GOBI ARTS & SCIENCE COLLEGE (AUTONOMOUS) : GOBICHETTIPALAYAM

SCHEME OF EXAMINATIONS - B.Sc. (INFORMATION TECHNOLOGY) (16 BATCH)

No.	Code	Subject Title	Hrs	CIA	EOSE	Total	Credit
SEMESTER : 1							
1	16U1TM11	PART I : TAMIL - I	3	25	75	100	3.0
2	16U2EN01	PART II : ENGLISH - I	3	25	75	100	3.0
3	10UAIT01	PART III : MAJOR CORE : FUNDAMENTALS OF INFORMATION TECHNOLOGY	3	25	75	100	3.5
4	16UAIT05	OFFICE AUTOMATION TOOLS	3	25	75	100	3.5
5	11UBIT03	PART III : ALLIED CORE : MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE	3	25	75	100	5.0
6	16UAITP1	MAJOR CORE PROGRAMMING LAB - I (OFFICE AUTOMATION TOOLS)	3	25	75	100	2.0
7	15U4HE01	PART-IV: i)HUMAN EXCELLENCE:PAPER-I BASICS OF YOGIC LIFE	3	25	75	100	1.0
SEMESTER : 2							
8	16U1TM12	PART I : TAMIL - II	3	25	75	100	3.0
9	16U2EN02	PART II : ENGLISH - II	3	25	75	100	3.0
10	08UAIT04	PART III : MAJOR CORE : COMPUTER ORGANIZATION AND ARCHITECTURE	3	25	75	100	3.5
11	O8UAIT02	PROGRAMMING IN C	3	25	75	100	3.5
12	09UBIT06	PART III :ALLIED CORE : COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS	3	25	75	100	5.0
13	15UAITP2	MAJOR CORE PROGRAMMING LAB - II (C)	3	25	75	100	2.0
14	15U4HE02	PART-IV : i)HUMAN EXCELLENCE:PAPER-II SUBLIMATION AND SOCIAL WELFARE	3	25	75	100	1.0
15	13U4HEP1	PRACTICAL – I: YOGA PRACTICE-I		100		100	1.0
16	12U4FN01	ii)FOUNDATION SUBJECT-A: GENERAL AWARENESS	1.5		100	100	1.0
SEMESTER : 3							
17	08UAIT07	PART III : MAJOR CORE : OBJECT ORIENTED PROGRAMMING WITH C++	3	25	75	100	3.5
18	08UAIT08	DATA STRUCTURES AND ALGORITHMS	3	25	75	100	3.5
19	16UAIT09	INTRODUCTION TO INFORMATION SYSTEMS	3	25	75	100	3.5
20	08UAIT10	OPERATING SYSTEM	3	25	75	100	3.5
21	08UBIT01	PART III : ALLIED CORE : STATISTICS AND ITS APPLICATIONS	3	25	75	100	5.0
22	12UAITP3	MAJOR CORE PROGRAMMING LAB-III (C++)	3	25	75	100	2.0
23	12UAITP4	MAJOR CORE PROGRAMMING LAB-IV (DATA STRUCTURES IN C)	3	25	75	100	2.0
24	14U4HE03	PART-IV : i)HUMAN EXCELLENCE: PAPER-III MENTAL PROSPERITY AND HUMAN EXCELLENCE	3	25	75	100	1.0
25		ii)FOUNDATION SUBJECT-B:	3		100	100	2.0

Contd....

SEMESTER : 4

26	12UAIT11	PART III: MAJOR CORE: RELATIONAL DATABASE MANAGEMENT SYSTEMS	3	25	75	100	5.0
27	10UAIT12	JAVA PROGRAMMING	3	25	75	100	4.0
28	16UAIT13	INTERNET & E-COMMERCE	3	25	75	100	4.0
29		PART III : ALLIED OPTIONAL :	3	25	75	100	5.0
30	14UAITP5	MAJOR CORE PROGRAMMING LAB - V (RDBMS)	3	25	75	100	2.0
31	12UAITP6	MAJOR CORE PROGRAMMING LAB - VI (JAVA)	3	25	75	100	2.0
32	14U4HE04	PART-IV : i)HUMAN EXCELLENCE: PAPER-IV SCIENCE OF DIVINITY AND REALIZATION OF SELF	3	25	75	100	1.0
33	13U4HEP2	PRACTICAL – II: YOGA PRACTICE-II		100		100	1.0
34		ii) FOUNDATION SUBJECT-B	3		100	100	2.0
35		PART V : CO-CURRICULAR ACTIVITIES					1.0

SEMESTER : 5

36	16UAIT14	PART III : MAJOR CORE: VISUAL BASIC	3	25	75	100	4.5
37	16UAIT15	WEB DESIGN	3	25	75	100	4.5
38	12UAIT20	COMPUTER NETWORKS	3	25	75	100	4.5
39	11UAIT17	SOFTWARE ENGINEERING	3	25	75	100	4.5
40	16UAITP7	MAJOR CORE PROGRAMMING LAB-VII (VISUAL BASIC)	3	25	75	100	2.0
41	16UAITP8	MAJOR CORE PROGRAMMING LAB-VIII (WEB DESIGN)	3	25	75	100	2.0
42		PART III : MAJOR OPTIONAL:	3	25	75	100	4.0

SEMESTER : 6

43	16UAIT18	PART III : MAJOR CORE : MULTIMEDIA SYSTEMS AND DESIGN	3	25	75	100	4.5
44	11UEIT01	MAJOR SKILL BASED PAPER : COMPUTER GRAPHICS	3	25	75	100	4.5
45	16UAITP9	MAJOR CORE : PROGRAMMING LAB-IX (MULTIMEDIA)	3	25	75	100	2.5
46	14UEITP1	MAJOR SKILL BASED PRACTICAL : PROGRAMMING LAB-X (COMPUTER GRAPHICS)	3	25	75	100	2.5
47	16UAIT21	MAJOR CORE: PROGRAMMING WITH PHP	3	25	75	100	4.5
	16UAITPA	PROGRAMMING LAB-XI(PHP)	3	25	75	100	2.5
		(OR)					
	08UAITV1	PROJECT WORK		25	75	100	7.0

CREDIT:

PART I : 6 PART II : 6 PART III : MAJOR : 100
ALLIED: 20
---> 120
PART IV : 11 PART V : 1 TOTAL : 144

B.Sc. (I.T) – I Semester

FUNDAMENTALS OF INFORMATION TECHNOLOGY

Instruction Hrs: 60

Objectives:
1. Effectively communicated Information Technology to a range of audiences.
2. Grown professionally through self-study, continuing education and professional development.
3. Evaluates and implement technologies that ensure availability of information.

