

Commerce

Part I: Course outcome

B.Com I Group I Paper I-Financial Accounting

Unit I- To Learn basic accounting Perception as applicable to business..

Unit II- Perception about preparation of Final Accounts.and rectification of error

Unit III- Perception about concept of Depreciation and non trading institutions accounting

Unit IV- Perception about concept of special Accounting Areas

Unit V- To Enable the students to learn the basic concepts of Partnership Accounting, and allied aspects of accounting.

Group I Paper II-Business Communication

Unit I- Perception about basic communication skills,

Unit II- Perception about corporate communication skills.

Unit III- Perception about concept Business letters.

Unit IV-Perception about concept of various report writing.

Unit V- Perception about the non-verbal Aspects of communication, Interview skill, Modern forms of communication devices. International Communication.

Group II Paper-I Business Mathematics

Unit I- Perception about Simultaneous Equations and Linear Programming.

Unit II- Perception about Matrices, Determinants and Logarithm's.

Unit III- Perception about Simple Interest and Compound Interest.

Unit IV-Perception about Ratio, Proportion, Average and Percentage.

Unit V- Perception about Profit and loss, Brokerage, Commission.

Group II Paper II-Business Regulatory Framework

Unit I- Perception about basic of Law of Contract.1872

Unit II- Perception about Special Contracts-Indemnity, Guarantee, Bailment and Pledge, Agency.

Unit III- Perception about Sale of Goods Act.1930

Unit IV-Perception about Negotiable Instruments Act1881

Unit V- Perception about Consumer Protection Act, Partnership Act 1932 & 2008 and Intellectual Property Right Act.

Group III Paper-I Business Environment

Unit I- Perception about basic Concept of Business Environment.

Unit II- Perception about Problems of Growth, Regional Imbalances And Social Injustice. Inflation, parallel economy.

Unit III- Perception about policies of Government.

Unit IV-Perception about Economic Planning in India.

Unit V- Perception about International Business Environment.

Group III Paper II-Business Economics

Unit I- Perception about Micro and Macro Economics and Utility Analysis.

Unit II- Perception about Law of Demand & Elasticity of Demand

Unit III- Perception about Concepts Related to Production.

Unit IV-Perception about Various Market Structures.

Unit V- Perception about the Theories of Distribution, Wages, Rent, Interest and Profit.

B.Com II Group I - Accounting

Paper I- Corporate accounting

Unit I - Perception about the share and debenture affairs of company.

Unit II - Knowledge about the final accounts and liquidation of company.

Unit III - Learning about valuation of goodwill and share.

Unit IV - Perception about the amalgamation and reconstruction of company.

Unit V- Perception about the holding and subsidiary company affairs

Paper II- Cost accounting

Unit I - Basic Perception about the costing, cost and material control.

Unit II - Perception about accounting for labour and overheads.

unit III - Knowlegde about Cost Ascertainment

Unit IV - Knowlegde about operating costing and process costing.

Unit-V Knowlegde about cost records and break even analysis

Group II - Business management

Paper I - Principle of business management

Unit I - Knowlegde about the all concept of management and functional areas of management.

Unit II - Learning about planning and decision making.

Unit III- Learning about organization and orgainzing structure

Unit IV - learning about motivation, leadership and communication qualities.

Unit V- knowlegde about managerial control and management of change.

Paper II - Company law

Unit I - Knowlegde about corporat personalities

Unit II - Knowlegde about main document of comapany like MOA, AOA act.

Unit III - learing about capital management of comapany and role of directors.

Unit IV - Knowlegde about company meetings.

Unit V- learning about minority rights and majority powers of companies member

Group III - Applied Economics Paper I - Business statisitics

Unit I - Basic Perception about statistics, university of data, frequency distribution and cocept of central tendency."

Unit II - Perception about tools of depersion.

Unit III - Perception about linear regression and correlation.

Unit IV - Perception about index number.

Unit V- knowledge about forecasting and law of probability.

Paper II - Fundamentals of entrepreneurship

Unit I - Perception about theories of enterpreneurship.

Unit II - Learning about pramotion of venture.

Unit III - Learing about entrepreneurial behavior.

Unit IV - Perception about entrepreneurial development programs.

Unit V- Perception about role of entrepreneur.

B.Com III Compulsory core course

Paper I- Income Tax "Unit I - Perception about the Basic concepts of Income Tax ,Basis of charges and Agricultural Income."

Unit II - Perception about Income From Salary and House Property.

Unit III - Perception about Income from Business or Profession;Capital Gain and Other Sources.

Unit IV - Perception about the Calculation of Tax Liability of individual and HUF

Unit V- Perception of Tax Management and Tax Administration.

Paper II- Indirect Tax

Unit I - Perception of Customs

Unit II - Perception about State Excise Duty

unit III - Perception about GST

Unit IV - Perception of Registration under GST

Unit-V Assessment and Return

Paper III - Management Accounting

- Unit I - Basic knowledge about Management Accounting and Ratio Analysis
- Unit II - Learning about Fund and Cash Flows
- Unit III- Perception of Absorption & Marginal Cost
- Unit IV - Perception about Budgetary Control and Flexible Budget
- Unit V- knowledge about Standard Costing

Paper IV - Auditing

- Unit I - Basic knowledge about Auditing.
- Unit II - Knowledge of Internal Checking and Control.
- Unit III - Perception Regarding Audit of different Limited Companies
- Unit IV - Knowledge of Investigation
- Unit V- Knowledge of Recent Trends in Auditing and Auditor.

Optional Group (B) Paper I - Principles of Marketing

- Unit I -Perception of Basic Marketing Concept Marketing Area
- Unit II - Perception of Consumer Behaviour and Market Segmentation.
- Unit III - Perception about the concept of Product
- Unit IV - Perception of Distribution Concept
- Unit V- Learning of the concept of Promotion.

Paper II - International Marketing

- Unit I - Basic Perception of International Marketing
- Unit II - Perception about Foreign Market
- Unit III - Perception about Promotion of Product/Services Abroad
- Unit IV - Perception of International Distribution
- Unit V- Perception of Export-Import Policy & Documentation

M.Com I Semester**Paper I-Managerial Economics**

- Unit I- To Learn basic Concept Of Managerial Economics
- Unit II-Knowledge about fundamental economic concepts
- Unit III Perception about Demand Analysis.
- Unit IV- Perception about Theory Of Consumer Choice.
- Unit V- Perception about Production Theory and Stages of Production.

Paper II-Advanced Accounting

- Unit I- Perception about Issue, Forfeited and Redemption of Shares and Debentures
- Unit II-Knowledge about final account and statement of companies
- Unit III- Perception about Amalgamation and Reconstruction Of Companies.
- Unit IV-Perception about Accounting of Holding and Subsidiary Companies.
- Unit V-Perception about Accounting relating Liquidation of Companies.

Paper III-Income Tax Law and Accounts

- Unit I- Perception about basic Law Relating to Income Tax.
- Unit II- Perception about Calculation Of Taxable Income under the Head Salary and House Property.
- Unit III- Perception about Calculation Of Taxable Income under the Head Business, Profession, Capital Gain and Other sources.
- Unit IV-Perception about Set off and carry Forward of losses, tax computation of individual & HUF
- Unit V-Perception about Appeals and Revisions. Penalties & Income tax authorities

Paper IV-Statistical Analysis

Unit I- Perception about basic Rules and Functions of Statistics.

Unit II- Perception about Data Sources and Corelation.

Unit III-knowledge about Dispersion,skewness,corelation & Regression analysis

Unit III- Perception about Probability Theory.

Unit IV-Perception about Probability Distributions.

Paper-V Corporate Legal Framework

Unit I- Perception about Companies Act and Important Documents.

Unit II- Perception about Share capital,Meetings and Winding Up of Companies.

Unit III- Perception about Negotiable Instruments.

Unit IV-Perception about Endorsement and crossing of Cheque, SEBI

Unit V- knowledge about Legal Environment for Security Markets

M.Com II Semester

Paper I-Business Economics

Unit I- Perception about Cost Theory and Estimation.

Unit II- Perception about Price Determination under Different Market Conditions.

Unit III- Perception about Pricing Practices.

Unit IV- Perception about Business Cycles and .

Unit V-knowledge about Inflation

Paper II-Specialized Accounting

Unit I- Perception about Accounts Of General Insurance Companies.

Unit II- Perception about Accounts Of Banking Companies.

Unit III- Perception about Accounts Of Public Utility Concerns.

Unit IV-Perception about royalty Accounts .

Unit V- knowlegde about Investment Accounts

Paper-III Tax Planning and Management

Unit I- Perception about Calculation Of Taxable Income and Tax of Firms and Companies.

Unit II- Perception about basic Concepts of Return of Income, Reopening of Assessment."

Unit III- Perception about concept Of Tax Planning.

Unit IV- Knowledge about Tax Planning to Capital Structure

Unit V-Perception about Preparation of Income Tax Returns.

Paper IV-Advanced Statistics

Unit I- Perception about Statistical Decision Theory.

Unit II- Perception about Statistical Estimations and Test Theory

Unit III- Perception about Association Of Attributes.

Unit IV-Perception about Statistical Quality Control.

Unit V-knowledge about Interpolation and Extrapolation

Paper-V Buisness Law

Unit I- Perception about SEBI Act 1992.

Unit II- Perception about MRTP Act 1969

Unit III- Perception about Consumer Protection Act 1986

Unit IV-knowledge about FEMA Act1999

UnitIV-Perception about WTO, TRIP,TRIMS and GATS.

Part II: Programme outcome

Name of programme/degree - B.Com

- 1) Students will gain fundamental Perception of Commerce and Business.
- 2) Students will acquire firm grip in communication and behavioural skills, accounting and management skills,out of box thought process and overall personality development."
- 3)This programme develops the quality of entrepreneurship among students and prepares them for starting up their own business.
- 4)Students will be capable to face the modern-day challenges in commerce and business.
- "5) This program enhances the capabilty of students to take part in different professional exam like CA,CS,ICWA and other courses."
- 6)Through this programe students will be able to communicate effectively both interm of business as well as social interaction

M.Com

- 1) This programme imparts students to gain in-depth Perception and understanding of Commerce.
- 2)Students will get an opportunity to pursue research in their chosen area.
- 3)This course help to student in the application of statistical tools and techniques for Research analysis.
- "4)This programme will train the students to develop decision making skills, problem solving skills,leadership skills and entrepreneurial skills."
- "5)Students will be eligible for applying in exams like NET,SET etc for teaching in colleges."
- 6)Students will generate innovative business ideas and learn to face challenges that can be arise from business environment.

Part III: Programme Specific outcome

Name of programme/degree - B.Com

- PSO1 "Students can venture into Accounting Fields, Banking Sector,Insurance Sector."
- PSO2 "Students can move in professional Courses like CA,CS,CMA."
- PSO3 Students Can start their own Business.
- PSO4 "Students can give Examination like UPSC,CGPSC,SSC."
- PSO5 "Students Will Also Eligible for all certificate courses in banking ,Stock market,Income Tax."

PSO6 Students grasp practical and theoretical Perception the syllabus covers various fields of commerce and accountancy .

PSO7 "Students Will acquire Perception and practical skill to work as accountant, auditor and tax consultant. "

M.Com

PSO1 "To enhance the horizon of Perception of business and the techniques of managing the business with special focus on marketing, insurance and banking theory law and practices."

PSO2 To inculcate the Perception of basic accounting principles and the latest application oriented corporate accounting method.

PSO3 To acquire and develop the decision making skills through costing methods and practicals application of management accounting principles.

PSO4 To gain the Perception in various field of commerce through advertising and sales promotion auditing and entrepreneurial development.

PSO5 To get the Perception of innovations in international market .

