation.

UNIT-II

Business-to-Business Electronic Commerce: Characteristics of B2B EC, Models of B2B Ec, Procurement Management Using the Buyer's Internal Marketplace, Just in Time Delivery, Other B2B Models, Auctions and Services from Traditional to Internet Based EDI, Intergration with Back-end Information System, The Role of Software Agents for B2B EC, Electronic marketing in B2B, Solutions of B2B EC, Managerial Issues, Electronic Data Interchange (EDI), EDI: The Nuts and Bolts, EDI & Business.

UNIT-III

Internet and Extranet : Automotive Network Exchange, The Largest Extranet, Architecture of the Internet, Intranet and Extranet, Intranet software, Applications of Intranets, Intranet Application Case Studies, Considerations in Intranet Deployment, The Extranets, The structures of Extranets, Extranet products & services, Applications of Extranets, Business Models of Extranet Applications, Managerial Issues.

Electronic Payment Systems : Is SET a failure, Electronic Payments & Protocols, Security Schemes in Electronic payment systems, Electronic Credit card system on the Internet, Electronic Fund transfer and Debit cards on the Internet, Stored – value Cards and E- Cash, Electronic Check Systems, Prospect of Electronic Payment Systems, Managerial Issues.

UNIT-IV

Public Policy: From Legal Issues to Privacy : EC- Related Legal Incidents, Legal Incidents, Ethical & Other Public Policy Issues, Protecting Privacy, Protecting Intellectual Property, Free speech, Internet Indecency & Censorship, Taxation & Encryption Policies, Other Legal Issues: Contracts, Gambling & More, Consumer & Seller Protection In EC.

UNIT-V

Infrastructure For EC : It takes more than Technology, A Network Of Networks, Internet Protocols, Web- Based client/ Server, Internet Security, selling on the web, Chatting on the Web, Multimedia delivery, Analyzing Web Visits, Managerial Issues.

C.C.S. University, Meerut.
Bachelors of Computer Application
Semester - wise

Course Code Course Name

BCA-604 Knowledge Management.

UNIT-I

Business Intelligence and Business Decisions: Modeling Decision Process; Decision support systems; Group decision support and Groupware Technologies.

UNIT-II

Executive Information and support Systems: Business Expert System and AI, OLTO & OLAP; Data Warehousing; Data Marts, Data Warehouse architecture; Tools for data warehousing.

UNIT-III

Multi- Dimensional analysis: Data mining and knowledge discovery; Data mining and Techniques; Data mining of Advance Databases.

UNIT-IV

Knowledge Management Systems: Concept and Structure KM systems, techniques of knowledge management appreciation & limitation.

DEPARTMENT OF LIBRARY & INFORMATION SCIENCE

Ch. Charan Singh University, Meerut

Master of Library & Information Science

FIRST SEMESTER

2020 – 2021

Paper	Paper Code	Paper Title	Credit	Internal Marks	Exam Marks	Total
I	MLS 101	Knowledge, Information and Communication	04	20	80	100
II	MLS 102	Knowledge Organization: Classification (Theory)	04	20	80	100
III	MLS 103	Knowledge Organization: Classification (Practice)	02	10	40	50
IV	MLS 104	Research Methods and Statistical Techniques	04	20	80	100
V	MLS 105	Computer Application in LIS (Theory)	04	20	80	100
VI	MLS 106	Computer Application in LIS (Practical)	02	10	40	50
VII	MLS 107	Any ONE of the following: a) Public Library System b) Academic Library System c) Special Library System	04	20	80	100
		Total Credit / Marks	24	120	480	600

**FIRST SEMESTER
MLS 101**

Knowledge, Information and Communication

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Information: Definition; Characteristics, Nature, and Value; Conceptual difference between Data, Information and Knowledge; Communication of Information; Barriers.

Unit-II Knowledge: Definition, Kinds of Knowledge, Growth of Knowledge, Universe of Subjects: Formation, Structure and Development of Subjects.

Unit-III Information Science: Definition, Scope and Objectives; Information science as a discipline and its relationship with other subjects; Information Society: Genesis, Characteristics, Implications

Unit-IV Information Industry: Generators, Providers and Intermediaries; Intellectual Property Right Acts.

Unit-V Knowledge Management: Definition, Concept, Need and Basic Tools; Trends in Knowledge Management, Role of Information Manager.

Recommended Books

1. Raman Nair, R: Accessing information through internet. New Delhi, Ess Ess, 2002.
2. Bavakutty, M. et al. ed.: Information Access, management and exchange in the technological age. New Delhi, Ess Ess, 2003.
3. Ramesh Babu, M and Gopalakrishnan, S. ed.: Information, Communication, Library and Community Development. Delhi, B. R. Publishing, 2004.
4. Khan, MTM: Information Organisation and Communication, 1997.
5. Ramamurthy, CR: Information Security: A source book for librarians. Delhi, Authorspress, 2001.
6. Siddiqui, JA: Knowledge, Information and Communication, New Delhi, Shree Publishers & Distributors, 2016.
7. Mahapatra, PK and Chakrabarti, B: Knowledge Management in Libraries. New Delhi, Ess Ess, 2002.

MLS 102

Knowledge Organization: Classification (Theory)

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Development of general theory of Classification: Contributions of Richardson, W. C. Berwick Sayers, H. E. Bliss, S. R. Ranganathan and CRG. Mapping of Universe of Knowledge: Problems; Categorization of Isolates: Modern Trends.

Unit-II Mapping of Universe of Subjects in CC, UDC and DDC; Features of Special Classification Schemes

Unit-III Classificatory Principles in Classification of Sciences, Social Sciences and Humanities

Unit-IV Comparative study of CC & UDC with regard to Common Subdivisions and Indicator Digits

Unit-V Recent Trends in Classification; Automatic Classification, Web Dewey, Dewey on CD, Classification in Online System.

Recommended Books

1. Kumar, PSG: Knowledge Organisation, Information processing and retrieval: practice, Paper III of UGC Model Curriculum. Delhi, B. R. Publishing, 2003.
2. Kumar, PSG: Knowledge Organisation, Information processing and retrieval: theory, Paper II of UGC Model Curriculum. Delhi, B. R. Publishing, 2003.
3. Hussain, Shabahat: Library Classification: facets and analysis. Delhi, B. R. Publishing, 2004.
4. Ramalingam, MS: ed. Library Cataloguing and Classification Systems. Delhi, Kalpaz, 2000.
5. Kochar, RS: Library Classification Systems. 1998.
6. Balakrishnan, S and Paliwal, PK ed.: Library Online Cataloguing Systems. New Delhi, Anmol, 2001.
7. Aswal, RS: MARC 21: Cataloguing format for twenty first century. New Delhi, Ess Ess, 2004.