UNIT-I **12 Hrs**

Computer Basics-Introduction – Evolution of Computers – Generations of Computer – Classification of Computers – The Computer System – Applications of Computers – Input Output Media : Introduction – Types of Input Devices – Types of Output Devices – Computer Terminals

UNIT-II **12 Hrs**

Computer Memory And Storage – Introduction – Memory Hierarchy – Random Access Memory (RAM) – Read Only Memory (ROM). CPU Interaction – Types of Secondary Storage Devices – Magnetic Tap – Magnetic Disk – Types Of Magnetic Disk – Optical Disk – types of Optical Disk – Magneto – Optical Storage Devices – Mass Storage Devices.

UNIT-III **12 Hrs**

Computer Programming And Languages – Introduction – Algorith – Flowchart – Pseudo Code – Program Control Structures – Programming Paradigms – Programming Languages – Generations Of Programming Languages

UNIT-IV **12 Hrs**

Computer Software – Introduction – Categories of Software – Operating System – Introduction – Evaluation of Operating System – Types of Operating System – Functions of Operating System

UNIT-V **12 Hrs**

Multimedia Essentials – Introduction – Building Blocks of Multimedia – Multimedia System – Multimedia Applications – Virtual Reality – The Internet: Introduction – Evaluation of Internet – Basic Internet Terms – Getting Connected to Internet – Internet Applications.

TEXT BOOK

Introduction to Information Technology, ITL Education Solutions Limited, Pearson Education, 2008.

REFERENCE BOOK

1. Introduction to Information Technology, V. Rajaram, Prentics Hall India, 2006.
2. Information Technology, Chanchal Mittal, Pragati, 6th Edition, 2006.

B.Sc. INFORMATION TECHNOLOGY
SEMESTER-I
(Common for BCA & IT)
OFFICE AUTOMATION TOOLS

Instructional Hrs: 60

Objective: 1. To work on Linux environment.
2. To work on presentation & spread sheet through impress & calc.
3. To work on documents in writer.

UNIT-I 12 Hrs

LINUX: Basic of Linux – Getting started with Linux, Working with K Desktop Environment, Working with Files and Directories.

UNIT-II 12 Hrs

GIMP: Introducing GIMP, Working with Tools, Working with Layers and Text.

UNIT-III 12 Hrs

Writer: Getting started with OpenOffice.org Writer, Editing Documents in Writer, Formatting the Document.

UNIT-IV 12 Hrs

Impress: Getting started with OpenOffice.org Impress, Working with Presentations

UNIT-V 12 Hrs

Calc: Getting started with OpenOffice.org Calc, Working with Functions and Operators, Working with the OpenOffice.org Calc Layout.

TEXT BOOK:

Vikas Gupta, "LINUX AND OPEN OFFICE COURSE KIT", Dreamtech press, First Edition, 2010. (Unit I – V)

REFERENCE BOOKS:

1. Andy Channelle, "BEGINNING OPEN OFFICE 3: FORM NOVICE TO PROFESSIONAL", Apress, First Edition, 2009.
2. Greg M.Perry, "SAMS TEACH YOURSELF OPEN OFFICE.ORG ALL IN ONE", Prentice Hall, First Edition, 2004.
3. Jeffery A.Riley, "INTRODUCTION TO OPEN OFFICE.ORG", Prentice Hall, First Edition, 2009.
4. Gurdy Leete, Ellen Finkelstein, Mary Leete, "OPEN OFFICE.ORG FOR DUMMIES", Wiley publishing Inc, First Edition, 2004.

SEMESTER I

MATHEMATICAL FOUNDATIONS FOR COMPUTER SCIENCE

Instruction Hrs: 90

Objectives: 1. To develop the problem solving skills.

2. To develop the knowledge of measurements.

UNIT-I **18 Hrs**

Matrices: Definition – Types of Matrices – Addition & Subtraction of Matrices – Scalar multiple of a matrix – Matrix Multiplication – Determinant of a Matrix – Inverse of a matrix.

UNIT-II **18 Hrs**

Set Theory: Introduction – Sets & its Elements – Set Description – Types of Sets – Basic set operations – Laws of set theory – Duality – The inclusion & exclusion principle.

UNIT-III **18 Hrs**

Relations: Introduction – Definition of Cartesian Product of sets – Binary relation – set operations on relations – Types of relations – Partial Order Relation – Equivalence Relations – Composition of relations.

UNIT-IV **18 Hrs**

Graph Theory: Introduction – Definition of Graph, Undirected Graph, Multi Graph, Walk, Path, Circuit, Connected Graphs, Distance & Diameter, Cut Points & Bridges – Types of Graphs – Sub graph – Representation of Graphs in Computer memory.

UNIT-V **18 Hrs**

Mathematical logic: Introduction – Propositional calculus – Basic Logical Operations: Conjunction, Disjunction, Negation, Conditional Statements, and Bi conditional statements – Tautologies – Contradiction – Algebra of sets.