अर्थशास्त्र

बी.ए. प्रथम (प्रश्न पत्र 1)

1. अर्थशास्त्र के विभिन्न आर्थिक नियमों , प्रकृति क्षेत्र उपभोक्ता व्यवहार से परिचित होंगे ।
2. उत्पत्ति के नियमों की क्रिया” गीलता आंतरिक एवं बाह्य बचत, मांग एवं पूर्ति के नियमों का ज्ञान प्राप्त करके व्यवहारिक जीवन में इसका उपयोग कर पाएंगे।
3. विभिन्न प्रतियोगिता बाजार में मूल्य निर्धारण एवं क्रेताओं और
4. उत्पादन में उत्पत्ति के विभिन्न साधनों के योगदान का ज्ञान प्राप्त होगा।
5. कल्याणवादी अर्थशास्त्र से अधिकतम लोगों का ज्ञान प्राप्त होगा।

बी.ए. प्रथम(प्रश्न पत्र 2)

1. भारतीय अर्थव्यवस्था के अध्ययन से स्वतंत्रता के पूर्व और बाद के अर्थव्यवस्था की स्थिति का ज्ञान प्राप्त होगा! विभिन्न पंचवर्षीय योजनाओं के माध्यम से देश के आर्थिक विकास के प्रयासों का ज्ञान प्राप्त होगा।
2. भारत के विभिन्न जनांकिकीय विशेषताओं कुपोषण, प्रवास, निर्धनता, बेरोजगारी, असमानता आदि समस्याओं एवं निवारण उपायों का ज्ञान प्राप्त होगा।
3. कृषि उत्पादकता को बढ़ाने के उपायों ग्रामीण साख प्राप्त करने के स्रोत, कृषि फसलों के व्यापार से उचित मूल्य प्राप्त करने का ज्ञान प्राप्त होगा।
4. लघु एवं कुटीर उद्योगों के विकास से ग्रामीण जीवन स्तर को उपर उठाने का ज्ञान प्राप्त होगा।
5. भारत की आंतरिक और विदेशी व्यापार नीति, मौद्रिक और राजकोशीय नीति से परिचित होंगे।

बी.ए. द्वितीय (प्रश्न पत्र 1)

1. मेक्रो अर्थशास्त्र के विभिन्न धारणाओं से परिचित होंगे।
2. व्यापार चक्र की विभिन्न अवस्थाओं, सिद्धांतों से अर्थव्यवस्था में तेजी , मंदी का ज्ञान प्राप्त होगा तथा इसे नियंत्रित करने के उपायों से परिचित होंगे।
3. अंतर्राष्ट्रीय व्यापार से एक देश कैसे अंतर्राष्ट्रीय व्यापार करके लाभ प्राप्त कर सकता है इससे अवगत होंगे।
4. भारत में निर्यात संवर्द्धन के उपायों से परिचित होंगे।

बी. ए. द्वितीय (प्रश्न पत्र 2)

1. मुद्रा के विभिन्न कार्यों, प्रकार, महत्व आदि का ज्ञान प्राप्त होगा।
2. विभिन्न बैंकों के कार्यों का ज्ञान प्राप्त होगा।
3. सरकार के सार्वजनिक आय के स्रोत , सार्वजनिक आय एकत्र करने उद्देश्य” यों से परिचित होंगे।
4. सरकार के सार्वजनिक व्यय में वृद्धि के कारणों एवं किन-किन मदों पर सार्वजनिक व्यय किया जाता है आदि का ज्ञान प्राप्त होगा।
5. बजट के प्रकार, पारित प्रक्रिया, बजट बनाने की प्रक्रिया आदि से अवगत होंगे।

बी. ए. तृतीय (प्रश्न पत्र 1)

1. आर्थिक विकास एवं समृद्धि, मानव विकास सूचकांक, जनसंख्या वृद्धि की समस्या आदि से परिचित होंगे।
2. आर्थिक विकास के विभिन्न मॉडलों से परिचित होंगे।
3. पर्यावरण प्रदूषण के कारण, प्रदूषण नियंत्रण के उपायों को ज्ञान प्राप्त होगा।
4. सतत विकास के सूचक, खाद्य सुरक्षा, स्वास्थ्य एवं पोषण आदि के महत्व को समझेंगे।

बी. ए. तृतीय (प्रश्न पत्र 2)

1. आंकड़ों का महत्व, समकों का संकलन वर्गीकरण, सारणीयन, सर्वेक्षण, न्यादर्श, चित्रांकन एवं रेखाचित्रों का ज्ञान प्राप्त होगा।
2. सांख्यिकी के विभिन्न विधियों से परिचित होंगे।

हिन्दी भाषा

बी. ए. भाग1 आ. पा. हिन्दी भाषा

इस प्रश्न पत्र के माध्यम से छात्र –छात्राओं को मानकीकरण देवनागरी लिपि की विशेषता, समश्रुत, लोकोक्ति, मुहावरा, अनुवाद, पर्यायवाची शब्द, अनेकार्थी शब्द, पल्लवन संक्षिप्तीकरण की जानकारी होगी।

बी. ए. भाग1 हिन्दी साहित्य

प्रथम प्रश्न पत्र— प्राचीन एवं मध्यकालीन काल

विभिन्न कवियों का परिचय , उनकी कविताओं का अध्ययन, व्याकरण से संबंधित संपूर्ण जानकारी होगी

द्वितीय प्रश्न पत्र हिन्दी कथा—साहित्य

हिन्दी कथा के उद्भव, विकास ,रचना समृद्धि उसकी विविधता की जानकारी होगी।

साथ ही विभिन्न कथा एवं कथाकारों का परिचय प्राप्त होगा।

बी. ए. भाग2 आ. पा. हिन्दी भाषा

हिन्दी भाषा

विभिन्न निबंधकार के निबंधों का परिचय कार्यालयीन भाषा, मीडिया की भाषा, वित्त एवं वाणिज्य की भाषा ,मशीन की भाषा अनुवाद व्यवहार, व्याकरण, समास, संधि एवं सांसेप्तीकरण का परिचय प्राप्त होगा।

बी.ए. 2 प्रश्नपत्र प्रथम हिन्दी साहित्य

इस प्रश्न पत्र के माध्यम से विभिन्न कवियों एवं उनकी रचनाओं का परिचय प्राप्त होगा।

बी.ए. द्वितीय प्रश्नपत्र – हिन्दी साहित्य भाग2

नाटक निबंध एवं एकांकी का परिचय प्राप्त होगा।

निबंध लेखन की शैली विकसित करना।

बी.ए. 3 प्रथम प्रश्नपत्र –

जनपदीय भाषा और छत्तीसगढ़ और छत्तीसगढ़ी साहित्य

छत्तीसगढ़ी कवियों एवं रचनाओं का परिचय ,व्याकरण का परिचय,विभिन्न प्राचीन युगों की जानकारी

बी.ए. 3 द्वितीय प्रश्नपत्र –

हिन्दी का काथांग विवेचन

हिन्दी साहित्य के इतिहास , विभिन्न व्याकरण की जानकारी प्राप्त होगी।

एम. ए. पूर्व – हिन्दी प्रथम सेमेस्टर

आदिकाल एवं पूर्व मध्यकाल प्रथम प्र” न पत्र

1. आदिकाल – इतिहास दर्शन, इतिहास लेखन की परंपरा, पुनर्लेखन की समस्या से अवगत
2. आदिकाल की पृष्ठभूमि, वीरगाथा काल साहित्यिक प्रवृत्तियों के बारे में जानकारी
3. सांस्कृतिक चेतना, भक्ति आंदोलन की जानकारी प्राप्त करेंगे।
4. प्रेमाख्यानक काव्य की प्रवृत्तियाँ एवं उपलब्धि की जानकारी
5. लघुत्तरीय एवं वस्तुनिष्ठ प्रश्नों के बारे में अवगत होंगे।

एम. ए. पूर्व –हिन्दी द्वितीय प्रश्नपत्र

प्राचीन एवं मध्यकालीन काव्य

1. कबीर के जायसी एवं चंदबरदाई के बारे में अवगत होंगे।
2. साथ ही प्राचीन कवियों के बारे में जानकारी प्राप्त करेंगे।

प्रथम सेमेस्टर

तृतीय प्रश्नपत्र

छायावाद एवं पूर्ववर्ती काल

1. राष्ट्रीय कवि मैथिलीशरण गुप्त के बारे में जानकारी प्राप्त करेंगे।
2. विद्रोही कवि सुर्यकांत त्रिपाठी निराला की कृतियों से अवगत।
3. कामायनी महाकाव्य की विभिन्न सर्गों से अवगत।
4. द्रुत पाठ के कवियों एवं वस्तुनिष्ठ प्रश्नों से लाभांवित होंगे।

चतुर्थ प्रश्न पत्र

आधुनिक गद्य साहित्य

1. चंद्रगुप्त, जयशंकर प्रसाद— ऐतिहासिक नाटकों की जानकारी
2. मोहन राकेश लिखित आशाढ़ का एक दिन नाटक का परिचय प्राप्त करेंगे।
3. विभिन्न एकांकी एवं एकांकीकारों का परिचय
4. गद्यांशों की व्याख्या करना सीखेंगे।

एम. ए. पूर्व – हिन्दी द्वितीय सेमेस्टर प्रश्न पत्र पंचम

उत्तर मध्यकाल से आधुनिक काल तक

1. रीतिकाल – कालसीमा, नामकरण, प्रवृत्तियाँ, रीतिकालीन साहित्य की विभिन्न धाराएँ, प्रवृत्तियाँ एवं वि” शताओं से परिचय।
2. आधुनिक काल की सामाजिक, राजनैतिक, आर्थिक एवं सांस्कृतिक पृष्ठभूमि से परिचय। सन् 1857 की राज्य क्रांति एवं पुनर्जागरण, भारतेन्दु युग प्रमुख साहित्यकार, एवं साहित्यिक वि” शताओं से अवगत होंगे।
3. द्विवेदी युगीन साहित्य एवं साहित्यकारों से परिचय प्राप्त करेंगे।
4. गद्य साहित्य के विभिन्न रूपों का उद्भव, विकास, नाटक का उद्भव, विकास, गीति नाटकों का परिचयात्मक अध्ययन करेंगे।

एम. ए. पूर्व हिन्दी द्वितीय सेमेस्टर प्रश्न पत्र षष्ठ

मध्यकालीन काव्य

1. सूरदास— भ्रमरगीत से परिचय
2. तुलसीदास— सुन्दरकांड से परिचय
3. बिहारी के दोहों से परिचय
4. द्रुतपाठ हेतु विभिन्न कवियों का परिचय प्राप्त करना
5. लघुत्तरीय प्रश्नों से लाभान्वित होंगे।
6. वस्तुनिष्ठ प्रश्नों से विभिन्न प्रतियोगी परीक्षाओं में लाभ होगा।
- 7.

एम. ए. पूर्व हिन्दी द्वितीय सेमेस्टर प्रश्न पत्र सप्तम

प्रयोगवादी एवं प्रगतिवादी काव्य

1. प्रयोगवाद के जनक अज्ञेय की जानकारी प्राप्त करेंगे।
2. प्रगतिवादी कवि गजानंद माधव मुक्तिबोध के बारे में परिचय एवं उनकी रचनाओं से अवगत होंगे।
3. वैद्यराज नागार्जुन की कविताओं से परिचय प्राप्त करेंगे।

एम. ए. पूर्व हिन्दी द्वितीय सेमेस्टर प्रश्न पत्र अष्टम

आधुनिक गद्य साहित्य (उपन्यास, निबंध तथा कहानी)

1. उपन्यास— गोदान, प्रेमचंद उपन्यास के बारे में जानकारी प्राप्त करेंगे।
2. वाणमह की आत्मकथा – हजारी प्रसाद द्विवेदी का परिचय प्राप्त करेंगे।
3. विभिन्न निबंधों की जानकारी
4. कहानी लेखन की जानकारी होगी
- 5.

एम. ए. पूर्व हिन्दी तृतीय सेमेस्टर प्रश्न पत्र प्रथम

1. भारतीय काव्य शास्त्र का परिचय
2. अलंकार सिद्धांतों के बारे में जानकारी प्राप्त करेंगे।
3. पाश्चात्य काव्य भास्त्र— प्लेटो, अरस्तु लॉजाइनस से परिचय
4. कला की अवधारणा से परिचय

एम. ए. पूर्व हिन्दी तृतीय सेमेस्टर प्रश्न प्रत्र द्वितीय

भाषा विज्ञान

1. भाषा विज्ञान, भाषा अभिलक्षण, स्वरूप, व्याप्ति से परिचय
2. स्वन प्रक्रिया— स्वरूप और भाषाओं से परिचय
3. अर्थ विज्ञान— अर्थ की अवधारणा भाब्द और अर्थ के संबंध से परिचय

एम. ए. पूर्व हिन्दी तृतीय सेमेस्टर प्रश्न प्रत्र तृतीय

कमकाजी हिन्दी एवं पत्रकारिता

1. हिन्दी के विभिन्न रूपों से परिचय
2. पारिभाषिक भाब्दावली से अवगत होंगे।
3. इंटरनेट संपर्क उपकरणों से परिचय होंगे
4. समाचार लेखन कला, भीर्षक संरचना, संपादकीय लेखन, पृष्ठसज्जा, साक्षात्कार, पत्रकार वार्ता, प्रमुख प्रेस कानून एवं आचार संहिता से परिचित होंगे।

एम. ए. पूर्व हिन्दी तृतीय सेमेस्टर प्रश्न प्रत्र चतुर्थ

भारतीय साहित्य

1. भारतीय साहित्य का स्वरूप, भारतीय साहित्य के अध्ययन की समस्याओं से परिचय
2. पश्चिमोत्तर भाषाओं की जानकारी
3. मराठी भाषा साहित्य, मलयालम भाषा, बंगाली भाषा का हिन्दी भाषा साहित्य के साथ तुलनात्मक अध्ययन
4. उपन्यास अग्निगर्म— महा” वेतादिनी
5. नाटक हय वंदन
6. कविता संग्रह— कोच्चि दरखत के बारे में जानेंगे।