MLS 103

Knowledge Organization: Classification (Practice)

Max. Marks: 50

Internal assessment: 10 Marks (2 Tests –5 Marks each)

Theory: 40 Marks

Time: 3 Hours

The practical examination will consist of *Ten* complex titles to be classified in depth according to UDC (Abridged edition 2003) out of *Twenty* Titles

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Recommended Books

1. Fosket, AC: Universal Decimal Classification. Clive Bingley, London.
2. Mellwaine, IC: The Universal Decimal Classification: A guide to its use.
3. Universal Decimal Classification. British Standards Institution, London.

MLS 104

Research Methods and Statistical Techniques

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Research: Concept, Meaning, Need, Purpose; Types of Research: Hypothesis: Definition, Characteristics, Functions, Research Design: Concept and Types; Identification of Problem.

Unit-II Research Methods: Scientific Method: Definition, Characteristics, Process, Spiral of Scientific Method; Historical Method: Definition, Steps, Descriptive Method: Meaning, Assessment, Evaluation

Unit-III Research Techniques; Questionnaire: Print and Electronic Form; Quantitative and Qualitative Studies; Interview; Observation; Library Records and Reports; Sampling Techniques.

Unit-IV Data Analysis and Interpretation; Measures of Central Tendency; Mean; Mode; Median; Measures of Dispersion: Variance and Covariance; Standard Deviation; Graphical Representation of Data; Bar Graph; Pie Graph; Histograms; Chi Square Test.

Unit-V Bibliometrics; Scientometrics; Infometrics and Webometrics: Concepts and Definition; Bibliometric Laws: Bradford; Zipf; Lotka; Research Report; Structure, Style, Contents, Guidelines

Recommended Books

1. Sinha, SC and Dhiman, AK: Research Methodology. New Delhi, Ess Ess, 2002.
2. Khan, MA: Research Methods in Library and Information Science. New Delhi, Cosmo, 2002.
3. Deverajan, G: Research in Library and Information Science. New Delhi, Ess Ess, 2002.
4. Kumar, K: Research Methods in Library and Information Science, 1992.
5. Lancaster, FW: Bibliometric Methods in accessing productivity and impact of research. 1991.
6. Ravichandra Rao, IK: Quantitative Techniques for Library and Information Science, 1983.

MLS 105
Computer Application in LIS (Theory)

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Introduction to Computers: Brief Description of various components of Computer; Input and Output devices; Classification of Computers; Hardware and Software.

Unit-II IT and Libraries; Representing Data in a Computer: ASCII, EBCDIC; Programming Languages: Generations; Software Packages; Operating Systems, Multimedia: Elements and its Application in Libraries.

Unit-III Library Automation Software Packages: Libsys, SOUL, Alice for Windows, Application of Library Software Packages in Library Operations and Services.

Unit-IV Telecommunication and Networking; Network Media: UTP, Optical Fibre Element, Network Interface Card, Hub, Router, Modem; Types of Network: LAN, MAN, WAN and their Applications; Network Typologies: Bus, Star, Ring, Token Ring; Internet and Intranet: Basic Features and Applications.

Unit-V Digital Libraries: Genesis, Definition, Objective and Scope; Software and Hardware for Digital Libraries; Data Warehousing; Data Mining; Meta Data; Artificial Intelligence and Expert Systems; Online Searching of Databases: MEDLINE, DIALOG, OCLC.

Recommended Books

1. Deitel, HM: An introduction to operating systems. Masschusettes, Addison-Wesley, 1984.
2. Martin, J: Fourth generation languages. New Jersey, Prentice Hall, 1985.
3. Vasantha, N and Mudhol, MV: Software packages for library automation. Delhi, Ess Ess, 2000.
4. Raman Nair: accessing Information through Internet. New Delhi, Ess Ess, 2002.
5. Dhiman, AK: Basics of Information Technology for Librarians and Information Scientists. New Delhi, Ess Ess, 2003.
6. Siddiqui, JA: Information Technology Application in Libraries. New Delhi, Shree Publishers & Distributors, 2019.

MLS 106

Computer Application in LIS (Practical)

Max. Marks: 50

Internal assessment: 10 Marks (2 Tests –5 Marks each)

Theory: 40 Marks

Time: 3 Hours

Note: There will be *FIVE* questions. The examinee has to answer *ALL* questions. All questions carry equal marks.

- i) Documents, data, database, etc. to work on for the practical assignments will be provided by the Teacher in the computer lab
- ii) Students are required to do the practical assignment in the computer lab Evaluation of the assignment will be done by the Teacher on the spot.
- iii) Students have to make Screen Captures for all the answers and save them in one file. The Teacher will evaluate these screen captures and give marks accordingly.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Note: This paper will be of 50 marks out of which 10 marks will be allotted for internals and 40 marks will be allotted for external examination. The external examination will be conducted by one external examiner and one internal examiner to be appointed by the university. The duration of the examination would be of 3 hours. The practical questions will be set to check IT skills in the following areas:

Unit-I Creation and Maintenance of Database by using Library Software Package, Use of Library Software Packages for In-House Operations, Bar Code Generation, Membership Cards, Machine Readable Catalogue Cards

Unit-II CD-ROM On-line Searching, Digitization of Documents (scanning, OCR etc.)

Unit-III Internet Searching – Web 2.0 tools b. Content Management Software

Unit-IV Web Page Creation and Design

Recommended Books

1. Deitel, HM: An introduction to operating systems. Masschusettes, Addison-Wesley, 1984.
2. Martin, J: Fourth generation languages. New Jersey, Prentice Hall, 1985.
3. Vasantha, N and Mudhol, MV: Software packages for library automation. Delhi, Ess Ess, 2000.
4. Raman Nair: accessing Information through Internet. New Delhi, Ess Ess,2002.
5. Dhiman, AK: Basics of Information Technology for Librarians and Information Scientists. New Delhi, Ess Ess,2003.
6. Siddiqui, JA: Information Technology Application in Libraries. New Delhi, Shree Publishers & Distributors, 2019.

Paper-107 (a)

Planning and Management of Public Library System

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Concept, Nature and Characteristics of Public Libraries. Public Library Movement in India. Public Library Legislation: Need and Importance.

Unit-II Public Library Systems in India. National Policy for Public Library Development in India. Public Library Users.

Unit-III Public Library Collection. Library Cooperation and Resource Sharing among Public Libraries in India. Budgeting for Public Libraries. Human Resource Development.

Unit-IV Public Library Services. Library Extension Services. Role of UNESCO, IFLA, Raja Rammohan Roy Library Foundation for Development and Promotion of Public Libraries.

Unit-V Public Libraries in India: The State Central Library, Mumbai; Delhi Public Library; T. S. Central Public Library, Chandigarh. Recent Trends in Public Library Services.

Recommended Books

1. Raman Nair, R: Public Library Development. New Delhi, Ess Ess Publications, 1993.
2. Kumar, S and Leena Shah: Public Library Acts in India. New Delhi, Ess Ess Publications, 2001.
3. Augustine, CA and Devarajan, G: Public Library System in India. New Delhi, Ess Ess Publications, 1990.
4. Vishwanathan, CG: Public Library Organisation. New Delhi, Ess Ess Publications, 2005.
5. Raju, AAN: Glimpses of Library Movement and Public Library Development in Andhra Pradesh. New Delhi, Ess Ess Publications, 2010.
6. Trivedia, Priya Ranjan and Others: Public Library Systems and Services. New Delhi, Jnanada Prakashan (P&D), 2010.

