

**Class: BCA** **Semester: THIRD**  
**Subject: OBJECT ORIENTED PROGRAMMING WITH C++**  
**Paper (U.G): BCA -231**

| S. No. | Course Outcomes  |
|--------|--|
| 1      | In “Object Oriented Programming in C++” the students will study about the extension version of c language and the Features of C++, Classes and Objects, Scope Resolution Operator. |
| 2      | They will gain the ideas of implementing the programs in C++ using Constructors and Destructors.   |
| 3      | Students will come to know the concept of pointers initialization and declaration in C++ passing parameters to functions by reference.   |
| 4      | Students will gain the Knowledge about Polymorphism, Function Overloading and Creation of Operators.   |

**Class: BCA** **Semester :THIRD**  
**Subject: DATA STRUCTURE**  
**Paper (U.G): BCA -232**

| S. No. | Course Outcomes   |
|--------|---|
| 1      | Students will surge their Knowledge about the basic Data Structures and Strings.  |
| 2      | Students will gain the Knowledge about the Arrays, Linked Lists.  |
| 3      | Students will come to know the concept of data structure and algorithm to solve a problem.  |
| 4      | They will expedite their ideas by studying the concept of static & dynamic data structures and relevant standard algorithms for them: Stack, Queue, Linked list, Tree, Graph. |

**Class: BCA** **Semester: THIRD**  
**Subject: COMPUTER ARCHITECTURE**  
**Paper (U.G): BCA -233**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | Students come to know about basic computer organization, instruction code, instruction cycle and design of accumulator logic.                                       |
| 2             | They will expedite their ideas by studying the concept of micro operations used in computer architecture and register transfer, design and working of control unit. |
| 3             | They will grasp the Knowledge about the data is to be transferred and manipulated by central processing unit and how various types of interrupts be handled by it.  |
| 4             | At last, they will grasp the Knowledge about memory organization and input output organization of computer hardware.  |

**Class: BCA** **Semester: THIRD**  
**Subject: SOFTWARE ENGINEERING**  
**Paper (U.G): BCA -234**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | They will expedite their ideas by studying the concept of Introduction to Software phases in Software Development, Software Development Process Models. |
| 2             | They will grasp the Knowledge about the concept of software requirement analysis and Specifications.  |
| 3             | They will familiarize with the concepts of Structured Analysis and Tools, Gantt Chart, PERT Chart, Software Maintenance.                                |
| 4             | They will grasp the Knowledge about the Software Project Planning, Risk Management, Software Testing Strategies.  |

**Class: BCA** **Semester: THIRD**  
**Subject: FUNDAMENTAL OF DATABASE SYSTEMS**  
**Paper (U.G): BCA -235**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | They will expedite their ideas by studying the concept of Data, Database Approach, DBMS and its functions, DBA. |
| 2             | They will familiarize with the concepts of the Database system Architecture, Data Independence.                 |
| 3             | They will expedite their ideas by studying the concept of data Models and their design, E-R diagrams.           |
| 4             | At last They will grasp the Knowledge about Relational Data Models, Hierarchical and Network Data Model.        |

**Class: BCA** **Semester: THIRD**  
**Subject: COMPUTER ORIENTED NUMERICAL METHODS**  
**Paper (U.G): BCA -236**

| <b>S. No.</b> | <b>Course Outcomes</b>   |
|---------------|--|
| 1             | They will expedite their ideas by studying the concept of Computer Arithmetic, Error in number Representation, Iterative Methods.                            |
| 2             | They will familiarize with the concepts of the Solution of Simultaneous Linear Equations and Ordinary Differential Equations, Predictor – corrector Methods. |
| 3             | They will grasp the Knowledge about the Interpolation and approximation, Chebyshev Polynomial.   |
| 4             | They will grab the Knowledge about the Numerical Differentiation and Integration, Gaussian Quadrature.   |

**Class: BCA**

**Semester: FOURTH**

**Subject: ADVANCED DATA STRUCTURE**

**Paper (U.G): BCA -241**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | They will exacerbate their ideas by adding knowledge of Trees, Binary Search Trees, Huffman's Algorithm, General Trees. |
| 2             | They will expedite their ideas by studying the concept of Graphs, Warshall's Algorithm, Dijkstra Algorithm,             |
| 3             | They will familiarize with the concepts of the Sorting, Searching Algorithms on the basis of complexity.                |
| 4             | At last, They will grasp the Knowledge about the Files and File Organization, Hashing, Collision Resolution.            |