एम. ए. पूर्व हिन्दी चतुर्थ सेमेस्टर प्रश्न प्रत्र पंचम

हिन्दी आलोचना तथा समीक्षा भास्त्र

1. विभिन्न वाद— मनोवि” लेशण वाद, अस्तित्ववाद, स्वच्छवाद, अभिव्यंजनावाद, मार्क्सवाद, आधुनिक समीक्षा की विशिष्ट प्रवृत्तियों के बारे में जानकारी प्राप्त करेंगे।
2. हिन्दी कवि आचार्यों का काव्यशास्त्रीय चिंतन को जानेंगे।
3. आधुनिक आलोचन से अवगत होंगे।
4. व्यावहारिक समीक्षा की जानकारी प्राप्त करेंगे।
5. लघुत्तरीय एवं वस्तुनिष्ठ प्रश्नों से प्रतियोगी परीक्षाओं की तैयारी होगी।

चतुर्थ सेमेस्टर प्रश्नप्रत्र षष्ठ हिन्दी भाषा

1. प्राचीन मध्यकालीन, आधुनिक भारतीय भाषाओं की जानकारी प्राप्त करेंगे।
2. हिन्दी के भौगोलिक विस्तार के बारे में ज्ञान प्राप्त करेंगे
3. हिन्दी के विविध रूप और संवैधानिक स्थिति से परिचित होंगे
4. हिन्दी में कम्प्यूटर सुविधाओं से लाभान्वित होंगे
5. देवनागरी लिपि की विशेषताएं एवं मानकीकरण के बारे में जानेंगे।

प्रश्नप्रत्र सप्तम्

मीडिया—लेखन एवं अनुवाद

1. जनसंचार प्रौद्योगिकी एवं चुनौतियों की जानकारी, विभिन्न जनसंचार माध्यमों का स्वरूप,—मुद्रण, श्रवण, दृ” य—श्रव्य, इंटरनेट समाचार वाचन लेखन, रेडियों नाटक, उद्घोशणा लेखन विज्ञापन लेखन की जानकारी
2. दृष्य श्रव्य माध्यमों में : भाषा की प्रकृति पार्श्व वाचन, विज्ञापन की भाषा पटकथा लेखन, टेली ड्रामा की जानकारी प्राप्त होगा।
3. हिन्दी की प्रयोजनीयता में अनंवाद की भूमिका को जानेंगे।

4. प्रशासनिक भाषावली, पदनाम अनुवाद के सिद्धांत एवं व्यवहार सारानुवाद आदि को जानेंगे।

चतुर्थ सेमेस्टर प्रश्न प्रत्त-अष्टम

जनपदीय भाषा आर साहित्य (छत्तीसगढ़)

1. छत्तीसगढ़ी भाषा- भौगोलिक सीमा, नामकरण, भाषिक स्वरूप के बारे में जानकारी प्राप्त करेंगे।
2. छत्तीसगढ़ी साहित्य की युग प्रवृत्तियों एवं इतिहास के बारे में जानकारी प्राप्त करेंगे।
3. छत्तीसगढ़ी कविता एवं कवियों का परिचय प्राप्त करेंगे।
4. छत्तीसगढ़ी नाटक एवं उपन्यास से परिचित होंगे।

ए. 1 इतिहास

प्रथम प्रश्न पत्र— भारत का इतिहास प्रारंभ से 1206 ई.

इस प्रश्न पत्र के अध्ययन के उपरांत छात्र भारतीय इतिहास के स्रोतों का सर्वेक्षण तथा भारत की भौगोलिक विशेषताएँ, प्रागैतिहासिक काष्ठ हडप्पा की सभ्यता लौह तथा महा पाशाण काल का ऋगवैदिक एवं उत्तर वैदिक काल इस युग में सामाजिक, आर्थिक, धार्मिक एवं राजनीति स्थिती, बौद्ध एवं जैन धर्म मगध साम्राज्य उत्कर्ष सिकंदर की विजय तथा उसका प्रभाव मौर्य एवं गुप्त साम्राज्य की राजनीति एवं संस्कृतिक तथा वैज्ञानिक प्रगति की जासकरी।

क्षेत्रीय राजवंशों में भुंग, सातवाहन, कुशाण, चोल, चाल्युक, पाण्ड्य क्षत्रियों का संक्षिप्त परिचय एवं क्षेत्रीय राजनीति में प्रभाव का उद्घयन भारत का उक्षिण पूर्व एशिया में सांस्कृतिक एवं व्यापारिक सम्बंधों का उल्लेख।

विदेशी मुस्लिम आक्रमणकारियों के आक्रमण एवं उसके प्रभाव का दूरगामी अध्ययन तथा छत्तीसगढ़ का भौगोलिक परिचय एवं प्रमुख राजवंशों का संक्षिप्त परिचय एवं उनके प्रशासकीय कार्यों का ज्ञान प्राप्त करेगें।

द्वितीय प्रश्न पत्र – विश्व का इतिहास 1453 से 1890तक

संबंधित प्रश्न पत्र में छात्र यूरोप में सामन्तवाद का पतन आधुनिक युग का अविर्भाव एवं आधुनिक युग की विशेषताओं से परिचित होगें धर्म सुधार आंदोलन राष्ट्रीय राज्यों का उदय वाणिज्यवाद, अपनिवेशवाद, औद्योगिक क्रांति, एवं गृह युद्ध गौरवपूर्ण क्रांति, अमेरिका एवं फ्रांस का स्वतंत्रता संग्राम नेपोलियन एवं मेट की गृह एवं विदेशनीति का मूल्यांकन किया जावेगा, इटली एवं जर्मनी का एकीकरण में मैजनी गैरी बाल्डी, काउन्टर काबूर एवं विस्मार्क का योगदान से छात्रों को अवगत कराया जावेगा।

बी. ए. भाग द्वितीय –

प्रथम प्रश्न पत्र भारत का इतिहास 1206 से 1761 तक

संबंधित प्रश्न पत्र के द्वारा छात्र/छात्राओं को सल्तनत कालीन इतिहास जानने के स्रोत का परिचय कराया जावेगा साथ ही 1206 से 1526 ई. तक के सल्तनत कालीन भासकों दासवंश खिलजी वंश, तुगलक वंश, सैय्यद एवं लोदी वंश के भासकों का विजय अभियान प्रशासन सुधार योजना का बोध कराया जावेगा।

मुगल कालीन इतिहास जानने के विविध स्रोतों का परिचय देते हुये मुगलकालीन भासकों बाबर, हुमायूँ, अकबर, जहांगीर शाहजहाँ एवं औरंगजेब की युद्धनीति, प्रशासन, धार्मिक नीति एवं मुगलकालीन सामाजिक, आर्थिक, स्थापत्यकला, का विवरण प्रस्तुत किया जावेगा, पानीपत के युद्ध के परिणामों के बाद मराठों का उत्कर्ष एवं मराठों की प्रशासकीय व्यवस्था का अवलोकन किया जावेगा। मध्ययुग के भक्ति कालीन संतो, सुधारकों, के अपदेशों का भारतीय समाज पर प्रभाव की विवेचना की जावेगी।

द्वितीय प्रश्न पत्र के माध्यम से छात्र/छात्राओं को यूरोपीय राजनीति में घटित घटनाओं का अवलोकन कराया जावेगा जर्मनी के राष्ट्रपति विलियम की विदेश नीति, अफ्रीका का विभाजन, जापान का आधुनिकीकरण रुस जापान युद्ध 1904-05 चीनी क्रांति, अफीम युद्ध, बाल्फन युद्ध, से संबंधित घटनाओं का उल्लेख किया जावेगा, प्रथम विश्वयुद्ध एवं युद्ध के बाद वर्सायकी उदय एवं राष्ट्रसंघ के विरोधी राष्ट्रों हिटलर एवं मसोलिनी का उत्कर्ष, एवं द्वितीय विश्व युद्ध का प्रारंभ एवं अंत तथा विश्व भांति के लिए संयुक्त राष्ट्रसंघ का गठन, भीत युद्ध विश्व शांति को चुनौती कोरिया, एवं फिलीस्तीन की समस्या।

बी.ए. भाग तृतीय प्रथम प्रश्न पत्र

भारत का इतिहास 1761 से 1947 ई.तक

प्रस्तुत पाठ्यक्रम में भारत में यूरोपीयनों का आगमन व्यापार एवं व्यापारिक संघर्ष, अंग्रेजों द्वारा व्यापार के साथ-साथ राजनीतिक सत्ता प्राप्त करना प्लासी एवं बक्सर का युद्ध ईस्ट इण्डिया कंपनी के अधीन भारत के राज्यों में भासन सहायक संधि, भूमि का स्थायी बंदोबस्त एवं हडपनीति के द्वारा साम्राज्य का विस्तार, अंग्रेजों द्वारा सामाजिक शिक्षा, एवं रेलों का विकास, अंग्रेजी भासन के परिणाम स्वरूप हस्तकला, कुटीर उद्योगों का पतन, अंग्रेजी भाषण के परिणाम स्वरूप कृषक, आदिवासी, मजदूर एवं महिला जागृति आन्दोलन, विभिन्न सुधार आन्दोलन, बम्ह समाज, आर्यसमाज, प्रार्थना समाज एवं मुस्लिम समाज सुधार आन्दोलन का सूत्रपात हुआ। कंपनी के भासन अधीन देशी रियासत, पाश्चात्य शिक्षा एवं प्रेस का विकास, ब्रिटिश भासन काल में प्रशासनिक व्यवस्था सामाजिक सुधार छत्तीसगढ़ में कबीर पंथ, सतनाम पंथ एवं जनजातीय संस्कृति का अवलोकन।

द्वितीय प्रश्नपत्र

भारत के राष्ट्रीय आन्दोलन का इतिहास 1857 ई. से 1947 ई. तक

संबंधित प्रश्नपत्र में अध्येताओं को राष्ट्रवाद का उदय, 1857 ई. की क्रांति भारतीय राष्ट्रीय काँग्रेस की स्थापना, उदार दल, उग्रदल एवं गांधीवादी विचारधारा का उदय, बंगाल विभाजन, स्वदेशी आन्दोलन, साम्प्रदायिकता का उदय, होमरूल आन्दोलन, असहयोग, सविनय एवं भारत छोड़ो आन्दोलन, ब्रिटिश साम्राज्यवादियों का सबसे बड़ा कहर भारतीय मजदूर किसानों पर बरपा परिणाम स्वरूप कृषक, आदिवासी एवं

मजदूर संगठनों का प्रदर्शन, आजाद हिन्द फौज, स्वतंत्रताप्राप्ति भारत विभाजन, देशी राज्यों का विलीनीकरण, छत्तीसगढ़ में 1875 की कान्ति की पृष्ठभूमि नारायण सिंह का योगदान 1875 का मुरिया एवं 1910ई० का भूमकाल आन्दोलन छत्तीसगढ़ में 1920 से 1947 तक गांधीवादी आंदोलन एवं रियासतों का विलीनीकरण ।

समाजशास्त्र

1. छात्र/ छात्राएं समाजशास्त्र के अध्ययन से समाजशास्त्र विषय से परिचित होंगे। समाज,समुदाय ,समिति , नातेदारी, विवाह ,स्तरीकरण तथा हमारी संस्कृति , आदर्श ,नैतिकता ,मूल्यों जनरीति ,प्रभाएं परम्पराएं आदि के बारे में जानकारी प्राप्त करेंगे।
2. विद्यार्थी समाजशास्त्र के अध्ययन से हमारे समाज की प्राचिन संस्कृति वर्ण ,आश्रम , धर्म , पुरुशार्थ तथा भारतीय समाज की संरचना , जनजातियों , दलित , स्त्रियों ,अल्पसंख्यक, भारतीय समाज की मौलिक संस्थाएं जाति व्यवस्था , विवाह ,परिवार में परिवर्तन , पारिवारिक समस्याएं ,सामाजिक समस्याएं आदि का ज्ञान अर्जन कर जानकारी प्राप्त करेंगे।
3. भारत में रहने वाली विभिन्न जनजातियों ,उनका वर्गीकरण ,उनकी सामाजिक संस्कृति (नातेदारी ,विवाह ,परिवार , धार्मिक वि" वास एवं संस्कृति की जानकारी)जनजातीय विकास की याजनाएं ,आन्दोलन तथा जनजातियों की विभिन्न समस्याएं उनमें बेरोजगारी , निर्धनता , ऋणग्रस्ता ,आत्महत्या आदि उत्पन्न होने के कारण , निवारण , भासन तथा समाज इसे रोकने के लिये क्या प्रयास कर रहे हैं ,की जानकारी प्राप्त करते हैं।
4. हमारे समाज में जो विभिन्न प्रकार के अपराध होते हैं। (जैसे संगठित ,असंगठित ,सफेदफोश, कालाबाजारी , भ्रष्टाचार आदि अपराध होते हैं ,अपराधियों को सुधारने के तरीके, समाज को अपराधियों से होने वाली हानि तथा सुधार संस्थाओं की जानकारी प्राप्त करते हैं। साथ ही मद्यपान तथा दण्ड को व्यवस्था से अवगत होते हैं।
5. विद्यार्थी समाजशास्त्रियों के विचारों से , उनके द्वारा प्रतिपादित विभिन्न सिद्धांत (सामाजिक एकता एवं आत्महत्या का सिद्धांत , कारण , हल , वर्ग , संघर्ष , नौकर" ाही , विलासी वर्ग , सामाजिक परिवर्तन के विभिन्न कारक तथा समाज" ास्त्र के विकास के विभिन्न चरण , अहिंसा , सत्याग्रह तथा राधाकमल मुखर्जी द्वारा प्रतिपादित मूल्य आदि की जानकारी प्राप्त करते हैं।
6. सामाजिक भाोध की प्रविधियों के अध्ययन से छात्र/छात्राएं भाोधकर्ता द्वारा भाोध करते समय विभिन्न घटनाओं , समस्याओं जैसे :- बेरोजगारी ,निर्धनता ,ऋणग्रस्तता ,दहेज , गंदी बस्ती ,अपराध , बालअपराध , आदि घटने के कारण , उसका निवारण तथा विभिन्न घटनाओं का अवलोकन ,निरीक्षण , परीक्षण , वर्गीकरण , सत्यापन , निश्कर्ष निकालना आदि की जानकारी प्राप्त करते हैं। सामाजिक भाोध की विभिन्न विधिया , सर्वेक्षण , साक्षात्कार , अनुसूची , प्रश्नावली , निर्देशन पद्धति द्वारा तथ्यों का संकलन करना , सांख्यिकीय का महत्व तथा दोष आदि की जानकारी प्राप्त कर अपने भान के वृद्धि करते हैं।

POLITICAL SCIENCE

Course Outcome of U.G./P.G.