Paper –107 (b)

Planning and Management of Academic Library System

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Role of Libraries in Academic Institutions. Development of Academic Libraries in India. Planning of Academic Libraries. Role of UGC and UNESCO in Promoting Academic Libraries.

Unit-II Library Governance: Authority, Committees and Role of librarian. Human Resource Management: Staffing, Selection & Recruitment, Performance Appraisal.

Unit-III Budgeting. Academic Library Buildings: Planning, Basic Elements in Designing. Furniture.

Unit-IV Library and Information Services: Need and Types. Library Cooperation and Resource Sharing. Role of INFLIBNET: Electronic Journals and Consortia. E-ShodhSindhu: Consortium for Higher Education E-Resources. OCLC

Unit-V Shodhganga, Shodhgangotri. Role of NAAC and UGC in Academic Libraries.

Recommended Books

1. Singh, S: Reference Service in Academic Libraries in India, New Delhi; Ess Ess Publications.
2. Prasher, RG: University Libraries in India 1980s and Beyond, New Delhi: Medallian Press.
3. Sahai, Shri Nath: Academic Library System. 2nd Edition. New Delhi, Ess Ess Publications, 2009.
4. Dhiman, AK and Sinha, SC: Academic Libraries. New Delhi, Ess Ess Publications, 2002.
5. Bavakutty, M and Abdul Aziz TA: Redefining Academic Libraries in Knowledge Society. New Delhi, Ess Ess Publications, 2014.
6. Waghchaure, Shilpa S: Best Practices in Academic Libraries. New Delhi, Ess Ess Publications, 2016.
7. Verma, Shiv Ram: Academic Library System. New Delhi, Shree Publishers and Distributors, 2005.

Paper –107 (c)

Planning and Management of Special Library System

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Definition, Meaning, Objectives and Scope of Special Libraries. Types of Special Libraries. Development of Special Libraries in India.

Unit-II Special Libraries Governance: Authority, Committee and Role of Librarian. Organisational Pattern: Staff, Selection. Budgeting, Special Library Buildings. Furniture.

Unit-III Library Cooperation and Resource Sharing among Special Libraries. Networking and E-journals Consortia. INDEST, FORSA, CSIR.

Unit-IV Study of Important Special Libraries in India. IIT Madras; BARC, Mumbai; CFTRI, Mysore; Khuda Bakhsh Oriental Public Library, Patna. Raza Library Rampur.

Unit-V Library and Information Services in Special Libraries. Need and Types of Services. Recent Trends in Special Libraries in India. Role of National Organisations for the development of Special Libraries.

Recommended Books

1. Mukherjee, AK: Fundamentals of Special Librarianship and Documentation.
2. Sinha, SC and Dhiman, AK: Special Libraries: Research and Technical Libraries. New Delhi: Ess Ess Publications.
3. Dhiman, AK: A Handbook of Special Libraries and Librarianship. Verma, Shiv Ram: Academic Library System. New Delhi, Shree Publishers and Distributors, 2008.
4. Barua, BP: National Policy on Library and Information Systems and Services for India. Bombay, Popular Prakashan, 1992.

SECOND SEMESTER

2020 – 2021

Paper	Paper Code	Paper Title	Credit	Internal Marks	Exam Marks	Total
I	MLS 201	Information Storage and Retrieval System	04	20	80	100
II	MLS 202	Knowledge Organisation: Cataloguing (Theory)	04	20	80	100
III	MLS 203	Knowledge Organisation: Cataloguing (Practice)	02	10	40	50
IV	MLS 204	Any ONE of the following: Information Sources and Systems a) Natural Sciences b) Social Sciences c) Medical Sciences	04	20	80	100
V	MLS 205	Information Technology Application in LIS (Theory)	04	20	80	100
VI	MLS 206	Information Technology Application in LIS (Practice)	02	10	40	50
VII	MLS 207	Dissertation and Viva	04	Dissertation = 80 Viva Voce = 20		100
		Total Credit / Marks	24	120	480	600

MLS 201

Information Storage and Retrieval

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Abstract and Abstracting: Concept, Types, Procedure of Abstracting; Guidelines in Preparing Abstracts; Principles of Abstracting (Canons); Auto Abstracting.

Unit-II Index and Indexing: Concepts and Types, Principles of Indexing; Subject Indexing; Pre-coordinate Indexing System; Post Coordinate Indexing Systems; Chain Indexing; Citation Indexing.

Unit-III Special types of Indexing: KWIC, KWAC, KWOC etc. Thesaurus; Thesaurofacet; Vocabulary Control: Tools of Vocabulary Control.

Unit-IV Features of IR System; Information Retrieval Models; Search Strategies: Manual, Machine; Evaluation of IR Systems; Trends in IR.

Unit-V Information Products: Nature, Concept, Types; Marketing of Information Products.

Recommended Books

1. Bradford, SC: Documentation. 2nd ed. London, Lockwood, 1953.
2. Foskett, AC: Subject approach to Information. 5th ed. London, Library Association, 1997.
3. Guha, B: Documentation and Information: services, techniques and systems. 2nd rev ed. Calcutta, World Press, 1983.
4. Kawatra, PS: Fundamentals of Documentation with special reference to India. New Delhi, Sterling, 1983.
5. Khanna, JK: Documentation and Information Services: Systems and techniques. Agra, Y K Publishers, 2000.
6. Lancaster, FW: Information Retrieval Systems: Characteristics, Testing and Evaluation. New York, John Wiley, 1968.
7. Ranganathan, SR: Documentation and its facets. London, Asia Pub. House, 1963.
8. Prasher, RG: Index and Indexing. New Delhi, Medallion Press, 1989.

MLS 202

Knowledge Organisation: Cataloguing (Theory)

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Introduction of Library Catalogue. Objectives of Library Catalogue. Forms of Catalogue. Types of Library Catalogue. Kinds of Entries.

Unit-II Contributions of Cutter, Lubetzkey, S. R. Ranganathan in the field of Cataloguing. Paris Principles in the Development of Catalogue Codes. Comparative Study of CCC and AACR-II. Corporate Authors.

Unit-III Normative Principles. Subject Cataloguing. Subject Headings: LCSH, POPSI, PRECIS, Chain Procedure, Thesaurus: Need and importance. Principles for Compilation.

Unit-IV Centralized and Cooperative Cataloguing. Rules for the Union Catalogues of Books, Periodicals, Indexing and Abstracting Journals.

Unit-V Recent Trends in Library Cataloguing. Online Cataloguing: OPAC, WEBOPAC. Exchange Formats: ISBD, MARC, CCF, UNIMARC, MARC21.