TEXT BOOKS:

1. N. Ch. S. N.IYENGAR, “MATRICES”, Anmol Publications Pvt. Ltd., I Edition, 1998. (Unit I).
2. J.K Sharma, “DISCRETE MATHEMATICS”, Macmillan India Ltd., II Edition 2005. (Unit II-V).

B.Sc IT – SEMESTER - I

(Common for BCA & IT)

PROGRAMMING LAB – I (OFFICE AUTOMATION TOOLS)

Instructional Hrs: 60

Objectives:
1. Able to make work on writer.
2. To make use on calc.
3. To design presentations in Impress & GIMP.

1. Create an open Office Writer application with 10 lines and perform various task such as Bold, Italic, Underline, Font-Size, Color, Background color, Line Spacing, Header & Footer, Page Numbering, Bullets & Numbering and Change Case.
2. Design an Invitation Card in Writer.
3. Design a Time Table in Writer.
4. Perform Mail-Merge for many companies in different cities through Writer.
5. Maintain a worksheet of Student Mark List for each semester in Open Office Calc.
6. Create a Chart for Student Mark List in a worksheet in Calc.
7. Maintain the sales details for the company for six days in a week for the branches and perform the following operations in Calc.

a. Sales details Day wise

b. Sales details Branch wise

c. Sales details Product wise

d. Highest Sales details in Product wise.

8. Create Consolidated Mark sheet for three semesters using Calc.
9. Develop a table for Saving Scheme in Calc and calculate the interest amount using the principle amount, number of years and rate of interest.
10. Design a Greeting card using GIMP.
11. Create a Rainbow using GIMP.
12. Design sun using GIMP.
13. Using GIMP create Planet and Saturn.
14. Design a presentation about the college in Open Office Impress.
15. Design a presentation for product advertisement in Impress.
16. Design a presentation for the Newspaper in Impress.

SEMESTER II

COMPUTER ORGANIZATION AND ARCHITECTURE

Instruction Hrs: 60
Objective: To make the students to understand the concepts in computer H/W devices, data types, Registers and memory etc.

UNIT-I **12 Hrs**

CENTRAL PROCESSOR ORGANIZATION: ALU and Bus Organization – General Register Organization – Stack Organization – Instruction formats – Addressing modes – data Transfer and Manipulation – Program control.

UNIT-II **12 Hrs**

PIPELINE AND VECTOR PROCESSING: Parallel Processing – Pipelining Arithmetic Pipeline – Instruction Pipeline and memory interleaving.

MICROPROGRAM CONTROL: Control memory – Address Sequencing – micro instruction format – Design of control Unit.

UNIT-III **12 Hrs**

INPUT – OUTPUT ORGANIZATION: Peripheral Devices – Input – Output Interface – Asynchronous Data transfer: Strobe control, handshaking, asynchronous serial transfer, UART - Priority Interrupt – DMA – IOP: CPU – IOP communication.

UNIT-IV **12 Hrs**

COMPUTER ARITHMETIC: Introduction – Addition and Subtraction: Addition and Subtraction with signed – Magnitude Data, Addition and Subtraction with signed – 2's complement Data – Multiplication Algorithm: Hardware Implementation for signed – Magnitude Data – division Algorithm: H/W implementation for signed – Magnitude Data – Floating – Point Arithmetic operations: Addition and Subtraction.

UNIT-V **12 Hrs**

MEMORY ORGANIZATION: Memory Hierarchy – Auxiliary memory – Associative memory – Cache memory – Virtual Memory – Memory Management H/W.

TEXT BOOK:

Morris Mano. M., "Computer System Architecture", "PHI Publication – Third Edition, 2003."

SEMESTER II

PROGRAMMING IN C

Instruction Hrs: 60
Objectives: 1. To develop system software and packages.

2. Control the hardware components and develop the chip level coding.

UNIT-I **12 Hrs**

C FUNDAMENTALS: Overview of C, Constants, Variables and Data Types, Operators and Expressions, Data Input and Output Operators – Simples Programs.

UNIT-II **12 Hrs**

CONTROL STATEMENTS :If -Statements, switch, Conditional Operator, While, do..While, for statements, break, continue, Storage Classes – Programs.

UNIT-III **12 Hrs**

ARRAY AND FUNCTIONS: One and Multi dimentional arrays, Handling of Character Strings – Programs. USER DEFINED FUNCTIONS: - Programs.

UNIT-IV **12 Hrs**

STRUCTURE AND POINTERS: Structures and Unions – Programs.
POINTERS: Introduction, Pointer Expressions, Pointers and Arrays, Pointers and Character Strings, Pointers and Functions, Pointers and Structure – Programs.

UNIT-V **12 Hrs**

File and the preprocessor: File Management in C – Programs, Concept of Dynamic Allocation of Memory and Linked List, The Preprocessor.

TEXT BOOK

E. Balagurusamy, Programming in ANSI C, Tata McGraw Hill Publishing Company Limited.

SEMESTER II

COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS

Instruction Hrs: 90
Objectives: 1. To develop solving skills of Numerical problems.

2. To solve the algebraic equations in simplest methods.

UNIT-I **18 Hrs**

The Solution of Numerical Algebraic & Transcendental Equations – Bisection method – Iteration Method – Newton – Raphson method – The method of false position

UNIT-II **18 Hrs**

The Solution of Simultaneous Linear Algebraic Equation – Gauss Elimination method – Gauss Jordon Elimination method – Triangularization Method – Gauss Seidal method – Gauss – Jacobi method

UNIT-III **18 Hrs**

Interpolation – Newton forward interpolation formula – Newton backward interpolation formula – LaGrange's formula. Numerical Differentiation – Newton's Forward Difference formula – Newton's backward difference formula

UNIT-IV **18 Hrs**

Measurres of central tendency – Mean, Media and Mode – Relationship among mean, media and mode.

UNIT-V **18 Hrs**

Measurres of dispersion – Range, quartile deviation, mean deviation and Standard deviation

TEXT BOOKS:

NUMERICAL METHOD – P.Kandasamy, K. Thilagavathi, K. Gunavathi. S. Chand & company Ltd. New Delhi Revised Edition 2005.