- Every student should know about our constitution. We know about Rights & duty through constitution.
- Procedure, working, functions of Executive, legislature & Judiciary of centre & state.
- Working, procedure, Jurisdiction of supreme court – Judicial activism, Judicial Review.
- Every one should know about party system & pressure Groups.
- Virtue is knowledge & knowledge is virtue (गुण ही ज्ञान है ज्ञान ही गुण है) As per all western & Indian Political Thought.
- By comparative politics we know about so many countries like Britain, U.S.A., Switzerland, China, Russia, Pakistan etc.
- Through Freedom movement & Politics women got importance & Role in Indian Society.
- Through political Socialization one can connect/ take part in political Activities.
- We know about policy of different countries.
- We know about Plantation, Changes in weather, Global warming etc.
- Through Globalisation world has become smaller.
- By this concept of humanity student can know about values, Humanism, Human Rights etc.
- By public Administration we know about –

Posdcorb – 1) Planning 2) Organization 3) Stathing 4) Direction

5) Coordination 6) Reporting 7) Budgeting.

- One should know about accountability .
- Sailable beauties of Beaurocracy, types, views, evils & suggestion of different critics.
- Importance of Budget, many functions principles & world wide Budget process.
- Many of Global Village liberalisation, New Public management, public choice thought etc.

- Indian freedom movement P.G - U.G Both
- Gender issue P.G - U.G Both
- Judicial Activism & judicial reform P.G - U.G Both
- Political culture P.G - U.G Both
- To know world by reading European union BRICKS(P.G - U.G)
- Distinguishing features of Indian foreign policies
- Know world – C:Y.B.Y.N.P.Y., North -South (P.G - U.G) Dialogue, South -South Dialogue, W.T.O.
- Panchayati Raj - (P.G - U.G Both)
- Voting behaviours -(P.G - U.G Both)
- Political Economy of international relation
- Accountability in public administration
- Freedom movement in Chhattisgarh (P.G.)(U.G.)
- Environmental crisis – Aspects.
- Human Rights – B.A. III
- World peace –(B.A.III)

Geography

Program outcome

After completion of graduation in geography the students will understand different aspects of physical and human geography, economic and resource geography, remote sensing, geography of India and Chhattisgarh. The students will also learn different surveying and statistical methods and representation of data and facts cartographically.

BA first year- Second paper

Human Geography

In this paper students will learn about man- environment relationship, different schools of Environmentalism, Human Development Index, races, different communities, population, migration, urbanization, rural and urban settlement and contemporary environmental issues.

Second year

First paper: Economic and commercial Geography

In this paper students will learn concept of economic geography, resources like soil, forest, water, minerals, power resource, crops, agricultural region, industrial region and theory of agricultural and industrial location, world transportation, trade, trade blocks, conservation of resource and sustainable development.

Second Paper: Geography of India

In this paper students will learn about physiography, drainage, soil, climate, forest, minerals, power resources, population, major crops of India, green revolution and agricultural region. Lastly they will also study some regions of India.

BA Third Year

First paper- Remote Sensing

In this paper students will learn about remote sensing, electro magnetic radiation, spectrum, band, interaction of EME with surface and atmosphere, type of remote sensing, aerial photograph, platform and sensor, spatial resolution, signature and product; image processing, technique, application of RS in resource and environmental mapping. Indian satellite, ISRO, GIS, geoinformatics, toposheet, surveying, aerial photograph, satellite data, types of data, data analysis, raster data, vector data, special data, special information technology.

Second Paper Geography of Chhattisgarh

In this paper students will learn physical features of Chhattisgarh, drainage, climate, natural resources like soil, water, forest, minerals and power resource, agriculture, crops, population, its tribal population and culture.

Course outcome

BA First, Geography paper- First- Physical Geography

In this paper students will learn about lithosphere, atmosphere and hydrosphere of the earth.

ENGLISH

Course Outcome of U.G.

1. Over the period of time, English language has become universal language to communicate with each other specially in profession and business.
2. Most of the jobs in today's world are based on computers for which, knowledge of English language is needed.
3. English language in rural area makes students competent and confident to for any challenge in professional world.
4. English literature, American, Indo Anglian literature is being introduced.
5. English language and literature is a strong means to introduce Indian culture.
6. Through the study of English language/ literature, many ancient and modern Authors, poets, dramatics works are known in today's world.
7. Indian Art, Veda, Religions Granth, Cultures Civilization, their differences in ancient and today's world are being seen.
8. Literature gives knowledge of Regional Customs, Festivals, Moral / Human Values, which makes man's personality and therefore a good society.
9. Knowledge of phonetics, Grammar for correct usage, pronunciation, speaking etc. is gained.

Programme Outcome of English

B.A/B.Sc./B.Com – I, II, III U.G.

- Through foundation course i.e. English language/ literature, different writers, poets, dramatics in the form of poems, prose, etc are being studied.
- Letter writers – formal/ Business letters, informal letters.
- Essay writing.
- Letter writing.
- **Grammar:** Tense, Voice, Speech/ Narration, Noun, Pronoun, Articles, Preposition, Clause, Combining Sentences – Simple, Compound, complex.
- Paragraph writing.

Course Outcomes

B. Sc.I (Botany)

On completion of the course, students will be able to:

- Students learned about the different groups of microorganisms.
- Students taught depth of knowledge on microbial interaction and their metabolism
- Understand the diversity among Bacteria, Viruses and Algae and their morphology, systematics and biology and life cycle patterns
- Understand their economic importance and the biodiversity of Fungi, lichens and plant pathogens.
- Get knowledge on different mushroom cultivation procedures.
- The students will enable to know the salient feature's structure, reproduction, life cycle and economic importance of fungi, bryophytes.
- To understand the phylogeny from Bryophytes and evolution of sporophytes in bryophytes.
- Students gain adequate knowledge on general characters, morphology and anatomy classification and economic importance of Pteridophytes & Gymnosperms.
- Student are able to learn about various Gymnospermic plants & fossils that help in the give information about ancestor link.
- Student gets knowledge in the methods of fossil and fossilization.
- Through Geological time scale students understand the sequence of geological periods in the history of earth.

B. Sc.II (Botany)

On completion of the course, students will be able to:

- Understand external structure. classification of plant families, their description and its economic importance.
- To acquire knowledge in the preparation of herbarium techniques.
- To gain knowledge on various types of inflorescence and fruits, taxonomic families and their useful parts of plants
- Understand the scope & importance of anatomy and various types of tissue systems.
- Understand normal and anomalous secondary growth in plant
- Understand structure and development of plant reproductive organs.
- Know about the process of fertilization, endosperm and embryogeny.
- Student know about the Ethnobotany and their importance

- Students learned about the interaction between biotic and abiotic components of the environment, concept of energy flow in the ecosystem.
- Students will experience in plasmolysis, light intensities were influenced on transpiration, stomata size and number are responsible for transpiration rate, different coloured light are important for oxygen evolution, respiration rates are measured by using germinating seeds with Respirometer..
- Understand the plants and plant cells in relation to water and process of photosynthesis, respiration the movement of sap and absorption, translocation of water and food in higher plants.
- To become knowledgeable in plant and its water relations.
- Students will be able to gain knowledge on role of micronutrients in plant growth, their development and understand the mechanism of nitrogen metabolism.
- To gain knowledge about chloroplast structure, photosynthetic pigments, the path of energy from the light reactions through Calvin cycle. Students are able to understand the process of translocation of organic solutes in plants.
- To understand the energy releasing steps in Glycolysis. Students will be familiar about the mechanism of respiration.
- To acquire knowledge in plant growth regulator and its uses, understand the physiology of flowering and photoperiodism.

B. Sc.III (Botany)

On completion of the course, students will be able to:

- Get knowledge about bio instruments like, centrifuge, Spectrophotometer, Chromatography principle, and be able to apply these instrument mechanisms to the process of experimentation.
- Students are capable to become practical knowledgeable in of sugars, proteins, lipids and separation of plant pigments by paper chromatography methods.
- Understand the scope and importance of Plant Pathology, etiology and control measures of plant diseases.
- Acquired knowledge on the internal structure of diseased plant parts.
- Student Know about their environment and reason of their pollution and aware about them.
- Know about different pollutions, consequences in the environment and its mitigation. Student Know about recombinant DNA technology, Biotechnology and its application.
- Know about introduction and uses of Bio statistic and central tendency.
- Cell biology give knowledge about cell organelles, importance their function
- Acquire knowledge on ultrastructure of cell and understand the structure and chemical composition of chromatin and concept of cell division.

- Student will be able to observe mitosis cell division through the cytological preparation from onion root tips.
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Programme Outcomes

- Students know about different types of microorganism and their effect in plant.
- Students understand the lower plants such as algae, fungi, bryophyte, pteridophyte that indicates the evolution in plants.
- Understand in depth about fungi, algal, Bryophyta & pteridophyte.
- Students learn the characteristic of various plants and classification of different plant groups to understand the different taxonomic group and evolutionary.
- Gymnosperm and fossils: Student is able to learn about various Gymnospermic plants & fossils that help in giving information about ancestor link.
- The student gains adequate knowledge about diversity of plants and biology of seed plants.
- Economic botany gives knowledge about economic importance and their utilization.
- They are able to understand about environmental problems along with finding solutions.
- Understand the plant disease, chemical properties and evolutionary relationship among taxonomic groups.
- They learn about the importance of medicinal plants and their importance in human life.

Course outcomes

M.Sc. I Semester (Botany)

After completion of this course:

- Students will gain understanding about gene, genetic recombination producing the characters differently.
- Student will also know the interaction of the packaging of DNA occurs.
- Student can differentiate Euchromatin and heterochromatin region of chromosome on the basis of staining properties and draw a good karyotype and Idiograms of Karyotype, and also how the evolution of Karyotype takes place.
- Understanding of the different structural and numerical changes of chromosome can able to use the trisomic and monosomic for the chromosome mapping.
- Understanding the role and process of mutation and different mutagenic agent which brings about mutation in the organism.
- The student will know about the cell structures in relation to function of cells the fundamental unit of life.
- Students will understand the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles.
- They learn about the Isolation of plant DNA and its quantification, Isolation of RNA and its quantitation & Estimation of seed proteins.
- Students will be able to understand the structure, type and identification of archaebacteria, eubacteria cyan bacteria.
- Students will gain understanding of Thallus structure, reproduction and economic importance algae.
- Students will gain understanding of the classification, structure of mycelium reproduction of fungal species also know and learn classification and evolutionary trends in Fungi Bryophyta, Pteridophyta and Gymnosperm.
- Students can compare the characters of different orders & relationship of each order from Cordaitales to Gnetales.
- Student can critically differentiate the characters of three orders of Gymnosperm i.e., Ginkgoales, Coniferales, and Taxales.
- Students can critically differentiate fossil and living fossil. Students will also understand the evolutionary tendencies and comparative morphology of Cycadales,

M.Sc. II Semester (Botany)

On completion of this course, the students will be able to:

- Acquire basic skills on the plant taxonomy with special reference to Angiosperm.
- Illustrate the types; merits and demerits of various system of classification
- Detailed study on diverse morphology of angiosperms.
- Make scientific illustrations of vegetative and reproductive structures of plants of selected 25 families. To understand the diversities of plant kingdom and their relation to evolution of plants.
- A systematic reconstruction of plant kingdom can be made only after the complete knowledge of the individual plants.

- To understand the various aspects of plant nomenclature and classification.
- To understand the classical and modern trends of Angiosperm taxonomy
- Detailed analysis: - ultra-structure of a plant cell.
- Enumerate the functions of each cell organelle. Draw and explain the structure of biomolecules.
- Explain the concepts in molecular biology in application level, detailed study on operons.
- Understand how to apply the basic concepts of Plant Physiology in other disciplines of agriculture.
- To understand, to know and discuss the concept of physiological processes of plants.
- Understand and describe the distribution of metabolic processes in the cell.
- Understand the importance of mineral nutrition, transpiration, photosynthesis and respiration of plant organisms.
- To understand and explain the processes of growth and development of plants.