Recommended Books

1. Girja Kumar and Krishna Kumar: Theory of Cataloguing, 5th Rev Edition. New Delhi, Vikas Publishing House Pvt. Ltd.
2. Sahoo, KC: Information Management with IT Applications. New Delhi, Medallian Press.
3. Parmeshwaran, M. Anglo American Cataloguing Rules and CCC. New Delhi, Ess Ess Publications.
4. Singh, SN and Prasad, HN: Cataloguing Manual AACR-II. New Delhi, B. R. Publishing House.
5. Khan, MTM: Anglo American Cataloguing Rules. New Delhi, Shree Publishers.

MLS 203

Knowledge Organisation: Cataloguing (Practice)

Max. Marks: 50

Internal assessment: 10 Marks (2 Tests – 5 Marks each)

Theory: 40 Marks

Time: 3 Hours

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Cataloguing of complex problems involving the rendering of Headings and Description will be done according to AACR-II for Corporate Authors, Non-Book Materials and Periodicals. There will be **SIX** Cataloguing Problems. The examinee has to attempt **FOUR** Cataloguing problems. All problems carry equal marks. The Practical Examination will be conducted through a question Paper and evaluated by One External Examiner and One Internal Examiner to be appointed by the University.

Recommended Books

1. Girja Kumar and Krishna Kumar: Theory of Cataloguing, 5th Rev Edition. New Delhi, Vikas Publishing House Pvt. Ltd.
2. Sahoo, KC: Information Management with IT Applications. New Delhi, Medallian Press.
3. Parmeshwaran, M. Anglo American Cataloguing Rules and CCC. New Delhi, Ess Ess Publications.
4. Singh, SN and Prasad, HN: Cataloguing Manual AACR-II. New Delhi, B. R. Publishing House.
5. Khan, MTM: Anglo American Cataloguing Rules. New Delhi, Shree Publishers.
6. Mohd. Sabir Husain and Siddiqui, JA: Practical Cataloguing with AACR-II. New Delhi, Ess Ess Publications, 2018.

MLS – 204 (a)

Information Sources and Systems in Natural Sciences

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Sciences: Definition, Terminology, Scope. Information Systems, Components of Information Systems. Sectoral, Regional, and National Information Systems in Natural Sciences in India.

Unit-II Information Sources: Types, Need and Purpose. Primary Sources, Secondary Sources and Tertiary Sources in the field of Natural Sciences.

Unit-III Information Networks in Natural Sciences: Need and Purpose. Study of Global Information Systems and Networks. INIS, ENVIS, AGRIS, MEDLARS. Sciencedirect, Scopus, Science Citation Index.

Unit-IV Major activities of important Research Organisations in the growth of Natural Sciences with Special Reference to India, USA and UK.

Unit-V Information Analysis and Repackaging. Content Analysis, Consolidation, Compilation.

Recommended Books

1. Katz, WA: Introduction to Reference Work. New York, McGraw Hill.
2. Sharma, Pandey SK: Library and Society. New Delhi, Ess Ess Publications.
3. Dhiman, AK and Rani, Y: Resource Sharing and Library & Information Networks. New Delhi, Ess Ess Publications.
4. Foskett, AC: Subject Approach to Information. 5th Edition. London, Library Association.
5. Kwatra, PS: Fundamentals of Documentation with special reference to India. New Delhi, Sterling.
6. Khanna, JK: Documentation and Information Services: Systems and Techniques. Agra, YK Publishers.
7. Ranganathan, SR: Documentation and its Facets. London, Asia Publishing House.
8. Guha, B: Documentation and Information. Services, techniques and systems. 2nd rev ed. Calcutta, World Press.

MLS–204 (b)

Information Sources and Systems in Social Sciences

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Social Sciences: Definition, Terminology, Scope and History of Social Sciences. Branches and Landmarks in Social Sciences.

Unit-II Information Sources: Types, Need and Purpose. Primary Sources, Secondary Sources and Tertiary Sources in the field of Social Sciences.

Unit-III Information Networks in Social Sciences: Need and Purpose. Study of Social Science Networks at National and International Level.

Unit-IV Major activities of important Research Organisations in the growth of Social Sciences with special reference to India, USA and UK.

Unit-V Information Analysis and Repackaging. Content Analysis, Condensation, Consolidation, Compilation in the field of Social Sciences.

Recommended Books

1. Katz, WA: Introduction to Reference Work. New York, McGraw Hill.
2. Sharma, Pandey SK: Library and Society. New Delhi, Ess Ess Publications.
3. Dhiman, AK and Rani, Y: Resource Sharing and Library & Information Networks. New Delhi, Ess Ess Publications.
4. Foskett, AC: Subject Approach to Information. 5th Edition. London, Library Association.
5. Kwatra, PS: Fundamentals of Documentation with special reference to India. New Delhi, Sterling.
6. Khanna, JK: Documentation and Information Services: Systems and Techniques. Agra, YK Publishers.
7. Ranganathan, SR: Documentation and its Facets. London, Asia Publishing House.
8. Guha, B: Documentation and Information. Services, techniques and systems. 2nd rev ed. Calcutta, World Press.

MLS–204 (c)

Information Sources and Systems in Medical Sciences

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Medical Sciences: Definition, Terminology, Scope and History of Health Sciences. Branches and Developments in Health Sciences.

Unit-II Information Sources: Types, Need and Purpose. Primary Sources, Secondary Sources and Tertiary Sources in the field of Medical Sciences.

Unit-III Information Networks in Health Sciences: Need and Purpose. Study of Health Science Networks at National and International Level. MEDLARS, PubMed, IndMed, MEDInd.

Unit-IV Major activities of important Research Organisations in the growth of Health Sciences in India and USA.

Unit-V Information Analysis and Repackaging. Content Analysis, Condensation, Consolidation, Compilation in the field of Health Sciences.

Recommended Books

1. Katz, WA: Introduction to Reference Work. New York, McGraw Hill.
2. Sharma, Pandey SK: Library and Society. New Delhi, Ess Ess Publications.
3. Dhiman, AK and Rani, Y: Resource Sharing and Library & Information Networks. New Delhi, Ess Ess Publications.
4. Foskett, AC: Subject Approach to Information. 5th Edition. London, Library Association.
5. Kwatra, PS: Fundamentals of Documentation with special reference to India. New Delhi, Sterling.
6. Khanna, JK: Documentation and Information Services: Systems and Techniques. Agra, YK Publishers.
7. Ranganathan, SR: Documentation and its Facets. London, Asia Publishing House.
8. Guha, B: Documentation and Information. Services, techniques and systems. 2nd rev ed. Calcutta, World Press.

MLS 205

Information Technology Application in LIS (Theory)

Max. Marks: 100

Internal assessment: 20 Marks (2 Tests –10 Marks each)

Theory: 80 Marks

Time: 3 Hours

Note: The paper will be divided into Three Sections A, B and C.

Section A will consist of *Five* Short Answer Type questions not exceeding 75 words. The examinee will attempt all questions. Each question carries 3 marks.

Section B will consist of *Three* questions not exceeding 200 words. The examinee will attempt *Two* questions. Each question carries 10 marks.