Numerical Method – N. Kalavathi
Business Statistics – S.P. Gupta & M.P. Gupta. **Sultan Chand and Sons** (Unit IV & V)

SEMESTER-II

PROGRAMMING LAB II – (C)

Instructional Hrs: 60

Objectives:
1. To learn the basic structure of programming.
2. To learn programs with decision making statements and loops.
3. To learn about building Block of statements.

1. Write a C program to calculate the sum of digits of a given number.
2. Write a C program to find a factorial for given number.
3. Write a C program to print the Fibonacci series.
4. Write a C program to find the Ramanujam number.
5. Write a C program to print the numbers between some interval which divisible by four.
6. Write a C program to find the Maximum and Minimum value in a array.
7. Write a C program to sort a given number.
8. Write a C program to add two matrices.
9. Write a C program for converting numbers into words.
10. Write a C program to find and count number of vowels in a word or string.
11. Write a C program for sorting string in a alphabetical order.
12. Write a C program to find the roots of a Quadratic Equation.
13. Write a C program for swapping two values using pointers.
14. Write a C program to print Electricity Bill using File.
15. Write a C program to Maintain Student Mark List using Structure.

SEMESTER III

OBJECT ORIENTED PROGRAMMING WITH C++

Instruction Hrs: 60

Objectives: 1. To develop object oriented programming knowledge.

2. To develop the knowledge of how to represent real-life entities of problems in system design.

UNIT-I **12 Hrs**

Principles of Object Oriented Programming: Procedure Oriented Programming, Object Oriented Programming Paradigm, Basic Concepts of Object Oriented Programming, Benefits of Object Oriented Programming, Object Oriented Languages, Application of Object Oriented Programming - Beginning With C++: What Is C++, Applications Of C++, Structure of C++ Statement – Tokens, Expressions and Control Structures: tokens, keywords, identifiers and constants, basic and user defined datatypes, derived datatypes, variables, Operators in c++, Operator Precedence, Expression and Their Types, Control Structures.

UNIT-II **12 Hrs**

Function in C++: Main Function, Function Prototyping, Call By Reference, Return By Reference, Inline Functions, Default Arguments, Function Overloading – Classes And Objects: Specifying A Class, Defining Member functions, Making an Outside Function Inline, Nesting of Member Functions, Private Member Functions, Arrays Within a Class, Memory Allocation For Objects, Static Data Members and Member Functions Arrays of Objects, Object As Function Arguments, Friendly Functions, Pointers to Members.

UNIT-III **12 Hrs**

Constructors And Destructors – Constructors, Parameterized Constructors, Multiple Constructors In A Class, Constructors With Default Arguments, Copy Constructor, Destructors – Operator Overloading And Type Conversions: Defining Operator Overloading, Overloading Unary Operators, Overloading Binary Operators using Friend, Rules For Overloading Operators, Type Conversions.

UNIT-IV **12 Hrs**

Inheritance: Defining Derived Classes, Single, Multilevel, Multiple, Hierarchical And Hybrid Inheritance, Virtual Base Classes, Abstract Classes, Constructors in Derived Classes, Nesting Of Classes – Pointers, Virtual Functions And Polymorphism: Pointers To Objects, This Pointer, Pointers To Derived Classes, Virtual Functions, Pure Virtual Functions.

UNIT-V **12 Hrs**

Managing Console I/O Operations: C++ Streams, C++ Stream Classes, Unformatted I/O Operations, Formatted Console I/O Operations, managing Output With Manipulators Working With File: Classes For File Stream Operations, Opening And Closing A File Detecting End-Of-File, Open() File Modes, File Pointers And Their Manipulation , Sequential I/O Operations, Random Access File, Error Handling During File Operations.

TEXT BOOK:

OBJECT ORIENTED PROGRAMMING WITH C++, E. Balagurusamy, Tata McGraw Hill Publishing Company, 3rd edition.

REFERENCE BOOKS:

1. THE C++ PROGRAMMING LANGUAGE, Bjarne Stroutstup, Addition Wesely Publications.
2. MASTERING C++ K.R.Venugopal, Rajkumar, T.Ravishankar, Tata McGraw Hill Publishing Company Ltd, 1998.
3. OBJECT ORIENTED PROGRAMMING IN TURBOC++, Robert Lafore, Galgotia Publications.

SEMESTER III

DATA STRUCTURES AND ALGORITHMS

Instruction Hrs: 60

Objectives:
1. Familiar with basic techniques of algorithm analysis with recursive methods.
2. To implement the linked data structures such as linked list and trees.
3. Analysis the problems and writing program and solve the solutions above techniques.

UNIT-I **12 Hrs**

Introduction – Basic Terminology: Elementary Data Organization – Data Structures-Data Structure Operations – Preliminaries – Mathematical Notation and Functions – Algorithmic Notation – Control Structure – Complexity of Algorithms – Other Asymptotic Notations for complexity by Algorithms.

UNIT-II **12 Hrs**

Array, Records and Pointers: Introduction – Linear Arrays – Representation by Linears Array in memory – Traversing Linear Arrays – Inserting and Deleting – Linked lists: Introduction – Representation of Linked Listed in memory – Traversing a Linked list – Searching a linked list – memory Allocation – Insertion into a Linked list – Deletion from a Linked list.

UNIT-III **12 Hrs**

STACKS, Queues, RECURSION: Introduction – Stacks – Arrays Representation of Stacks – Linked Representation of stacks – Arithmetic Expression – Polish Notation – Quick sort, an Application of stacks – Recursion – Towers of Hanoi – Queues – Linked Representation of Queues.

UNIT-IV **12 Hrs**

TREES : Introduction – Binary Trees – Representing Binary Trees in memory – Traversing Binary Trees – Traversal Algorithms using Stacks – Graphs and Their Applications – Graph theory Terminology – Sequential Representation of Graph : Adjacency matrix, path matrix, Warshall's Algorithm. Shortest paths.