M.Sc. IIISemester (Botany)

After successful completion of this course, students will be able to:

- Know about plants anatomical structure, their developmental patterns.
- Plant reproductive parts development of male, female gametophytes and fruits.
- Vascular tissues and its constituents by sections and maceration, wood anatomy, Mechanical tissues (Collenchyma, Sclerenchyma, Stone cells and Xylem) , Secretory tissues (Mucilage Canals, Resin canals, Nectaries, and oil glands), laticifers (Latex cells and Vessels).
- To know about normal and abnormal secondary growth.
- Understand core concepts of Economic Botany and relate with environment, populations, communities, and ecosystems.
- Develop a basic knowledge of taxonomic diversity and important families of useful plants.
- Appreciate the diversity of plants and the plant products in human use.
- On completion of this course the students are able to analyze various types of ecosystems, correlate different ecosystems.
- To analyze the threat and suggest conservative measures.
- The students are also trained in the environmental impact analysis
- Students are able to analyze, monitor various physical, chemical and biological properties of soil water and air.
- Students learned about the interaction between biotic and abiotic components of the environment.
- Know about the concept of energy flow in the ecosystem.
- Student learn about classification, characteristics, ultra structure of Prokaryotic and Eukaryotic microbes
- Student know about organisms and causal factor responsible for plant diseases & methods of studying plant diseases.
- Student familiarize with some common plant diseases of India and Gain knowledge on Host parasite interaction process
- Understand the scope and importance of Plant Pathology
- Know the etiology and control measures of plant diseases

M.Sc. IV Semester (Botany)

After successful completion of this course, students will be able to:

- Discuss the different applications of biotechnology and understand the importance of cells to genetic engineering.
- Know the natural function of restriction endonucleases and how a normal bacterial cell protects its DNA from their activity.
- Understand how insulin is produced using bacterial cells and importance to gene technology.
- Describe techniques used to characterize DNA and Axenic culture of cell.
- Students will know about concept of diseases, knowledge and awareness of diseases, causal agents of plant diseases, identification methods and management of crop diseases.
- Discuss the structural elements of plants floral parts and reproduction • Discuss the Pollination, embryology and apomixis.
- Acknowledge the economic uses of plants in modern society.
- Acquire an increased awareness and appreciation of plants & plant products encountered in everyday life.

Develop scientific insights into the development of many plant products that have shaped our society.

- The students will be able to express the historical development of ethno botany.
- Explain ethnobotanically uses of plants and their native habitats and cultivated lands.
- Student will develop the understanding of growth, development and reproduction in plants as well as understand the physiological and metabolic changes happening along with the environmental impact.
- Student will develop the understanding of growth, development and reproduction in plants as well as understand the physiological and metabolic changes happening along with the environmental impact.
- Learning molecular and technical skills along with applications of the instrumentation. Designing/conducting experiments and analysing experimental data.
- Introduce students to the basic principles and concepts of plant pathology.
- Familiarize students with the basic vocabulary of plant pathology and plant disease management using flash cards with images and audio files.
- Introduce and illustrate the major groups of organisms that cause plant diseases.
- Enhance student's understanding of scientific research, especially as it applies to the science of plant pathology and the study of microorganisms.
- Improve the written and oral communication skills of students through class, group and individual projects.
- Prepare students for additional classes in Plant Pathology and related disciplines.

Program Outcomes

- The M.Sc. - Botany curriculum is designed to equip students with subject domain knowledge and technical skills pertaining to plants in a holistic manner.
- A student completing the course is able to understand different branches of Botany such as systematics, evolution, ecology, developmental biology, physiology, biochemistry, plant interactions with microbes and insects, morphology, anatomy, reproduction, genetics and molecular biology of various life-forms
- Provide a framework that students can use in their profession to best approach plant disease management
- Students have developed the skills to identify different types of plants.
- Students have developed the skills to do laboratory work from different equipments.
- Students have developed the skills related to scientific research in the area of Botany.
- Students are ready to transform the society and can explain the importance of different plants to human beings.
- The student completing the course is able to identify various life forms of plants, design and execute experiments related to basic studies on evolution, ecology, developmental biology, physiology, biochemistry, plant interactions with microbes and insects, morphology, anatomy, reproduction, genetics, microbiology, molecular biology, recombinant DNA technology, proteomics and transgenic technology.
- The student completing the course is capable to perform short research projects using various tools and techniques in plant sciences and develop scientific temperament and research attitude.

ZOOLOGY

Course outcome

- (1) CO1:- Cell biology aims for the study of various types of cells and its organelles. It also includes the study of tools and techniques of Cytology.
- (2) CO2:-Classification of invertebrates (from phylum protozoa to echinodermata) and the type study from each phylum is also done.
- (3) CO3:-Origin and classification of chordates is studied.
- (4) CO4:-Special features of Fish, Amphibia, Aves and mammals are also studied.
- (5) CO5:- Developmental biology aims for the study of reproductive biology and development of embryo.
- (6) CO6:-Reproductive biology aims to study about mammalian reproductive system.
- (7) CO7:- Comparative anatomy and physiology enables students to have comparative study among various classes of chordates.
- (8) CO8:- Vertebrate endocrinology provides knowledge about Hormones its characters, nature, source and effects.
- (9) CO9:- Evolution enables students to learn about the theories of organic evolution and process related to evolution.
- (10) CO10:- Applied zoology aims to give knowledge about economic importance of zoology.
- (11) CO11:- Ecology and environmental biology involves the study of major ecosystem and its components. It enables to understand the surrounding environment.

- (12) **CO12**:- Toxicology study enables the students to understand the toxicity, its characters, source and effect.
- (13) **CO13**:- Microbiology and medical microbiology provides knowledge about various useful and harmful microbes as well as disease causing microorganisms.
- (14) **CO14**:- Genetics and biotechnology enables students to learn about various modern scientific practices related to chromosome and DNA.

Program Outcome

- (1) **PO1**:- Knowledge of cell biology, cell physiology and Biochemistry: Students learn about basic structure physiology and biochemistry of cell.
- (2) **PO2**:- Taxonomy and Evolution: Students are able to learn about specific characteristics of hierarchy of classification and understand the Evolutionary line.
- (3) **PO3**:- Anatomy, Physiology, Developmental biology, Ethology: Students are able to learn about anatomy, physiology, embryology, developmental biology of various types of animals and their behavioral science.
- (4) **PO4**:- Microbiology, Genetics, biotechnology: It provides knowledge about applied medical and pathological microbiology, biotechnology and genetics.
- (5) **PO5**:- Environmental biology: Students gets aware about ecosystem and environmental impact assessment.

Program Specific Outcomes

- (1) **PSO1**:- Understand the nature and basic concept of cell biology, Biochemistry, Taxonomy and ecology.
- (2) **PSO2**:- Analyse the relationships among animals, plants and microbes.
- (3) **PSO3**:- Perform procedures as per laboratory standards in the areas of Biochemistry, Bioinformatics, Taxonomy, Economic Zoology and Ecology.
- (4) **PSO4**:- Understand the applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine.

PHYSICS

COURSE OUTCOME:-

Upon taking the foundation course in physics:-

1) In Classical mechanics to understand classical problem and there solution and about gravitational force & its effect.

Electromagnetic theory to learn, how the electricity generate by electric field & magnetic field. And varies type of effect of electric field, magnetic field, electromagnetic field in our life, in our nature, in our universe also.

2) In thermodynamic student study about thermodynamic system, properties of thermodynamic system , how the thermionic energy convert to mechanical energy ,transform the energy , principle of generator and varies type of system which need to our life deeply.

3)(Wave & optics) and Quantum theory of physics:-

In quantum theory student understand the basic property of energy, how the energy transform one place to other place, one function to other function , conservation of energy , how radiation and EM-wave transform one place to other place and how they work and what is the necessary of energy.

4) Atomic & Nuclear physics and Particle physics:-

In atomic & nuclear physics student understand how the universe born i.e. about black body radiation, scattering theory , different type of particle available in our nature, properties of this particle and uses.

5) Spatial Theory of Relativity:- In Spatial theory of relativity student learn & understand the different type of reference frame , inertial frame , non inertial frame , about relative motion, about relative mass, velocity, time, wavelength ,energy ect .

PROGRAMME OUTCOME:-

1) Student will be able to lean experiment design and scientific data collection and analysis there result.

2) Student learns scientific information both theoretically and practically.

3) Student learns the analytical, quantitative, technical, modern technology to understand nature.

In physics foundation course basically student learns about nature and working of nature.

What they do, what they don't for nature.

Many Experiment of Scientists and student do experiment and proof results.

Program specific outcome:-

- Student will show that they have learned laboratory skills, enabling them to take measurements in physics laboratory and analyze through valid conclusion.
- Obtain internship at(national organization including)NASA, National institute of standards and Technology (NIST), National Institutes of Health (NIH), the national academics of science.
- They can teach and they can go for research also.

Department of Chemistry

Program outcomes

After successful completion of 3 years degree program in chemistry a student will be able to:

PO1. Create an understanding in the students about major concepts in all discipline of chemistry

PO2. Get an idea about the role of chemistry in human health and environment

PO3. Making the students capable for handling the sophisticated instruments.

PO4. To enculcate the scientific temperament in the students and promote scientific thinking.

PO5. Enhancement of problem solving ability and methodological thinking in the students.

Course outcome

CO1. To have an idea about the shape of different molecules including the concept of hybridization and chemical bonding.

CO2. students will have an idea about various type of reaction mechanism involved in organic synthesis.

CO3. students will have idea about the chemistry of s and p block elements and noble gases.

CO4. students will have the knowledge of basic concepts involved in organic, Inorganic and physical chemistry.

CO 5. students will have the idea of stereochemistry of organic molecules in terms of configuration and conformational isomers.

CO6. students will have the knowledge of the chemistry involved in aliphatic and aromatic hydrocarbons, carbonyl compounds, Carboxylic acids amines etc.

CO7. students will know about the photochemical reactions and different principles involved in photochemistry.

CO8. students will know about the structure and properties of biomolecules proteins and carbohydrate.

CO9. role of Thermodynamics and Kinetics in chemical reaction mechanism.

CO10. role of spectroscopic techniques in the structural determination of various molecules.

CO11. The students will exercise the principles involved in good laboratory practices.

CO12. Students will be conversant about basic analytical chemistry and instrumentation techniques.

MATHS

Course outcome

1) b.sc 1st year student learn about algebra of matrix ,application of matrix ,different type of equation solving ,group, sub group, cyclic group, ring, the de movers theorem and trigonometric series etc.

In 2nd paper we teach them about basic rule of differential and integral calculus.

In 3rd paper they used to study about basic concept of vectors and then analyzing them.

2) In b.sc. 2nd year I'm giving the knowledge of calculus in advance knowledge like convergence ,divergence of sequence and series and tracing of curve by using basic calculus.

in 2nd paper they used to study about different type of differential equations(P.D.E, D.E) of 1st,2st, and higher order and there solution.

in 3rd paper students are learning about deep knowledge about mechanics.

3) in b.sc. 3rd year students are analyzing about in different method of fourier series, remain and improper integration, complex analysis and different transforms etc.

4) in 2nd paper students studies algebra in advance level.

5) in 3d paper I used to teach them basic formulas of disctere mathematics and there applications.

Program outcome

the students of graduation level have gain the knowledge about matrix, eqations , differential and integral calculus ,transform and different types of theories, like group ,ring ,vectors, Boolean algebra, lattice and mechanics etc.

Program specific outcome:-

After graduation over students can use their knowledge about trigonometric and algebra in the field of finance, management, stock -exchange, real state

,they also use machenice in the field of geographic estimations , sysmograph, electrical instruments, work power and energy ,also they used to study about spitch ,sound, waves for biological region.

BCA -101

DISCRETE MATHEMATICS

UNIT - I

Recall of statements and logical connectives, tautologies and contradictions, logical equivalence, algebra of propositions quantifiers, existential quantifiers and universal quantifiers.

UNIT – II

Boolean algebra and its properties, algebra of propositions as an example, De Morgan's Laws, partial order relations g.l.b., l.u.b. Algebra of electric circuits and its applications. Design of simple automatic control system.

UNIT – III

Boolean functions - disjunctive and conjunctive normal forms. Boolean's expansion theorem, fundamental forms. Many terminal Networks.

UNIT – IV

Arbitrary Cartesian product of sets. Equivalence relations, partition of sets, injective, surjective, bijective maps, binary operations, countable, uncountable sets.

UNIT –V

Basic Concept of Graph Theory, Sub graphs, Trees and their properties, Binary Trees, Spanning Trees, Directed Trees, Planar graphs, Euler Circuit, Hamiltonian Graph. Chromatic number.

BCA - 102

FUNDAMENTALS of IT & O.S.