Section C will consist of *Five* questions in detail. The examinee will attempt *Three* questions. Each question carries 15 marks.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

Unit-I Internet and Intranet: Basic features and Applications. Protocols: Concept and Functions. Modes of Connectivity: Dial Up, ISDN, Leased Line, Blue Tooth, Wi Fi etc.

Unit-II E-mail: Definition, Importance, Types, Process and Applications. Web Browser: Netscape Navigator, Internet Explorer, Mozilla Firefox.

Unit-III Web Servers, Web Tools, Search Engines. Internet Security. Network Protocols: TCP/IP, SPX, NetBUI, FTP, HTTP.

Unit-IV Digital Libraries: Definition, Need, Objectives and Scope. Storage Media, Standards, Formats: ISO-9660, DVD. Software and Hardware for Digital Libraries. Open Source Softwares. RFID: Features components and its applications.

Unit-V Data Warehousing, Data Mining, Meta Data. Scanners and Cameras. Artificial Intelligence and Expert Systems. Online Searching of Databases: Web of Science Institutional Repositories, Subject Gateways.

Recommended Books

1. Devrajan, G and Asari, K. Ravindaran: Information Technology and Library Automation. New Delhi, Ess Ess Publications.
2. Chopra, HS: Digital Library. New Delhi, Shree Publishers and Distributors.
3. Deital, HM: An introduction to Operating Systems. Massachussettes, Addisson Wesley, 1984.
4. Dhiman, AK: Basics of Information Technology for Librarians and Information Scientists. New Delhi, Ess Ess Publications, 2003.
5. Aswal, RS: CDS/ISIS for Windows: A handbook for Librarians. New Delhi, Ess Ess Publications, 2003.

MLS- 206

Information Technology Application in LIS (Practice)

Max. Marks: 50

Internal assessment: 10 Marks (2 Tests –5 Marks each)

Theory: 40 Marks

Time: 3 Hours

Note: There will be *FIVE* questions. The examinee has to answer *ALL* questions. All questions carry equal marks.

- i) Documents, data, database, etc. to work on for the practical assignments will be provided by the Teacher in the computer lab
- ii) Students are required to do the practical assignment in the computer lab Evaluation of the assignment will be done by the Teacher on the spot.
- iii) Students have to make Screen Captures for all the answers and save them in one file. The Teacher will evaluate these screen captures and give marks accordingly.

Methodology: Lectures, self-study, case studies, assignments, experimental learning exercises

The question paper for practical examination will be set to check IT skills in the following areas.

1. Database creation in SOUL 2.0 and KOHA
2. Use of Library Software Packages, SOUL 2.0, Alice for Windows and KOHA for In-House Operations, Bar Code Generations, Membership Cards, Machine Readable Catalogue Cards.
3. Access to World e-Book Library, Web of Science and Shodhganga.

Recommended Books

1. Devrajan, G and Asari, K. Ravindaran: Information Technology and Library Automation. New Delhi, Ess Ess Publications.
2. Chopra, HS: Digital Library. New Delhi, Shree Publishers and Distributors.
3. Deital, HM: An introduction to Operating Systems. Massachusetts, Addison Wesley, 1984.
4. Dhiman, AK: Basics of Information Technology for Librarians and Information Scientists. New Delhi, Ess Ess Publications, 2003.
5. Aswal, RS: CDS/ISIS for Windows: A handbook for Librarians. New Delhi, Ess Ess Publications, 2003.
6. Siddiqui, JA: Information Technology Application in Libraries. New Delhi, Shree Publishers & Distributors, 2019.

MLS–207
Dissertation

Max. Marks: 100

Viva Voce: 20 Marks

Dissertation Marks: 80

Note: This paper will consist of areas such as annotated subject bibliography, bibliometric study, case study, survey, trend report etc. The dissertation on any one of the above theme will be submitted before the commencement of Second Semester examination and will be evaluated by an external examiner. It will carry 80 marks. Viva-Voce examination will be of 20 marks. This will be conducted by a group of Three members consisting of Coordinator of the Department, External Examiner and the Supervisor.

Note: For more “Suggested Readings” please contact concerned teachers.

Ch. Charan Singh University, Meerut -250004

**DEPARTMENT OF BIOTECHNOLOGY (SFS COURSE)
M.Sc. BIOTECHNOLOGY, 2009**

Distribution of Marks in different courses:

I Semester	Course Title	Theory External	Theory Internal	Total Marks
Course I	Fundamental of Genetics	50	50	100
Course II	Cytogenetics and Molecular Genetics	50	50	100
Course III	Statistical Methods and Bioinformatics in Biology	50	50	100
Course IV	Tools and Techniques in Biotechnology	50	50	100
Practical I (4 hours)		100(External)	100(Internal)	200
Total Marks		300	300	600

II Semester	Course Title	Theory External	Theory Internal	Total Marks
Course V	Fundamentals of Biochemistry	50	50	100
Course VI	Plant Genetic Resources: - Conservation and Sustainable use	50	50	100
Course VII	Biotechnology in Crop improvement	50	50	100
Course VIII	Recombinant DNA Technology and Genetic Engineering	50	50	100
Practical II (4 hours)		100 (External)	100(Internal)	200
Total Marks		100	300	600

III Semester	Course Title	Theory External	Theory Internal	Total Marks
Course IX	Microbial, Industrial and Environmental Biotechnology	50	50	100
Course X	Concepts of Nanotechnology	50	50	100
Course XI	Animal biotechnology and Immunology	50	50	100
Course XII	Genomics and Proteomics	50	50	100
Practical III (4 hours)		100(external)	100(Internal)	200
Total Marks		300	300	600

IV Semester	Course Title	Dissertation, presentation, viva-voce	Total Marks
	Project	400	400
Grand Total of Marks		2200	2200

A minimum of 30% marks separately in internal and external assessment of each course and an aggregate of 40% marks in all the courses is required for passing. In case of failing to obtain 30 % marks in internal assessment of any paper, the candidate will not be eligible to appear in external examination of that course.

CURRICULUM: M.Sc. BIOTECHNOLOGY (2009)

I Semester

1. Fundamental of Genetics
2. Cytogenetics and Molecular Genetics
3. Statistical Methods and Bioinformatics in Biology
4. Tools and Techniques in Biotechnology

Lab.: Fundamental of Genetics; Cytogenetics and Molecular Genetics; Statistical Methods and Bioinformatics in Biology; Tools and Techniques in Biotechnology

II Semester

5. Fundamentals of Biochemistry
6. Plant Genetic Resources: - Conservation and Sustainable use
7. Biotechnology in Crop improvement
8. Recombinant DNA Technology and Genetic Engineering

Lab.: Fundamentals of Biochemistry; Plant Genetic Resources: - Conservation and Sustainable use; Biotechnology in Crop improvement; Recombinant DNA Technology and Genetic Engineering

III Semester

9. Microbial, Industrial and Environmental Biotechnology
10. Concepts of Nanotechnology
11. Animal biotechnology and Immunology
12. Genomics and Proteomics

Lab.: Microbial, Industrial and Environmental Biotechnology; Concepts of Nanotechnology; Animal Biotechnology and Immunology; Genomics and Proteomics

IV Semester

- Project: 1. Report of work
2. Presentation of work.
 3. Viva-voce examination.