UNIT-V **12 Hrs**

Sorting and Searching : Introduction – Sorting – Insertion Sort – Selection Sort – merging – merge sort – Radix sort – Searching and data modification – Hashing.

TEXT BOOK:

Seymour Lipschutz & GA Vijayalakshmi Pai, Data Structures, Tata McGraw Hill – 2006.

REFERENCE BOOK:

Alfred V. Aho, John E. Hopcroft, Jeffrey D. Ullman, Data Structures and Algorithms, Ellis Horowitz, Saartaj sahni, fundamentals of Data Structures.

B.Sc. [IT] Third Semester

INTRODUCTION TO INFORMATION SYSTEMS

Instruction Hrs:60

Objectives:

1) Students will learn the professional behavior, including rules of ethics and etiquette.
2) Understand principles of systems analysis and design including the appropriate application of techniques to elicit and document user requirements of an information system.
3) Students will demonstrate the ability to solve problems in the discipline.

12 Hrs

UNIT I

IT in Business: Introduction – Business Pressures – Organizational Responses – Strategtic Alliances – E-Commerce – Office Automation Technologies – Overview of Information Systems – IT Support at Different Organizational Levels – Managing Information System in Organizations. Managing Organizational Data and Information: Introduction – Why a Database – Characteristics of Data in Database – Database Management System – Why DBMS – Types of Database Management System - Logical Data Models.

12 Hrs

UNIT II

Telecommunications and Networks: Introduction – Telecommunication System – Communication Process - Communications Media - Characteristics of Communication Media – Telecommunication Software – Types of Networks – Network Topologies – Network Protocols – Network Architecture – Networks Standardization – Business and Networks.

12 Hrs

UNIT III

Data, Information and Knowledge: Introduction – Difinition of Information – History of Information – Quality of Information - Information Processing – Management – Decision Making – Data Transformation and Management - Decision Support Systems – Enterprise Decision Support – Data Visualization Technologies – Data and Information Analysis. Intelligent System in Business: Artificial Intelligence – Commercial AI Systems – Expert Systems – Intelligent Agents – Agents for Commerce – Concerns and Issues Surrounding Intelligent Agents - Intelligent Agents of the Future.

12 Hrs

UNIT IV

IS Planning and Management: Information Systems(IS) Planning - Information System Plan - Principles for IS Planning – Roles of IS and Other Department in IS Planning – Allocating Resources Between new and old Information System – Project Roles of IS Professionals – Strategic Alignment of Business and IT - The Information System Department – Managing the IS Department.

12 Hrs

UNIT V

IS Security Issues and Solutions: IS Vulnerability – Types of Computer Crimes – Computer Security – Crime and Security – Computer Crime by Authorized Users – Computer Crime through Unauthorized Access – Potentially Mailcious Computer Programs – Cryptography – What is Encryption – Different Cryptosystems – Applications of encryption – The limits of Encryption – SSL – Digital Certificates – SET – SET transcations – SET process – Firewalls and Network Security – Risk Management and Cost-Benefit Analysis.

Text Book:

Alexis Leon, Mathews Leon - “Introduction to INFORMATION SYSTEMS”, Vijay Nicole and LXL Consultancy Service pvt ltd-2004.

Reference Book:

Rainer, Turban, Potter.”Introduction to INFORMATION SYSTEMS”. Pasupathy Printers – 2006.

SEMESTER III

OPERATING SYSTEMS

Instruction Hrs: 60

Objectives:
1. Operating system is that it enables users to run their own computer without any knowledge of coding.
2. Software that controls the hardware.
3. To develop the skill sets specific to operating system.

UNIT-I **12 Hrs**

PROCESS MANAGEMENT: Introduction to Operating System – Process concepts – Asynchronous Concurrent process – Mutual exclusion – Critical section – Semaphores – Process synchronization with semaphores.

UNIT-II **12 Hrs**

DEADLOCK: Examples – Necessary conditions for deadlock – deadlock prevention – Avoidance – Detection – Recovery from deadlock – STORAGE MANAGEMENT : Storage Organization – storage management – Hierarchy, Strategies – Contiguous Vs Non-contiguous Storage allocation – fixed and variable partitioned multiprogramming – Virtual storage – Multilevel storage organization – block mapping.

UNIT-III **12 Hrs**

PROCESSOR MANAGEMENT: Job scheduling levels – Objectives – Criteria – Preemptive Vs Non-preemptive – Interval timer – interrupting clock – priorities – Scheduling – FIFO, RR, SJF, SRT, HRN, Multilevel feed back queue – Fair share Scheduling.

UNIT-IV **12 Hrs**

FILE SYSTEMS: Introduction – System Functions – data hierarchy – blocking and buffering – file organization – Queued and Basic access methods – allocating and freeing space – file description – Access control matrix – access control by user classes – backup and recovery – SECURITY: Security requirements – Cryptography – user authentication.

UNIT-V **12 Hrs**

Red Hat Linux: Introduction to Linux – features – files creation and manipulation commands – shell programming: Control Structure – if, for, while, until, case statements.

TEXT BOOKS:

1. H.M. Deitel, “Operating System”, Addison Wesley Publications. Second Edition.
2. Andrew S. Tanenbaum, “Modern Operating system”, Pearson Education.
3. Alax Cox, “Linux Programming”, Shroff Publishers & Distributors.

SEMESTER III

STATISTICS AND ITS APPLICATIONS

Instruction Hrs: 90

Objectives: 1. To know about collection, analysis and interpretation of quantitative information.

2. To implement the statistics problem in SPSS.

UNIT-I **18 Hrs**

Statistics: Definition – Classification and Tabulation of Data – Measure of Central values: Mean – Median – Mode – Their relationship – Measures of Dispersion: Range – Quartile Deviation – Mean deviation – Standard deviation – Skewness, Kurtosis and moments – Skewness moments.