Unit-I Introduction to Computers

Computer System Characteristics and Capabilities : Speed, Accuracy, Reliability, Memory capability, Repeatability. Computer Hardware and Software: Block Diagram of a Computer, Different Types of Softwares. Data Processing: Data, Data Processing System, Storing Data, Processing Data. Types of Computers:

Analog, Digital, Hybrid General and Special Purpose Computers.

Computer Generations: Characteristics of Computer Generations Computer Systems – Micros, Minis & Main-frames.

Introduction to a PC : The IBM Personal Computer Types of PC systems PC, XT & AT Pentium PC's Limitations of Micro Computer.

Unit – II Computer Organization

Introduction to Input Devices

Categorizing Input Hardware, Keyboard, Direct Entry – Card Readers, Scanning Devices – O.M.R., Character Readers, MICR, Smart Cards, Voice Input Devices, Pointing Devices – Mouse, Light Pen.

Storage Devices :

Storage Fundamentals, Primary and Secondary Storage , Data Storage and Retrieval Methods – Sequential, Direct & Indexed Sequential, Tape Storage and Retrieval Methods Tape storage Devices, characteristics and limitations, Direct access Storage and Microcomputers - Hard Disks, Disk Cartridges, Direct Access Storage Devices for large Computer systems, Mass storage systems and Optical Disks, CD ROM.

Central Processing Unit :

The Microprocessor, control unit, A.L.U., Registers, Buses, Main Memory, Main Memory (RAM) for microcomputers, Read Only Memory (ROM).

Computer Output :

Output Fundamentals, Hardcopy Output Devices, Impact Printers, Non-Impact Printers, Plotters, Computer output Microfilm/Microfiche (COM) systems, Softcopy Output Devices, Cathode Ray Tube, Flat Screen Technologies.

Unit – III Computer Software:

System Software:

System software Vs. Application Software, Types of System Software, Introduction and Types of Operating Systems programs, Booting Loader, Diagnostic Tests, Operating Systems Executive, BIOS, Utility Programs, File Maintenance, Language Processors, Assembler, Compiler & Interpreter.

Application Software:

Microcomputer Software, Interacting with the System, Trends in PC software, Types of Application Software, Difference between Program and Packages.

Unit – IV Microsoft Disk Operating System :

Introduction, History and Versions of DOS.

Fundamentals of DOS :

Physical Structure of the Disk, Compatibility of drives, Disks & DOS versions, Preparing Disks for use, Device Names.

Getting Started with DOS :

Booting Process (DOS, Windows, Unix), System Files and Command.com, Internal DOS Commands - DIR, MD, CD, COPY, DEL, REN, VOL, DATE, TIME, CLS, PATH, TYPE. Files & Directories,

Elementary External DOS Commands - CHKDSK, MEM, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, HELP, TREE, SYS, LABEL, ATTRIB, Creating a Batch Files, Additional Commands - ECHO, PROMPT, EDIT, FORMAT, FDISK, BACKUP, RESTORE, MORE, SORT, APPEND. Introduction to Unix OS, Basic commands eg pwd, is, cat, pg, who, ps, mail, cal, File commands- ls, cat, tail, cp, mv, rm, file, type, chmod. Directory Commands- cd, mkdir, rmdir.

Unit – V Overview of GUI & Windows OS

Introduction to GUI and various versions of MS Windows 98, Windows XP, Windows 2000, Windows Vista, Workgroups and domains, Quick launch toolbar, Windows Flip, 3D navigation, Desktop, Internet explorer 7.0, networking features (Sharing files), managing programs and multimedia, control panel, Speech recognition and Dictation, Handling user accounts, Security and protection features, management tools (updating, diagnosing, configurations, backup and recovery, upgrading windows vista). OLE Concept, Comparative study of Linux, DOS and Windows, features of Windows Vista, reliability, migrating the data.

BCA-103

PROGRAMMING IN 'C' LANGUAGE

UNIT-I Fundamentals of C Programming

Overview of C : History of 'C', Structure of 'C' program. Keywords, Tokens, Data types, Constants, Literals and Variables, Operators and Expressions : Arithmetic operators, Relational operator, Logical operators, Expressions, Operator operator precedence and associativity, Type casting, Console I/O formatting, Unformatted I/O functions: getch(), getchar, getche(), getc(), putc(), putchar().

Control Constructs

If-else, conditional operators, switch and break, nested conditional branching statements, loops: For, do. While, while, Nested loops, break and continue, goto and label, exit function.

UNIT- II Arrays, Strings and Functions

Array

Array declaration, One and Two dimensional numeric and character arrays. Multidimensional arrays.

String

String declaration, initialization, string manipulation with/without using library function.

Functions

definition, function components: Function arguments, return value, function call statement, function prototype. Type of function arrangement: return and argument, no return and no argument, return and no argument, no return and argument. Scope and lifetime of variable. Call by value and call by reference. Function using arrays, function with command line argument. User defined function: maths and character functions, Recursive function.

UNIT-III Structure, Union & Enum- Structure

basics, declaring structure and structure variable, typedef statement, array of structure, array within structure, Nested structure; passing structure to function, function returning structure.

Union

basics, declaring union and union variable,

Enum

declaring enum and enum variable.

UNIT- IV Dynamic Data Structures in 'C' - Pointers

definition of pointers, pointer declaration, using & and * operators. Void pointer, pointer to pointer, Pointer in math expression, pointer arithmetic, pointer comparison, dynamic memory allocation functions – malloc, calloc, realloc and free, pointers vs. Arrays, Arrays of pointer, pointer to array, pointers to functions, function returning pointer, passing function as argument to function, pointer to structure, dynamic array of structure through pointer to structure.

UNIT-V File Handling and Miscellaneous Features -

File handling: file pointer, file accessing functions, fopen, fclose, fputc, fgetc, fprintf, fscanf, fread, fwrite, feof, fflush, rewind, fseek, ferror. File handling through command line argument. Introduction to C preprocessor #include, #define, conditional compilation directives: #if, #else, #elif, #endif, #ifndef etc.

BCA-104**Introduction to PC Software & Internet Applications****Unit - I MS-Word**

MS-Word- Creating and editing word documents, formatting documents – aligning documents, indenting paragraphs, changing margin, formatting pages, formatting paragraph, printing labels, working with tables, formatting text in tables, inserting and deleting cells, rows and columns, use bulleted and numbering, checking spelling and grammar, finding synonyms, working with long documents, working with header and footer, adding page number and foot note, working with graphics, inserting clip art, working with pictures, Word art, creating flow chart, creating word templates, creating templates, working with mail merge, writing the form letter, merging form documents, selecting merge records, creating macros, running macro.

UNIT – II MS-Excel

Introducing Excel, use of excel sheet, saving, opening, and printing workbook, Apply formats in cell & text, Divide worksheet into pages, setting page layout, adding Header & Footer. Using multiple documents, arranging windows i.e. (Cascade, Tiled, Split), protecting your work, password protection. Working with Functions & Formulas, using absolute reference, referencing cell by name, using cell label, giving name to cell and ranges, working with formulas (mathematical & trigonometric, statistical, date time, most recently used), Working with Excel graphics, creating chart & graphs. filtering a database, using auto filter, criteria range, calculating total and subtotal, creating pivot table, goal seek, recording & playing macros, deleting and selecting macro location.

UNIT – III MS-PowerPoint

Presenting with PowerPoint – Creating presentation, working with slides, different types of slides, setting page layout, selecting background and applying design, adding graphics to slide, adding sound and movie, working with table, creating chart and ginih, playing a slide show, slide transition, advancing slides, setting time, rehearsing timing, animating slide, animating objects, running the show from windows. MS-Access – Creating tables in Access, defining datatypes, creating relationships, manipulating records.

UNIT – IV MS Access

Front and back end of application, introduction to dbms, features of bdms, creating blank database, saving it in accdb formate . Define data type in ms access. Home tab : databse view, design view, pivot chart view, sort and filter option.

Create table : creating table, creating reports, query wizard. External Data Tab: importing data from accessed and excel sheet, exporting data excel and word . Datasheet tab: Relationship, field and columns options datatype and formatting options.

UNIT – V

Animations and Graphics:

Basic Concept of 2D/3D Animation, Principle and application in

Multimedia, Hardware & software resources requirement for animation, steps for creating generic animation. Learn the basic of Flash Animation;

Creating a new movie : Get set Up, Input Text, Animate Text, drawing and painting with tools, brush, create basic shapes like Oval, Rectangle & Polystar Tools, tools working with object & filing the object, Transformation, object properties dialog box, creating layers motion tweeing, shape tweeing , mask layers, basic action scripts, importing sound through Flash.

Interface of Photoshop : The Photoshop workspace use of menus palettes and toolbox, creating new images, using selecting tools, lasso tool, Direct select Lasso, convert point tool, image adjustment through Photoshop.

BCA –106

COMMUNICATION SKILLS

Unit-1

Vocabulary, knowledge of at least one thousand words - their spelling, meanings and usage. Phrases.

Unit – II

Structure of sentences - Simple, Complex and compound. Clauses and Subordinate clauses

Unit-III

The tenses and aspects. The modal, the gerund, the participle, the infinitive.

Unit – IV

Transformation of sentences :-

1. Interchange of Active and Passive Voice.
2. Interchange of Affirmative and Negative Sentences.
3. Interchange of Explanative and Assertive Sentences.
4. Interchange of interrogative and Assertive Sentences.
5. .Direct and Indirect Speech.

Unit - V

Practical application of grammar. Practical in talks, conversation and report writing, Writing of applications. Letter writings, description of events.

B.Sc. PART –I
COMPUTER FUNDAMENTAL
(Paper Code - 0805)

UNIT-I CLASSIFICATION AND ORGANIZATION OF COMPUTERS

Digital and analog computers and its evolution. History of computer, Generation of computer, Calculator vs Computer. Digital and Analog computers and its Major components of digital computers; Memory addressing capability of CPU; word length and processing speed of computers. Microprocessors single chip microcomputers; large and small computers. Users interface Hardware software and firmware. multi programming multi user system. Dumb smart and intelligent terminals computer network and multi processing, LAN parallel processing. Flinn's classification of computers. Control flow and data flow computers.

UNIT-II CENTRAL PROCESSING UNIT

Parts CPU-ALU control unit registers. Instructions for INTEL 8085, Instruction word size, Various addressing mode interrupts and exceptions, some special Control signals and I/O devices. Instruction cycle fetch and execute operation, time Diagram, data flow.

UNIT-III MEMORY

Memory hierarchy, Primary and secondary memory, cache memory, virtual Memory, Direct access storage devices DASD, destructive and non destructive. readout. Program of data Memory and MMU, PCMCIA Cards and Slots.

UNIT-IV I/O DEVICES

I/O devices- Keyboard, Mouse, Monitor, Impact and Non-Impact Printers, Plotter, Scanner, other Input/output devices. Scan methods of Display- Raster Scan. Vector Scan, Bit Mapped Scan. CRT Controller, I/O ports, programmable and non-programmable I/O ports, inbuilt I/O ports-parallel and serial ports, USB, IEEE, 1304, ACP, serial data transfer scheme, Micro controller, Signal Processor, I/O processor, Arithmetic Processor

UNIT-V SYSTEM SOFTWARE AND PROGRAMMING TECHNIQUE

Application And system software: Introduction, examples, Difference etc, Introduction to Open source software such as Unix/Linux(Ubuntu), Libre Office etc, Introduction to M/C language ML, AL, HLL, Programming Techniques, stack subroutine debugging of programs macro, micro programming, Program Design, software development, flow & chart multi programming, multiuser, multi tasking Protection, operating system and utility program, application package.

PAPER - II
PROGRAMMING IN 'C' LANGUAGE
(Paper Code – 0806)

UNIT-I Fundamentals of C Programming

Overview of C: History of 'C', Structure of 'C' program. Keywords, Tokens, Data types, Constants. Literals and Variables, Operators and Expressions: Arithmetic operators. Relational operator, Logical operators. Expressions. Operator: operator precedence and associativity, Type casting, Console formatted I/O Unformatted I/O functions: getch(), getchar(), getche(), putc(), putchar().

UNIT- II Control Constructs:

If-else, conditional operators, switch and break. nested conditional branching statements, loops: do while, while, for, Nested loops, break and continue, goto and label, exit function.

Functions: Definition, function components: Function arguments, return value, function call statement, function prototype, Types of function, Scope and lifetime Of variable, Call by value and call by reference, Function using arrays, function with command line argument. User defined function: maths and character functions, Recursive function.

UNIT-III Array:

Array declaration, One and Two dimensional numeric and character arrays. Multidimensional arrays.

String: String declaration, initialization, manipulation with / without using library function.

Structure, Union and Enum - Structure. basic, declaring Structure and Structure variables, typedef statement. array of structure, array within structure, Nested structure: passing structure to function, function returning Structure, **Union:** basics, declaring union and union variable, Enum: declaring enum and variable,

UNIT-IV

Pointer: Definition of pointer, Pointer declaration, Using & and operators. Void pointer. Pointer to pointer, Pointer in math expression, Pointer arithmetic, Pointer comparison, Dynamic memory allocation functions malloc, calloc, realloc and free, Pointer vs. Array, Array of pointer, Pointer to array, Pointers to function, Function returning pointer. Passing function as Argument to function, Pointer to structure, Dynamic array of structure through pointer to structure.