Course-I

Unit-I

Fundamental of Genetics

Introduction: History of Genetics, its scope and significance, Mendel's experiments, Principles of Segregation and Law of Independent Assortment, Lethality and Interaction of genes.

(4)

Unit-II

Linkage and crossing over: Linkage in higher eukaryotes, Coupling and Repulsion Hypothesis, measurement of Linkage, Detection of linkage, Breakdown of Linkage, Four- strand crossing over, Three-Point Test cross, cytological basis of crossing over, Interference and Coincidence, Crossing over and Chisma formation, Factor affecting recombination frequencies.

(4)

Unit-III

Genetics of Sex Determination and Differentiation: Sex-linked, Sex- limited and Sex- influenced traits in *Drosophila* and Human beings, Theories of Sex-determination- Chromosomal theory, environmental theory and genic balance theory, Sex- determination in dioeciously plants, Sex reversal and Gynandromorphs, Human sex anomalies (Klinefelter's Syndrome and Turner's Syndrome), brief idea of Dosage Compensation and Lyon's hypothesis.

(6)

Unit-IV

Mutation and Mutagenic Agents: Brief history of mutation, physical and chemical Mutagens, Detection of mutation in *Drosophila* (CIB method, Muller-5 method), Detection of mutation in plants and their practical application in crop improvement.

(6)

Unit-IV

Multiple Alleles: Concepts of multiple alleles, self incompatibility alleles in *Nicotiana*, coat color in rodents, Blood group in Humans, antigen-antibody interaction in inheritance of A, B, AB and O blood groups, H-antigens, MNS system, Rh Factor, Epitasis and multiple allelism (Bombay blood group).

(6)

Unit-V

Genetics of Inbreeding Depression and Heterosis: Definition and Historical aspects of heterosis and Inbreeding depression, manifestation and application of heterosis, apomixis and fixation of heterosis, application of molecular marker in heterosis breeding.
(8)

Unit-VI

Extra -chromosomal Inheritance: Criteria for extra- chromosomal inheritance, plastid inheritance in *Mirabilis*, iojapa in corn, Kappa particles in *Paramecium*, Coiling in snails, male sterility in plants.
(6)

Unit-VII

Biochemical Genetics: Inborn errors of Metabolism in man, eye transplantation in *Drosophila*, biochemical mutations in *Neurospora*, biosynthetic pathways and biochemical mutations.
(4)

Unit-VIII

Concepts of Genes: Classical and modern gene concepts, Pseudoallelism, position effects, intragenic crossing over and complementation (cistron, recon, muton), Benzer's work on rII locus in T4 phases.
(6)

Course-II

Cytogenetics and Molecular Genetics

PART-A: - Cytogenetics

Unit-I

Cell Division: Cell Cycle, differences between mitosis and meiosis, mechanism of chromosome movement, reduction division and equational division, double reduction. (6)

Unit-II

Duplication and deficiencies: Classification, methods of production, meiotic pairing and Phenotypic effects. (4)

Unit-III

Translocation: - Classification, methods of production, identification, meiotic pairing and role in evolution. (4)

Unit-IV

Inversion: Classification, methods of production, identification, meiotic pairing and crossing over in different regions, Role in evolution. (6)

Unit-V

Trisomic and Tetrasomic: - Classification, methods of production, Identification, meiotic pairing and utility in Chromosome mapping. (2)

Unit-VI

Monosomic and Nullisomic: - Methods of Production, Identification, meiotic behavior, monosomic analysis, alien additions/substitution lines. (2)

PART-B: - Molecular Genetics

Unit-VII

Genetic Material: DNA and RNA as genetic material (experimental evidences), structure of DNA(including Z-DNA and 5- hasisekharan's RL model), super coiling of DNA, Different type of RNAs and their roles, difference between DNA and RNA. (6)

Unit-VIII

DNA Duplication (in prokaryotes and Eukaryotes):- Unwinding proteins, Role of RNA Polymerases and DNA polymerases in prokaryotic and eukaryotic DNA replication, Semi-conservative, Discontinuous and Bi-directional replication, RNA primers, Role of proteins in prokaryotic and eukaryotic DNA replication, Models of replication. (8)

Unit-IX

Organization of Genetic Material: Chromosome ultra structure and nucleosome concept, packing of DNA as nucleosomes in eukaryotes, techniques used for discovery of nucleosome, structure and assembly of nucleosomes, solenoid, phasing of nucleosomes, DNA concept and C-value paradox, repetitive and unique sequences, overlapping, pseudo, crying and split genes, satellite DNA's, selfish DNA. (8)

Unit-X

Genetic Code (including mitochondrial genetic code):- Deciphering of code in vitro and in vivo (use of mutations-base replacement, frame-shift and suppressor mutation). (4)

Statistical Methods and Bioinformatics in Biology

PART-I: Statistical Methods

Unit-I

Presentation of Data: Frequency distributions, graphical presentation of data by histogram, frequency polygon, frequency curve, and cumulative frequency curves. (4)

Unit-II

Measures of central tendency and dispersion: - Mean, Median, Mode and their simple properties (without derivations), and calculation of median by graphs, range, mean deviation, standard deviations, coefficient of variation. (6)

Unit-III

Test of Significance: - Sampling distribution of mean and standard error, large scale sample tests (tests for an assumed mean and equality of two population means with known S.D.), small sample tests (t-tests for an assumed mean and equality of means of two populations when sample observations are independent, paired and unpaired t-test, t-test for correlation and regression coefficients), t-test for comparison of variances of two populations, chi-square test for independent of attributes, goodness of fit and homogeneity of samples. (10)

Unit-IV

Experimental Designs: Principles of experimental designs, completely randomized, randomized block and Latin square designs, simple factorial experiments (mathematical derivation not required), analysis of variance (ANOVA) and its uses. (8)

PART-II: Bioinformatics

Unit-V

Introduction: - History, aims of Bioinformatics, Definition and Concepts, Components of Bioinformatics, Basic tools, Scope of Bioinformatics in molecular biology and Computers, Role of internet in Bioinformatics, Applications of Bioinformatics. (6)

Unit-VI

Bioinformatics- Approaches and applications: - Introduction, DNA-the staff of life, molecular sequence alignments, databases, molecular visualization integrated molecular biology database.