UNIT-II **18 Hrs**

Correlation: Meaning – types – Methods, Scatter diagram – Karl Pearson's Coefficient of Correlation – Rank correlation – Concurrent deviation method – Simple regression – Curve fitting – Straight line, Parabola and exponential curves.

UNIT-III **18 Hrs**

Index numbers: Definition – Uses – Unweighted and weighted index numbers – properties of good index numbers – Cost of Living index – Baseline Shifting – Splicing and deflating index numbers.

UNIT-IV **18 Hrs**

Time series: Definition – Components of time series – Additive and multiplicative models – Methods of measuring trend and seasonal variations – Graphic method – Semi average method – Moving average method – Method of least squares – Ratio of trend method – Ratio of moving average method – Link Relative method.

UNIT-V **18 Hrs**

Overview of SPSS for Windows – SPSS Windows processes – Creating and editing a data file – Mastering Data – Graph

Base System Module: Frequencies – Cross tabulation – Chi-square analysis – Bivariate Correlation.

TEXT BOOKS:

1. R.S.N. Pillai and Bagavathi, Statistics, S.Chand & Company. Ltd, New Delhi.
2. Darren George, Paul Mallery, SPSS for Windows Step by Step, Pearson Education, 2006.
3. S.P.Gupta, Statistical methods, S.Chand & Company.Ltd, New Delhi.

SEMESTER III

MAJOR CORE PROGRAMMING LAB – III (C++)

Instruction Hrs: 60

Objectives: 1. To develop the object oriented programming knowledge.

2. To develop the programming skills.

3. To develop debugging knowledge of the students.

1. Write a C++ program to perform numerical operations using control structures.
2. Write a C++ program to perform string operations using various string functions.
3. Write a C++ program to perform arithmetic operation using inline function.
4. Write a C++ program to perform sorting of numbers using function overloading.
5. Write a C++ program to get and put student details using class concept.
6. Write a C++ program to check the biggest among two numbers using nested member function.
7. Write a C++ program to get and put the product details using array of object pointer.
8. Write a C++ program to get and swapping of two numbers using friend function.
9. Write a C++ program to calculate factorial value of given number using parameterized constructor.
10. Write a C++ program to add two complex numbers using constructor overloading.
11. Write a C++ program to perform concatenation of two strings using dynamic constructor.
12. Write a C++ program to perform finding binomial co-efficient using operator overloading [*].
13. Write a C++ program generate phone bill using multilevel inheritance.
14. Write a C++ program to get and put student details using hybrid inheritance.
15. Write a C++ program to get and put student details using virtual base class.
16. Write a C++ program to generate employee pay slip using file concept.

SEMESTER III

Programming Lab-IV (DATA STRUCTURES IN C)

Instruction Hrs: 60

Objectives: 1. To develop programming skill.

2. To implement the concept of Data structures in 'C' programming.

1. Write a C program to find factorial of the given number using recursion.
2. Write a C program to find Fibonacci series up to the given limit using recursion.
3. Write a C program to find GCD for the given two numbers using recursion.
4. Write a C program display the movement disks to give a tower using recursion.
5. Write a C program to find binomial co-efficient for the given numbers.
6. Write a C program to search the given number by linear search.
7. Write a C program to search the given number by Binary search.
8. Write a C program to sort the given numbers using Insertion sort.
9. Write a C program to sort the given number using Quick sort.
10. Write a C program to display the sparse matrix.
11. Write a C program to perform Stack operations.
12. Write a C program to perform Queue operations.
13. Write a C program to convert infix to postfix expression.
14. Write a C program to evaluate postfix expression.
15. Write a C program to add two polynomial equations.

SEMESTER IV

RELATIONAL DATABASE MANAGEMENT SYSTEMS

Instruction Hrs: 90

Objectives:
1. To know about the database management system.
2. Learnt to create and accessing tables.
3. To know about SQL Queries.

UNIT-I **18 Hrs**

INTRODUCTION: RDBMS Terminology – The Relational Data Structure – Relation Data Integrity – Codd's Rules. DATABASE ARCHITECTURE AND DATA MODELING: Conceptual, Physical and Logical Database Models – Database Design – Design Constraints – Functional Dependencies. ENTITY RELATIONSHIP MODELING: E-R Model – Components of an E-R Model, E-R modeling symbols.

UNIT-II **18 Hrs**

DATA NORMALIZATION: Introduction – First (1NF), Second (2NF), Third (3NF), Normal Forms, Boyce-Codd Normal Form(BCNF), Fourth (4NF), Fifth (5NF) Normal Forms, Domain-key Normal Form, Denormalization. RELATIONAL ALGEBRA AND RELATIONAL CALCULUS: Relational Algebraic operations: union, intersection, difference, Cartesian product, select, project, rename, join, division. – Tuple Relational Calculus, Domain Relational Calculus.

UNIT-III **18 Hrs**

SQL PLUS: Menus – commands - Editing the Command Line – The Describe Command – The COLUMN Command – Basic SQL: SQL Language Basics – The SELECT Command – Data Types – Expressions and operators – Functions – The INSERT Command – The UPDATE Command – The DELETE Command – Transactions.

UNIT-IV **18 Hrs**

Scheme Objects – Data Integrity: Types – Integrity Constraints. Creating and Manipulating Tables: The CREATE TABLE Command – Modifying Tables – Deleting a Table. Indexes: Creating Indexes – Changing an Index. SEQUENCES: The create sequence command – Pseudo columns – Deleting, changing, using sequence. VIEWS: How a view works – Creating a view – Deleting a view – Replacing a view. SYNONYMS: Creating, Renaming and Removing Synonyms.