UNIT-V

File Handling and Miscellaneous Features: File handling: file pointer, file accessing functions. fopen, fclose. fputc. fgetc, fprintf, fscanf. fread, fwrite, ferror, fflush. rewind, fseek, ferror. File handling through command line argument. **introduction to C preprocessor** #include, #define, Conditional compilation directives: #if. #else. #elif, #endif, #ifndef etc.

B.Sc. PART -II COMPUTER HARDWARE (Paper Code - 0855)

UNIT-I CLASSIFICATION AND ORGANIZATION OF COMPUTERS

Digital and analog computers and its evolution. Major components of digital computers; Memory addressing capability of CPU; word length and processing speed of computers. Microprocessors single chip microcomputers; large and small computers. Users interface Hardware software and firmware. multi programming multi user system. Dumb smart and intelligent terminals computer network and multi processing, LAN parallel processing. Flinn's classification of computers. Computer flow and data flow computers.

UNIT-II CENTRAL PROCESSING UNIT.

CPU organization, ALU control unit registers. Instructions for INTEL 8085, Instruction word size, Various addressing mode interrupts and exceptions, some special Control signals and I/O devices. Instruction cycle fetch and execute operation, time Diagram, data flow.

UNIT-III MEMORY OF COMPUTERS

Main memory secondary memory, backup memory, cache memory; real and virtual Memory Semiconductor memory. Memory controller and magnetic memory; RAM; disks, optical disks Magnetic bubble memory; DASD, destructive and non destructive. readout. Program of data Memory and MMU.

UNIT-IV I/O DEVICES

I/O devices of micro controller; processors. I/O devices, printer, plotter, other out put devices, I/O port serial data transfer scheme, Micro controller, signal processor, I/O processor I/O processor arithmetic processor.

UNIT-V SYSTEM SOFTWARE AND PROGRAMMING TECHNIQUE

ML, AL, HLL, stack subroutine debugging of programs macro, micro programming, Program Design, software development, flow & chart multi programming, multiuser, multi tasking Protection, operating system and utility program, application package.

PAPER - II SOFTWARE (Paper Code - 0856)

UNIT-I HTML BASICS & WEB SITE DESIGN PRINCIPLES

Concept of a Web Site, Web Standards, What is HTML? HTML Versions, Naming Scheme for HTML Documents , HTML document/file, HTML Editor , Explanation of the Structure of the homepage , Elements in HTML Documents ,HTML Tags, Basic HTML Tags, Comment tag in HTML, Viewing the Source of a web page, How to download the web page source? XHTML, CSS, Extensible Markup Language (XML), Extensible Style sheet language (XSL), Some tips for designing web pages, HTML Document Structure. HTML Document Structure-Head Section, Illustration of Document Structure, Element, Element, Element ,META,<title> element, <SCRIPT> element, HTML document,structure-body-section:Body elements and its attributes: Background; Background Color; Text; Link; Active Link (ALINK); Visited Link (VLINK); Left margin; Top margin, Organization of Elements in the BODY of the document: Text Block Elements; Text Emphasis Elements; Special Elements — Hypertext Anchors; Character-Level Elements; Character References ,Text Block Elements: HR (Horizontal Line); Hn (Headings) ; P (Paragraph); Lists; ADDRESS ; BLOCKQUOTE; TABLE; DIV (HTML 3.2 and up) ; PRE (Preformatted); FORM ,Text Emphasis Elements, Special Elements — Hypertext Anchors ,Character-Level Elements: line breaks (BR) and Images (IMG), Lists , ADDRESS Element, BLOCKQUOTE Element, TABLE Element, COMMENTS in HTML ,CHARACTER Emphasis Modes, Logical & Physical Styles, Netscape, Microsoft and Advanced Standard Elements List, FONT, BASEFONT and CENTER.

UNIT-II IMAGE, INTERNAL AND EXTERNAL LINKING BETWEEN WEBPAGES

Netscape, Microsoft and Advanced Standard Elements List, FONT, BASEFONT and CENTER Insertion of images using the element IMG (Attributes: SRC (Source), B.Sc.-II (51) WIDTH, HEIGHT, ALT (Alternative), ALIGN),IMG (In-line Images) Element and Attributes; Illustrations of IMG Alignment, Image as Hypertext Anchor, Internal and External Linking between Web Pages Hypertext Anchors ,HREF in Anchors ,Links to a Particular Place in a Document ,NAME attribute in an Anchor ,Targeting NAME Anchors ,TITLE attribute, Practical IT Application Designing web pages links with each other, Designing Frames in HTML. Practical examples.

UNIT-III INTRODUCTION TO OOP

Advantages of OOP, The Object Oriented Approach, Characteristics of object oriented languages- Object, Classes, Inheritance, Reusability, Polymorphism and C++. Function: Function Declaration, Calling Function, Function Defines, Passing Argument to function, Passing Constant, Passing Value, Reference Argument, returning by reference, Inline Function, Function Overloading, Default Arguments in function.

UNIT-IV OBJECT CLASSES AND INHERITANCE

Object and Class, Using the class, class constructor, class destructors, object as function argument, copy constructor, struct and classes, array as class member, Static Class Data, Static Member Functions, Friend function, Friend class, operator overloading. Type of inheritance, Base class, Derive class. Access Specifier: protected. Function Overriding, member function, String, Template Function.

UNIT-V POINTERS AND VIRTUAL FUNCTION

pointers: & and * operator pointer variables, pointer to pointer, void pointer, pointer and array, pointer and function, pointer and string, memory management, new and delete, pointer to object, this pointer
Virtual Function: Virtual Function, Virtual member function, accesses with pointer, pure virtual function
File and Stream: C++ streams, C++ Manipulators, Stream class, string I/O, char I/O, Object I/O, I/O with multiple object, Disk I/O,

PGDCA-101

FIRST SEMESTER

FUNDAMENTALS OF

COMPUTERS

UNIT - I Introduction to Computers

Computer system: characteristics and capabilities . Computer Hardware and Software : Block Diagram of a Computer, Different Data Processing: Data, Data Processing System, Storing Data, Processing Data. Types of Computers : Analogue, Digital , Hybrid, General and Special Purpose Computers. Generation of Computers .

UNIT - II Computer Peripherals

Introduction to Input Devices: Categorizing Input Hardware, Keyboard, Direct Entry - Card Readers, Scanning Devices - O.M.R., Character Readers, Thumb Scanner, MICR, Smart Cards, Voice Input Devices, Pointing Devices - Mouse, Light Pen, Touch Screen. **Computer Output:** Output Fundamentals, Hardcopy Output Devices, Impact Printers , Non-Impact Printers, Plotters, Computer output Microfilm/Microfiche (COM) systems, Softcopy Output Devices, Cathode RayTube, Flat Screen Technologies, Projectors, Speakers.

UNIT - III Basic Components & Storage

Central Processing Unit: The Microprocessor, control unit, A.L.U., Registers, Buses, Main Memory, Main Memory (RAM) for microcomputers, Read Only Memory(ROM). **Storage Devices:** Storage Fundamentals, Primary and Secondary Storage, Data Storage and Retrieval Methods - Sequential, Direct & Indexed Sequential, Tape Storage and Retrieval Methods Tape storage Devices, characteristics and limitations , Direct access Storage and Microcomputers - Hard Disks, Disk Cartridges, Direct Access Storage Devices for large Computer systems, Mass storagesystems and Optical Disks, CD ROM.

UNIT - IV Computer Software & Languages

System Software: System software Vs. Application Software, Types of System Software, Introduction and Types of Operating Systems. Boot Loader, Diagnostic Programs, BIOS, Utility Programs. **Application Software:** Microcomputer Software, Interacting with the System, Trends in PC software, Types of Application Software, Difference between Program and Packages. **Computer Languages:** Definition, Generations of computer languages , Types of Languages, Language Processors: Assembler, Interpreter, Compiler.

UNIT - V: Operating System and Linux

Introduction, Uses of OS, Functions of OS, Booting process, Types of Reboot, Booting from different OS, Types of OS, DOS, Windows , Linux Open source Software concept and evolution of Linux; Features of Multi-User Operating System; Structure of Linux OS; Security Features of Linux, File System, Directory Structure and related commands. Linux Editors & editor commands, Linux commands cd, md, rm, mv, cp, ls, cat, find, grep.

PGDCA-102
FIRST SEMESTER
OFFICE AUTOMATION AND TALLY

UNIT- I Using Office with MS-Word

Introduction to word processing software and its features, Creating new document , Saving documents , Opening and printing documents . **Home Tab:** Setting fonts, Paragraph settings, various styles (Normal, No spacing , Heading} , Heading2 , Title , Strong), Find & replace, Format painter, Copy paste and paste special. **Insert Tab:** Pages, Tables, pictures, clipart, shapes, header & footer, word art, equation and symbols . **Page Layout Tab:** Page setup, page Background, Paragraph (indent and spacing). **Mailing Tab:** Create envelopes and Labels, Mail merge . **Review Tab:** Spelling and grammar check, New comment, Protect document , **View Tab:** Document views, Zoom, Window (New wind ow, Split, Switch window).

UNIT - II Working with MS-Excel

Introducing Excel, Use of excel sheet, Creating new sheet, Saving, Opening, and pnnmtng workbook. **Home Tab:** Font, Alignment , Number, Styles and cells and editing, Conditional Formatting. **Insert Tab:** Table, Charts (column chart, Pie chart, Bar chart, Line chart) and Texts (header & footer, word art, signature line) . **Page Layout Tab :** Page setup options, Scale to fit(width, height, scale). **Formulas Tab :** Autosum (sum, ave rage, min, max), logical(IF, and ,or ,not ,true, false), Math &trig (sin, cos, tan, ceiling , floor , fact, mod, log) , watch window. **Data Tab:** Get external data from MS Access, Sort and filter options , Data valid ation, Group and ungroup. **Review Tab:** Protect sheet, Protect workbook, Share workbook. **View Tab:** Page breaks, Page layout, Freezing panes, Split and hide.

UNIT- ID Working with MS-PowerPoint

Introducing power point, Use of power point presentation , Creating new slides saving, Opening and printing. **Home Tab:** New slide, Layout, Reset, Delete, Setting text direction, Align text, Convert to smart art, Drawing options. **Insert Tab:** Table, picture, clipa rt, photo album, smart art, shapes and chart, movie and sound, hyperlink and action, text box , word art, object. **Design Tab:** Page setup options, slide orientati on, applying various themes, selecting background style and formatting it. **Animations Tab:** Custom animation for entrance, exit and emphasis, applying slide transition, setting transition speed and sound, animation on rehears timing. **Slide show &view Tab:** Start slid show options, setup options. **View tab:** Presentation vie ws, colours and window option.

UNIT-IV Working with MS-Access

Front end and back end of application, Introduction to DBMS, Features of DBMS, Creating blank databases, saving it in accdb format. Defining data types in ms access. **Home Tab:** Datasheet view, design vew, pivot chart view, pivot table view, sort and filter options. **Create Tab:** Creating tables, Creating reports, Query wizard. **External Data Tab:** importing data from access and excel sheet, exporting data to excel and ms word. **Datasheet Tab:** Relationships, Fields and columns options, Data type and formatting options .

UNIT - V Tally

Setting up Ledger & Groups. Study of recording of transactions in the ' Voucher ' . (According to Golden rules) . Study of ' Fina l A/C preparation & displaying in different mode /format' . Study of alteration & Deletion of ledger /Groups. Study of cash & fund flow, day book, sales register, purchase register , bills receivable/Payable etc. Study of data security & backing up data. Outline of entry for Income Tax, ED, VAT, ST/CST, PF, Gratuity, Bonus.

PGDCA-103
FIRST SEMESTER
PROGRAMMING IN C

UNIT - I: Introduction:

Introduction Character set, Identifiers and Keywords, Variables , Displaying variable s, Reading Variables, Character and Character String, Qualifiers, Type define Statements, Value initialized variables, Constants , Constant Qualifier, Operators and Expressions, Operator Precedence and Associativity, Basic input output: Single Character I/O , General Outputs, Types of Characters in format string, Scanf with specifiers, Searchset Arrangements and Suppression Character, Format Specifiers for scanf.

UNIT - II: Control Structures & Functions:

Control Structure : if-statement, if-else statement, multiple decisions, nested if statements, switch statement, for-loop, while-loop, do-while loop, break statement, continue statement, goto statement.

Functions: The main function, functions accepting more than one parameter, User defined and library functions, Concept associatively with functions, function parameter, Return value, recursion comparisons of Iteration and recursion variable length argument list.

UNIT - III: Arrays & Pointers:

Scope and Extent, Arrays, Strings , Multidimensional Arrays, Strings, Array of Strings, Function in String, Pointers: Definition and use of pointer, address operator, pointer variable, referencing pointer, void pointers , pointer arithmetic, pointer to pointer, pointer and arrays, passing arrays to functions, pointer and functions , accessing array inside functions, pointers and two dimensional arrays, array of pointers, pointers constants, pointer and strings .