**Class: BCA**

**Semester: FOURTH**

**Subject: ADVANCED PROGRAMMING USING C++**

**Paper (U.G): BCA-242**

| <b>S. No.</b> | <b>Course Outcomes</b>   |
|---------------|--|
| 1             | They will exacerbate their ideas by adding knowledge of Introduction to Dynamic Polymorphism.  |
| 2             | They will expedite their ideas by studying the concept of Type conversions and Inheritance.  |
| 3             | They will grasp the Knowledge about the difference forms of Inheritance, Templates in C++, Function Templates.                             |
| 4             | They will familiarize with the concepts of the Class Templates in C++, Exception Handling in C++, File Input Output in C++, File Pointers. |

**Class: BCA**

**Semester: FOURTH**

**Subject: E-commerce**

**Paper (U.G): BCA-243**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | They will exacerbate their ideas by adding knowledge of Various E-Commerce terms that includes E-Cash, E- Cheque, E-Transactions etc.                                 |
| 2             | They will expedite their ideas by studying the concept of B2B, B2C, B2G, G2G makes awareness in students to develop the Online procedure of sale and purchase.        |
| 3             | They will grasp the Knowledge about the E-Auctions and E- booking gives an opportunity to students to aware how to book and bid the various online data transactions. |
| 4             | With the help of the e-commerce they will gain the deep knowledge of electronic payment system which are very useful in now a days .                                  |

**Class: BCA**

**Semester: FOURTH**

**Subject: RELATIONAL DATABASE MANAGEMENT SYSTEM**

**Paper (U.G): BCA-244**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | They will exacerbate their ideas by adding knowledge of Introduction to Relational Model Concepts, Codd's Rules for Relational Model, Relational Algebra, Relational Calculus             |
| 2             | They will expedite their ideas by studying the concept of Functional Dependencies and Normalization, Functional Dependencies, Normal Forms (1NF, 2NF, 3NF & BCNF).                        |
| 3             | They will grasp the Knowledge about the SQL: Data Definition and data types, SQL Operators, Specifying Constraints in SQL, Basic DDL, DML and DCL commands in SQL, Tables, Views, Indexes |
| 4             | They will familiarize with the concepts of the PL/SQL architecture, PL/SQL and SQL*Plus, PL/SQL Basics, Advantages of PL/SQL, The Generic PL/SQL Block                                    |

**Class: BCA**

**Semester: FOURTH**

**Subject: COMPUTER-ORIENTED STATISTICAL METHODS**

**Paper (U.G): BCA-245**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | They will expedite their ideas by studying the concept of Basic Statistics: Preparing Frequency Distribution Table and Cumulative frequency, Measure of Central Tendency, Types, Measure of Dispersion, Standard Deviation Moments. |
| 2             | They will exacerbate their ideas by adding knowledge of Probability Distribution, Mathematical Expectation Types, Correlation.  |
| 3             | They will grasp the Knowledge about the Regression, Curve Fitting, Baye's Theorem in Decision Making, Forecasting Techniques.   |
| 4             | With the help of the e-commerce they will gain the deep knowledge of Sample introduction, Sampling, Types of test of Significance, Test of significance for large samples   |

**Class: BCA**

**Semester: FOURTH**

**Subject: MANAGEMENT INFORMATION SYSTEM**

**Paper (U.G): BCA-246**

| <b>S. No.</b> | <b>Course Outcomes</b>  |
|---------------|---|
| 1             | They will expedite their ideas by studying the concept of Introduction to System and Basic System Concepts, Types of Systems, The Systems Approach, Information System, Sub-Systems of an Information system.   |
| 2             | They will exacerbate their ideas by adding knowledge of An overview of Management Information System: Definition & Characteristics, Components of MIS, and Framework for Understanding MIS, Structured Vs Un-structured decisions, Formal vs. Informal systems. |
| 3             | They will grasp the Knowledge about the Developing Information Systems: Analysis & Design of Information Systems: Implementation & Evaluation, Pitfalls in MIS Development  |
| 4             | They will grasp the Knowledge about the Functional MIS: A Study of Personnel, Financial and production MIS, Introduction to e-business systems, ecommerce – technologies, applications, Decision support systems.   |