UNIT-V **18 Hrs**

PL/SQL: Blocks – control structures – Integrating SQL in a PL/SQL Program. TRIGGERS: Components – Types - Creating, Modifying, Enabling/Disabling a Trigger, Deleting, Replacing a Trigger – Stored Procedures and Functions: Creating, Executing, Deleting a stored procedure – Functions, Packages: structure – Using Navigator – Referencing, Recompiling, Deleting a Package – Cursors – Transactions. Users, Privileges and Roles.

TEXT BOOKS:

1. Alexis Leon & Mathews Leon, “Database Management Systems”, Vikas Publishing House Pvt. Ltd., (UNIT I, II)
2. Jose A. Ramalho, “Learn Oracle 8i”, BPB Publications. (UNIT III, IV, V)

SEMESTER IV

JAVA PROGRAMMING

Instruction Hrs: 75

Objectives:
1. Simple, object oriented and familiar.
2. Java was designed to be easy to use and is therefore easy to write, compile, debug and learn.
3. Java is platform – independent.

UNIT-I **15 Hrs**

Introduction – Literals – Data types – Variables – The Structure of a Java Program – Operators – Control Statements.

UNIT-II **15 Hrs**

Arrays – Classes – Inheritance – Packages – Interfaces – Implementing an Interface

UNIT-III **15 Hrs**

Exceptions – Input/Output Streams – Byte Streams – Disk File Handling – Memory Handling – Strings – Threads – Multitasking – Creating a Thread – Status of a Thread – Multithreaded Programming – Thread Priorities.

UNIT-IV **15 Hrs**

Applets – Basics – Methods – Html Applet Tag – Interface In Applet – Multimedia In Applet – Graphics.

UNIT-V **15 Hrs**

Event Handling – Model-Events – Event Listeners – Registering Listeners with Source – Example Programs – Mouse Event Handling – Key Event Handling – Window Event Handling

TEXT BOOK:

1. Dr. K. Somasundram, “Programming In Java 2”, JAICO Publishing House, 2005.

REFERENCE BOOKS:

1. E. Balagurusamy, “Programming with Java”, Tata McGraw Hill Company, 2004.
2. R. Krishnamoorthy & S. Prabhu, “Internet and Java Programming”, New Age International, First Edition: 2002.

Department of Information Technology/Computer Technology
B.Sc [IT], B.Sc. [CT] Semester - IV
Internet and E-Commerce

Instruction Hrs: 75

Objectives:

1. Electronic Commerce provides an overview of the fundamental concepts of online marketing, creating a web site, gaining customers online.
2. To prepare students to exploit newly created opportunities in the e-commerce field.
3. The Internet and new media are reshaping industries, and challenging existing commercial models and relationships.

15 Hrs

UNIT-I

Introduction to E-Commerce: Introduction-Meaning of E-commerce-Definitions of E-commerce-E-commerce in India-Traditional commerce vs E-commerce-Advantages of E-commerce-Benefits to organisation-Benefits to society-Limitations of E-commerce - Categories of E-commerce-E-Business - E-Business versus E-commerce-Advantages of E-Business. Nature and Dynamics of the Internet and its Infrastructure: Advantages of the Internet-Disadvantages-history and Growth of Internet-Anatomy of the Internet- Internet protocols-Basic features of the web.

15 Hrs

UNIT-II

Planning and Launching of Online Business: Planning Online Business-Business Models-Advantages of Bricks and Clicks Business Model-Launching Online Business-Life Cycle Approach for Launching an Online Business-One to One enterprise. Design and Development of Website: Meaning of Website - Advantage of Website-Types of Website-Life Cycle Approach for Building a Website - Different ways to build a Website-Principles of Web Designing.

15 Hrs

UNIT-III

IT Network Infrastructure for E-Commerce: Introduction-Information Superhighway-Components of I way-Types of Wireless Media-Cable TV Based Network Last Mile-VSAT-Cellular Communication-Radio Based Wireless-Specialized Mobile Radio System. Electronic Payment System: Traditional Payment System-Inter based Payment System-The Essential Requirements of E-Payment System-Credit Card-Debit Card-Smart Card-Electronic Funds Transfer-Automated Clearing House-Digicash. E-cash-E-cheques-E-wallet. Electronic Money: E-money-Introduction-Concept of E-money-Benifits of E-money-Different Types of E-money-Properties of E-money.

15 Hrs

UNIT-IV

Payment Gateways: Payment Gateway Process-Advantages of Payment Gateway-Disadvantages of Payment Gateway-Types of Payment Gateways. Promoting Web Traffic: Introduction-How to Promote the Website?-How to gather Web data?-Website Promotion Services-Different ways to Build Traffic-Domain name-Portals-Advertising-Advertisement Strategy-Advertisement Methods. Application of E-Commerce: Business-to-Business-Business within Business-Customer to Business-Online Travel Services-Broker Based Services-Online Career Industry-Online Insurance Industry-Online Banking-Online Real estate Service-E-auction.

15 Hrs

UNIT-V

E-Business Models: E-Business Models-Major type of E-Business-Brick and Mortar Business Model-B2C Business Model-B2B Business Model-C2B Business Model-c2c Business Model. Security in E-Commerce: Introduction-Treats to Internet Security-Types of Treats-Security Systems on the Internet-Digital Signature-Cryptography-Types of Cryptography-Secret Key-Public/Private Key-Network Security-Client Server Network Security-Data and Transmission Security-Firewalls-Security Protocols-Secure Socket Layer-Secure HTTP-SET.

Text Book:

Nidhi Dhawan, “Introduction to E-Commerce”, International Book House Pvt.Ltd, Second Edition 2011.

Reference book

1. Mamta bttasry “E-Commerce”- Fire Wall Media-2005.
2. “Basics of E-Commerce Legal and Security Issues”- NIIT-2004.

B.Sc. (CS) - SEMESTER-V

PROGRAMMING LAB-VIII (Relational Data Base Management Systems)

B.Sc. (IT) / B.Sc. (CT) - SEMESTER-IV

PROGRAMMING LAB-V (Relational Data Base Management Systems)

Instructional Hrs : 60

Objectives :
1. To create MYSQL programs to work within tables
2. To create SQL programs to manipulate within tables
3. To make the students to know about the various functions used when working within tables.