(8)

Unit-VII

Protein and Nucleic acid databases: - Introduction, Protein and Nucleic acid databases, databases accession, database searching, NCBI based study. (8)

Course-IV

Tools and Techniques in Biotechnology

Unit-I

Microscopy: Principles, Resolving Power and applications of Light Microscopy, Electron Microscopy (SEM, TEM) and Confocal Microscopy. (8)

Unit-II

Centrifugation: Brief history, type of centrifugation, theory of centrifugation, types of centrifuges and centrifugation techniques, Types of rotors. (8)

Unit-III

Electrophoresis: - History, Principles, Application and factor affecting of electrophoresis with detail reference to Agarose, PAGE, PFGE, Capillary electrophoresis, continuous, 2D-PAGE, IEF. (8)

Unit-IV

Nuclear Magnetic Resonance Spectroscopy: - History of NMR, theory and principles of NMR, NMR spectrometer, Detection of frequencies and Measurement by NMR. (6)

Unit-V

Radioisotope Technique: - Nature of Radioactivity, characteristics of different radiolabels, detection and measurement in Radioactivity, applications of radioisotopes in biological sciences. (6)

Unit-VI

Spectroscopy: - Introduction, theory and principles of different types of Spectroscopy and their applications in biotechnology. (6)

Unit-VII

Chromatography: - General principles and techniques of HPLC, LPLC, GLC, Adsorption Chromatography, partition chromatography, IEC, permeation Chromatography, Affinity Chromatography. (10)

Course-V

Fundamentals of Biochemistry

Unit-I

Structural and Biochemical Organization: - Amino Acids, Carbohydrates, Lipids and Fatty Acids and Nucleotides. (6)

Unit-II

Secondary metabolites: - Hormones, Alkaloids, Porphyrins. (6)

Unit-III

Enzymology: - Enzymes, Elementary Kinetics, Mechanism of enzymes action, assay types, reaction rates, Extremozymes engineering, enzyme activity and substrate specificity, Non-aqueous enzymology, coenzymes and vitamins, Isozymes and allosteric enzymes. (12)

Unit-IV

Protein as base unit: - Structure and function, Protein folding, Protein sequencing, Ramachandran's plot and Protein catabolism (10)

Unit-V

Major intermediary metabolic pathways, biosynthesis and catabolism of saturated and unsaturated fatty acid, nucleotides. (8)

Unit-VI

Glycolysis, Kreb's cycle, ETS of respiration and oxidative phosphorylation substrate level phosphorylation, Anaplerotic pathway. (8)

Course-VI

Plant Genetic Resources: - Conservation and Sustainable use.

Unit-I

Biological species: Concepts and its limitation. (2)

Unit-II

Centers of Diversity and Centers of Origin. (2)

Unit-III

A brief idea of the evolution of crop plants: - Wheat, Barley, Rice, Maize, Cotton, Sugarcane, Potato, Cole crops, Rapeseeds and mustard. (6)

Unit-III

Biodiversity vs. Genetic Resources: - Definition and Explanation, alpha vs. beta biodiversity and methods of their study, present levels of Biodiversity and rate of loss of biodiversity, causes for the loss of biodiversity, uses of biodiversity, extent of biodiversity in plants, exploration and germplasm collection, introduction and exchange of PGR, Red Data Books and Endangered plant species. (8)

Unit-IV

Plant Genetic Resources: - Different kinds of PGR, Taxonomical Classification of PGR, Basic, derived and molecular, core collections, principles of germplasm characterization, evaluation, maintenance and regeneration, Plant quarantine aspects- Sanitary and Phytosanitary Systems (SPS). (8)

Unit-V

Techniques for conservation of plant germplasm: - *In-situ* and *Ex-situ* methods of conservation, Cryopreservation of genetic materials. Gene banks and Cryobanks. (2)

Unit-VI

IPGRI, NBPGR, FAO and CGIAR: - Their role is conservation of PGR. (6)

Unit-VII

Future Harvest Centers and CBD: -A Brief Idea, CBD and Cartagena protocol. (6)

Unit-VIII

UPOV, Plant Breeders Rights (PBRs) and farmers Right (FRs), Protection of plant varieties and farmers right act (PPV and FRA) 2001. (4)

Unit-IX

PGR and IPRs (Intellectual Property Rights):- Patents, copyrights, Trademarks, GATT and TRIPs, Terminator and Traitor Techniques (v-GURT and t- GURT), Biodiversity Bill 2002, Geographic indicator bill. (6)

Course-VII

Biotechnology in Crop improvement

Unit-I

Plant organ, tissue and cell culture: - Somaclonal variation and its use in crop improvement, embryo culture and its utility in hybridization programmes, Anther culture, haploid production and their uses, micro propagation in horticultural crops and forestry and its uses, artificial seeds, techniques of protoplast culture, regeneration and somatic cell hybridization, achievements, limitations, utility in improvement of crop plants. (12)

Unit-II

Biofertilizers, Bioinsecticides and Molecular Farming. Concept and utility (4)

Unit-III

Methods of Gene Transfer in Plants: *Agrobacterium* mediated gene transfer, direct DNA delivery methods (microinjection, particle gun, electroporation). (6)

Unit-IV

Hybridization: - Distant hybridization and Somatic hybridization in crop improvement. (4)

Unit-V

Transgenic Plants in dicots and monocots: - Utility of Transgenic in basic studies and in crop improvement (resistance for herbicides, viruses, insects and abiotic stresses, Barnase and Barstar for hybrid seed production), Biosafety issues including risks associated with transgenic crops, biosafety regulations. (8)

Unit-VI

Improvement of Nutritional quality of plants: - seed storage proteins e.g. Glycinin, Conglycinin, Legumin, Phytohaemagglutinin, Phaseolin, Prolamins, Albumins and Designer-proteins, Engineering for vitamins and Iron-Deficiency, Engineering Traits related to hybrid seed Production (e.g. Male Sterility) (8)

Unit-VII

Plant genome Programs: - Impact of genetically modified crops and genomics research in agriculture and biology, Evaluation of Transgenic plants as to their commercial value, Efficacy and Environmental concerns, Legislation for Transgenic plants, Economic viability of Transgenic plants (8)

Course-VIII

Recombinant DNA Technology and Genetic Engineering

Unit-I

Genetic Engineering: - Definition and explanation, scope of GE, Concept and importance of GE, RDT in prokaryotes and eukaryotes, Restriction enzymes, modifying enzymes, Isoschizomers and cloning into mutagenesis, DNA Fingerprinting. (12)

Unit-II

Cloning and expression vectors:-Plasmid, Phage, M13, Phagemid, BAC, YAC, MAC, Expression vectors, Use of Promoters, Expression through Strong and Regulatable Promoters, Binary and Shuttle Vectors. (8)

Unit-III

Libraries and molecular probes: - Construction and Screening of genomic and cDNA libraries, BAC libraries and assembly of BACs into contigs, Molecular probes and their preparation, labeling and applications, Southern, Northern, Western blotting, Chromosome walking, Chromosome jumping. (12)

Unit-IV

Polymerase Chain Reaction: - Basic principles and its modifications, designing of primers, Different schemes of PCR, application of PCR, RACEs, Electronic PCR (e-PCR), RT- PCR, Real- Time PCR (8)

Unit-V

Gene Sequencing: - Different methods of gene isolation, techniques for sequencing (Maxam & Gilbert degradation method, Sanger's Dideoxy method), Organo-chemical gene synthesis mechanism, cDNA using reverse transcriptase. (10)

Course-IX

Microbial, Industrial and Environmental Biotechnology

Unit-I

Introduction: - Concepts, Growth curve, sterilization techniques, Isolation and Characterization. (2)