UNIT- IV: Structure and Union:

Declaring and using Structure, Structure initialization , Structure within Structure, Operations on Structures, Array of Structure, Array within Structure, Creating user defined data type, pointer to Structure and function . Union, difference between Union and Structure , Operations on Union, Scope of Union.

UNIT - V: Dynamic Memory Allocation and File Handling:

Dynamic Memory Allocation: Library functions for Dynamic memory allocation, Dynamic Multi-Dimensional arrays.

File Handling: - Introduction, Structure, File handling, Functions file types, Un-buffered and buffered file, Error handling .

DCA-101

Essential of Information Technology and OS

- 1. Introduction to Computers** Computer System Characteristics and Capabilities : Speed, Accuracy, Reliability, Memory capability, Repeatability. Computer Hardware and Software, Block Diagram of a Computer. Types of Computers: Analog, Digital, Hybrid General and Special Purpose Computers. Computer Generations: Characteristics of Computer Generations Computer Systems – Micros, Minis & Main-frames. Introduction to a PC : The IBM Personal Computer Types of PC systems PC, XT & AT Pentium PC"s.
- 2. Computer Organization Introduction to Input Devices :** Keyboard, Direct Entry – Card Readers, Scanning Devices – O.M.R., Character Readers, MICR, Voice Input Devices, Pointing Devices – Mouse, Light Pen. Storage Devices : Storage Fundamentals- Bits, Bytes, Primary Storage – RAM,ROM, Secondary Storage-Floppy Disks, Hard Disks, Optical Disks, CD/DVD. Computer Output : Output Fundamentals, Hardcopy Output Devices, Impact Printers, Non-Impact Printers, Plotters, Computer output, Softcopy Output Devices, Cathode Ray Tube, Flat Screen Technologies.
- 3. Operating System:** MS-DOS - Introduction, History and Versions of DOS. Booting Process, System Files and Command.com, Internal DOS Commands - DIR, MD, CD, COPY, DEL, REN, VOL, DATE, TIME, CLS, PATH, TYPE. Files & Directories, Elementary External DOS Commands - CHKDSK, MEM, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, HELP, TREE, SYS, LABEL, ATTRIB, Creating a Batch Files, Additional Commands - ECHO, PROMPT, MODE, EDIT, FORMAT, FDISK, BACKUP, RESTORE, MORE, SORT.
- 4. Windows:** Windows Concepts, Features, Structures, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin. Accessories : Calculator, Notepad, Paint, Wordpad, Character Map. Explorer : Creating folders and other Explorer facilities, Internet Explorer basics, navigating the Web, Control Panel.
- 5. Linux:** Open Source Software concept and evolution of Linux, Features of Linux OS, Structure of Linux OS, File System, Directory Structure, Linux editors & Editor commands, Linux commands cd, md, rm, mv, ls, cat, find, grep.

DCA-102

ESSENTIALS OF OFFICE AUTOMATION

- 1. MS-Word-** Creating and editing word documents, formatting documents – aligning documents, indenting paragraphs, changing margin, formatting pages, formatting paragraph, printing labels, working with tables, formatting text in tables, inserting and deleting cells, rows and columns, use bulleted and numbering, checking spelling and grammar, finding synonyms, working with long documents, working with header and footer, adding page number and foot note, working with graphics, inserting clip art, working with pictures, Word art, creating chart & Graphs, creating flowcharts, working with mail merge, writing the form

letter, merging form documents, merging to label, Working with Mailing lists and Data Sources, selecting merge records, creating macros, running macro.

2. Working with MS-Excel – Introducing Excel, use of excel sheet, saving, opening and printing workbook ,Apply formats in cell & text, Divide worksheet into pages , setting page layout, adding Header & Footer. Using multiple documents, arranging windows i.e. (Cascade, Tiled ,Split), protecting your work, password protection. Working with Functions & Formulas, using absolute reference, referencing cell by name , using cell label , giving name to cell and ranges , working with formulas (mathematical & trigonometric , statistical, date time , most recently used), Working with Excel graphics, creating chart & graphs. Working with lists & database, sorting a database, filtering a database ,using auto filter ,criteria range, calculating total and subtotal, creating pivot table, goal seek, recording & playing macros, deleting and selecting macro location.

3. Presenting with PowerPoint – Creating presentation, working with slides, different types of slides, setting page layout, selecting background and applying design, adding graphics to slide, adding sound and movie, working with table, creating chart and graph, playing a slide show, slide transition, advancing slides, setting time, rehearsing timing, animating slide, animating objects, running the show from windows.

4. Introduction of DBMS through MS-Access – Introduction to Database, DBMS, RDBMS, Features of Access, Designing Database, Relationship (One to One, One to many, Many to Many), Create table (Design View, Wizard, Datasheet View), Query (Update Query, Delete Query, Selection Query, Cross table Query, Make table Query).

5. Introduction to TALLY- Accounting, Accounting Conventions (Single and Double Entry), Transactions, Types of Accounts, Personal Accounts, Real, Nominal, Rules of Accounting. Introsuction to Accounting Software [Ex. TALLY] – Creating of Company, Ledgers & Groups. Voucher Entry; Types of Voucher, Capital and Revenue, Income, Expenditure, Receipts, Preparation of Trial Balance, Profit & Loss Account & Balance Sheet.

DCA103

PROGRAMMING IN ‘C’

1 - Introduction to C programming: structure and C compiler, Data representation : Simple data types like real integer, character etc. Program, statements and Header Files, Simple Input Output statements in C, Running simple C programs. Primitive data types in C, char, integer, float, Double Long, Double Void etc.

2- Operators and Expressions – Arithmetic Operators, Assignment Operators, increment and decrement operator, relational and Boolean operators, Mixing of Different data types and operators for forming expressions.

3 - Control Structure: If - statement, If -else statement, Multiway decision, Compound Statement, Loops: For - loop, While -loop, Do-While loop, Break statement, Switch statement, Continue statement, Goto statement. Arrays, Strings, Multidimensional Arrays, Strings, Array of Strings

4 - Functions : Function main , Functions accepting more than one parameter, User defined and library functions, Concept associatively with functions, function parameter, Return value, recursion function, Structure and Union, Declaring and using Structure, Structure initialization, Structure within Structure, Operations on Structures, Array of Structure, Array within Structure.

5 - Pointers: Definition and use of pointer, address operator, pointer variable, referencing pointer, void pointers, pointer arithmetic, pointer to pointer, pointer and arrays, passing arrays to functions, pointer and functions, accessing array inside functions, pointers and two dimensional arrays, array of pointers, pointers constants, pointer and strings.

DCA-105

GUI - PROGRAMMING IN VISUAL BASIC

UNIT - I Introduction to visual Basic: Hardware requirements, features of VB, Editions of Visual Basic, and Event Driven Programming vs procedure oriented programming. Introduction to Integrated Development Enviroment. Basic concepts of Visual Basic programming: Controls, properties, methods, events, forms, projects. Creating Executable files. Variables, constants, data types, data conversion function., scope of variables Operators.

UNIT - II Control Structure : Conditional / branching statements : If...else..endif, Select case Looping statements: do.. while, for.. next, for each, exiting a loop, goto statement, msgbox and input box functions. Arrays: types of arrays, array manipulation, Working with standard controls. Working with control array, various key and mouse events, using drag and drop concepts.

UNIT – III Procedure and Functions: types of function, library function, date and time function, format function, and string related function, validation function. Creating user defined function & procedure, call by value and call by reference, concept of recursion, working with basic module, class module and form module.

UNIT - IV Working with Advanced Controls: toolbar, status bar, tabbed dialog controls, progress bar, animation controls, dtpicker, calendar, common dialog control. SDI & MDI Application: creating MDI application, menu editor: defining menu & popup menu, sub main, startup objects. Working with graphics control and using grphic methods.

UNIT- V Data Access Using the ADO Data Control: Basic concepts of relational database, visual data manager, introduction to SQL, concept of ODBC, Overview of DAO and RDO, Using DAO and RDO to access data. ADO features, difference among ADO, DAO and RDO, accessing and manipulating database using ADO, ADO object hierarchy, concept of recordset and its type, connection object, command object.

DCA-106

E- Commerce

Unit – I : Introduction to Electronic Commerce –The scope of E-commerce; Size, growth and future projection of E-commerce market Worldwide and in India; Internet and its impact on traditional businesses; Definition of E-commerce; Business models in E –Commerce environment; Case studies.

Unit – II : Emergence of E-commerce - E-commerce on private networks, Electronic Data Interchange (EDI), What is EDI, EDI in action, EDI basics, EDI standards, financial EDI, FEDI for international trade transaction, FEDI payment system within the US, ACH credit transfer payment system FEDI, application of EDI, benefits of EDI, Electronics Payment system, E-commerce on the web, E-commerce in India.

Unit – III : Internet, Security and E-Commerce: Security of Data/Information in Internet/web environment; Client security, Network security; Virus protection and Hacking; Security Measures: Authentication, Integrity, Privacy, Non-repudiation; Public information, Private information, firewall tunnels, encryption, secret key encryption, public key encryption, digital signature.

Unit – IV: E-commerce Payment Systems – E-Commerce Payment Models: Pure and Hybrid ECommerce Payment Models; Credit Card; Debit Cards; Pre-paid Card; Online debit to the accounts; and Alternative Payment Systems employing Electronic Clearing System of Reserve Bank of India.

Unit – V : Types of E-commerce Business-to-Business (B2B), Business-to-Consumer (B2C); Business-to-Business-to-Consumer (B2B2C) and Consumer-to-Consumer (C2C) E-Commerce , Inter organizational transaction; Business transaction cycle, different types of transactions in Ecommerce environment; Electronic markets, advantages and disadvantages of E-Market, Future of E-Markets; Inter- Organizational E-Commerce transactions; Advantages and Disadvantages of Inter-Organizational E-Commerce.

DCA-107

HTML & Internet Applications

Unit – I : HTML Basics & Web Site Design Principles – Concept of a Web Site, Web Standards, What is HTML? HTML Versions, Naming Scheme for HTML Documents , HTML document/file, HTML Editor , Explanation of the Structure of the homepage , Elements in HTML Documents ,HTML Tags, Basic HTML Tags, Comment tag in HTML, Viewing the Source of a web page, How to download the web page source? XHTML, CSS, Extensible Markup Language (XML), Extensible Style sheet language (XSL), Some tips for designing web pages, HTML Document Structure. HTML Document StructureHead Section, Illustration of Document Structure, Element, Element, Element ,META ,

Unit – II : **HTML Document Structure-Body Section** - Body elements and its attributes: Background; Background Color; Text; Link; Active Link (ALINK); Visited Link (VLINK); Left margin; Top margin ,Organization of Elements in the BODY of the document: Text

Block Elements; Text Emphasis Elements; Special Elements -- Hypertext Anchors; Character-Level Elements; Character References ,Text Block Elements: HR (Horizontal Line); Hn (Headings) ; P (Paragraph); Lists; ADDRESS ; BLOCKQUOTE; TABLE; DIV (HTML 3.2 and up) ; PRE (Preformatted); FORM ,Text Emphasis Elements, Special Elements -- Hypertext Anchors ,Character-Level Elements: line breaks (BR) and Images (IMG),Lists ,ADDRESS Element, BLOCKQUOTE Element, TABLE Element ,COMMENTS in HTML ,CHARACTER Emphasis Modes, Logical & Physical Styles , Netscape, Microsoft and Advanced Standard Elements List, FONT, BASEFONT and CENTER.

Unit – III: Image, Internal and External Linking between WebPages - Netscape, Microsoft and Advanced Standard Elements List, FONT, BASEFONT and CENTER Insertion of images using the element IMG (Attributes: SRC (Source), WIDTH, HEIGHT, ALT (Alternative), ALIGN),IMG (In-line Images) Element and Attributes; Illustrations of IMG Alignment, Image as Hypertext Anchor, Internal and External Linking between Web Pages Hypertext Anchors ,HREF in Anchors ,Links to a Particular Place in a Document ,NAME attribute in an Anchor ,Targeting NAME Anchors ,TITLE attribute, Practical IT Application. Designing web pages links with each other, Designing Frames in HTML. Practical examples.

Unit – IV: Creating Business Websites with Dynamic Web Pages – Concept of static web pages and dynamic web pages, Introduction to scripting, Types of Scripting languages, Scripting Files, Client Side Scripting with VB/Jscript/JavaScript, Practical examples of Client side scripting. Identifying Objects & Events, and Creating & Implementing Common Methods,. Hosting & promotion of the web site, Domain Name Registration, Web Space allocation , Uploading / Downloading the website- FTP, cute FTP. Web Site Promotion Search Engines, Banner Advertisements.

Unit – V: Internet - Technical foundation of Internet, Internet Service Provider, Anatomy of Internet, ARPANET and Internet History of World Wide Web, Services Available on Internet; Basic Internet Terminologies. Client server computing, Distributed Computing, Domain naming system, DNS Server, Internet Security, Internet Applications.