UNIT II

Microbes: - Definition, classification, sources of useful microbes and their characteristics. (4)

Unit-III

Use of Microbes in food and dairy, single cell proteins, physiological aspects SCP from CO₂, waste materials and renewable resources, improvement in single cell protein production, Probiotic foods. (8)

Unit-IV

Industrial source of enzymes: - Cellulases, Xylanases, Pectinases, Amylase, Lipase and Proteases their production and applications. (6)

Unit-V

Commercial production of important antibiotics, amino acids, insulin, steroids, Fermentation and production of Ethanol, Acetone, Butanol, Glycerol, Vitamins and Alkaloid (8)

Unit-VI

Pollution: - Types, causes, Prevention and Control, methods of reducing environmental impacts of chemicals, weedicides, Pesticides and fertilizers, Biotechnological advances in pollution control through GEMs, Sewage treatment, Newer approaches to sewage treatment, treatment of solid waste, Energy production- Bio-fuels. (8)

Unit-VII

Bioremediation and pollution control through microbes and plants, Biodegradation of Natural Products, microbial desulphurization, biodegradation of xenobiotics, hydrocarbons. (8)

Unit-VIII

Biotechnology of fermentation: Methods and types of fermentation, dual/multiple fermentation, continuous fermentation and late nutrient addition, growth kinetics of microorganisms, fermenter systems and fermentation. (6)

Course-X

Concepts of Nano-biotechnology

Unit-I

Introduction: - Concept, scope, vision, application, present and future prospects in biological sciences. (6)

Unit-II

Applications of Quantum Dots in Biology: - An overview, Introduction, General properties, applications. (6)

Unit-III

Assembly and Characterization of Bio-molecules: - Gold Nano-particle conjugates and their use in intracellular imaging (introduction, different methods). (6)

Unit-IV

Surface-functionalized Nano-particles for controlled drug delivery: - Introduction and different Methods. (4)

Unit-V

Structural DNA nanotechnology- An overview: - Introduction, DNA objects, DNA Arrays, DNA nanomechanical devices, DNA based computational studies. (8)

Unit-VI

Nanostructure DNA templates: - Introduction, synthesis and purification of Plasmid templates, Fabrication and preparation of ultrathin carbon-coated TEM Grids, Preparation of Q-Cds/pUCLen4 or Q-Cds/ Φ x174 RF11 samples, their characterization. (8)

Unit-VII

Probing DNA structure with Nanoparticles: -Introduction, Different methods. (4)

Unit-VIII

Synthetic Nanoscale Elements for Delivery of Material into Viable cells: - Introduction, different Material required, Different methods. (8)

Course-XI

Animal biotechnology and Immunology

Part-A: Animal Biotechnology

Unit-I

Introduction: - Animal Tissue and Organ Culture, Plasma clot method, Raft method, Agar-gel method, Grid method, cyclic exposure to medium and Gas phase, advantages, limitations and applications, artificial skin. (6)

Unit-II

Cell Culture: - Substrate and suspension culture, Culture Media, natural and artificial, initiation of cell culture, sub-cultures, Evaluation and Maintenance of cell culture lines, Large scale culture of cell lines, Monolayer, Suspension culture, Immobilized cultures, Somatic cell fusion, mechanism and applications, cell culture products and their applications, Interferon's. (8)

Unit-III

Cloning: -In-vitro Fertilization and Embryo transfer, Application of Embryo transfer technology, Embryo transfer in cattle, , Animal cloning, Ethical and Social Issues relating to Human cloning, Transgenic and their future Prospective. (8)

PART B: Immunology

Unit-IV

Introduction: - History, concept and Scope of Immunology. (2)

Unit-V

Immunity: - Innate and Acquired immunity, Passive and Active Immunity, Lymph and organs, Humoral and Cell Mediated immunity, Specificity and Memory, Transplantation immunity, Major Histocompatibility Complex (MHC) and Complements. (6)

Unit-VI

Interactions: - Antigen-Antibody reactions, Antigen type-hapten, Immunoglobulin's (fine structure of IgG and diversity), serological reactions, Agglutination, Precipitation, Immuno-electrophoresis, ELISA, RIA, Immuno-electromicroscopy. (6)

Unit-VII

Hybridoma Technology: - Monoclonal antibody production, myeloma cell lines, Fusion of myeloma cells without antibody producing B-cells, selection and screening methods for positive hybrids, production, purification and characterization of monoclonal antibodies without Hybridoma, Genetic manipulation of immunoglobins. (6)

Unit-VIII

Diseases and Vaccines: - T-cell cloning, mechanism of antigen recognition by T-and B-lymphocytes, Genetic control of immune response, autoimmune diseases, immunodiagnosis, AIDS, types of vaccines, Strategies for the development of vaccines, infectious diseases. (8)

Course-XII

Genomics and Proteomics

PART A: Genomics

Unit-I

Origin and Evolution of genomics: - Origin of genomics, the first DNA genomes, microcollinearity and lack of it, DNA based phylogenetic trees, genomes and human evolution, evolution of nuclear and organellar (mitochondrial and Chloroplast genome, the concept of minimal genome and possibility of synthesizing it. (6)

Unit-II

Molecular maps of genomes and comparative genomics: - Genetic maps, physical maps, EST and transcript maps, functional maps, comparative genomics and collinearity/syteny in maps.(4)

Unit-III

Whole Genome sequencing: - Whole genome shotgun sequencing, clone-by-clone or 'hiererchical stotgun' sequencing, microbial genomes (including yeast), plant genomes (Arabidopsis and rice), Animal genomes (fruit fly, mouse, human). (6)

Unit-IV

Annotation of whole genome sequence and functional genomics: - *In silico* methods, insertion mutagenesis (T-DNA and transport insertion), TILLING, management of data, gene expression and transcript profiling, EST contigs and unigene sets, use of DNA chips and microarrays. (6)

Unit-V

Pharmacogenomics: - Use in biomedicine involving diagnosis and treatment of diseases, genomics in medical practice, personalized medicine, DNA polymorphism and treatment of diseases, use of SNP in pharmacogenomics, pharmacogenomics and industry. (6)

PART B: Proteomics

Unit-VI

Study and Scope: - Introduction, definition concepts and approaches of proteomics studies and activities. (2)

Unit-VII

Quantitative and Qualitative proteome analysis technique: - Separation technique- 2D-PAGE, 2-DE (BN-PAGE), image analysis, Mass- spectrophotometry, LC-TMS, MALDI, and SALDI (8)

Unit-VIII

Protein interaction and Protein complex: - Protein interaction, DNA- Protein interaction, Yeast two hybrid system and their applications. (4)

Unit-IX

Drug Discovery and Development: - Current issues, drug targets, Drug efficacy, Drug toxicology, Protein chips and Antibody Microarray. (4)

Unit-X

Cancer Proteomics: - An overview of cancer, origin and types of cancer, proteomics in cancer research, techniques of proteomics in cancer research, future approaches of proteomics and cancer research. (4)