1. Write a MYSQL program to create table for employee details and alter table, update and delete values in that table
2. Write a MYSQL program to create table and write queries with built in function for the following constraints.
   - comparison , logical and set operators
   - sorting and grouping operators built in functions for ceil , sysdate ,
   - minus ,square , round, length, count and sum.
3. Create a table called 'product' with the following details:

SL NO	Field Name	Data made of	Constraints
1.	Product code	First characters 'P' Other 3 characters are digits	Should not be empty and should be made of unique values
2.	Product Name	Alphabets	Should not be empty
3.	Qty on hand	9999	Should not be empty
4.	Cost price(RS)	9999.99 Format	Should not be empty

   - Insert at least 15 records for that table.
   - List of all products having 'a' as the second letter in their names.
   - List the Product codes and names where the Cost price is greater than Rs.100/-
   - List the Product codes where the quantity on hand is more than 50.
   - List the Product Name,Qty on hand,Cost price and the Total cost price of each product.
4. Write a PL/SQL program to find and display the number of ones, tens, hundreds and thousands in the given number.
5. Write a PL/SQL program to display names of the employees in the employee table whose names are palindrome.
6. Write a PL/SQL program to check Armstrong number condition for 3 digit numbers and Ramanujam number condition for 4 digit number.
7. Write a PL/SQL program to find the number of occurances of a character in the given string.
8. Write a PL/SQL program with recursive concept to create a set of value for ROLL NO using a sequence and store the generated ROLL NO in the ROLL NO field of the student table.
9. Create two tables one called EMP and another called DEPT with EMP having Employee Number, Employee Name, Department Number, Salary, Commission, Manager Number and the DEPT table with Department Number, Department Name and Department Location.

   Write SQL queries to:
   1. List the names of all the employees having salary of atleast Rs.5000/-
   2. List the names of employees and also the names of their managers.
   3. List the names of all employees with manager name as "Ram".
   4. List the names of all employees whose total earning is more than Rs.7500/-
   5. List the details of employees working in the production department.
   6. List all the programmers working in Chennai.

7. List the names of all employees whose salary is greater than the average salary of their department.
8. List the names of all the managers.
9. List the names of the Accounts department whose salary is either Rs.2500 or Rs.5000/-
10. List the names, salaries of employees of the Accounts department who are not earning any commission.

10. Write a Trigger to store the deleted records of the Department table in to a record table.
11. Write a PL/SQL program to raise divide by Zero Exception.
12. Write a PL/SQL program for fixing the salaries of employee using functions.
13. Write a PL/SQL program to calculate the commission payable to employees of the employee table using stored procedures.
14. Create the table SSLC mark (Regno, Name, Tamil mark, English mark, Maths mark, Science mark, Social science mark) with the necessary integrity constraints write SQL statements to

1. Find the topper in the class.
2. Find the names of the students who have scored more than 90 percent marks in each subject.
3. Find the Names of student who have scored centum in Maths.
4. List the Names and total marks of students who have scored more than 75 in the Maths and Science subjects put together.
5. List the names of the students and their marks in the language who have scored more than 60% in each of the language papers.

15. Write a PL/SQL program to split the SSLC mark sheet table into two tables with one containing the names of passed students and the other one containing the names of failed students.

SEMESTER IV

MAJOR CORE PROGRAMMING LAB – VI (JAVA)

Instruction Hrs: 60

Objectives: 1. To implement the concept of object oriented programming.

2. To improve the programming skills.

1. Write a Java program to perform matrix addition using two dimensional arrays.
2. Write a Java program to perform sum of two Numbers and concatenation of two strings using method overriding.
3. Write a Java program using method overriding.
4. Write a Java program to perform stack operation using interface.
5. Write a Java program to find factorial value using the concept of recursion.
6. Write a Java program to calculate simple interest using constructor.
7. Write a Java program to create threads using multiple threads.
8. Write a Java program to implement thread priorities.
9. Write a Java program to create bus reservation application using inheritance (single).
10. Write a Java program to perform sorting of numbers using Package.
11. Write an applet program to display simple moving banner.
12. Write an applet program to display the digital clock.
13. Write an applet program to perform adding and removing items using list box.
14. Write an applet program to display various colors using the concept of mouse event and handling.
15. Write an applet program to Implement key event handling.

Department of Information Technology
B.Sc. [IT] Fifth Semester
Visual Basic

Instruction Hrs:60

Objectives:

1) Introduces computer programming using the Visual BASIC programming language with object oriented programming principles.

2) Emphasis is on event driven programming methods, including creating and manipulating objects, classes, and using object oriented tools such as the class debugger.

3) Upon completion, students should be able to design, code, test and debug at a beginning level.

12 Hrs

UNIT I

INTRODUCTION TO VISUAL BASIC: Introduction – Features of VB – Visual Basic Concept-Visual basic environment – Properties, Methods and Events – Debugging – Difference between .Exe And .Dll file. VB PROGRAMMING BASICS: Introduction – Keyword – DataTypes – Variables – Literals – Operators in VB – Some useful Function.

12 Hrs

UNIT II

WORKING WITH CONTROLS: Introduction – Intrinsic and Container Control – Working with Controls – Create Event Procedure – Manipulating Forms – Basic Controls – Control Arrays – Some useful Events – Activex Control – Object Linking and Embedding(OLE) – Dialog box.

12 Hrs

UNIT III

CONTROL STRUCTURE: Introduction – Control flow – Decision Structures – If...Then Statement – Select...Case Statement – Looping Structure – For...next – Do loop Structure – While...Wend – Problems with loop – Arrays – Dimension of an Array – Declaring Array – Static and Dynamic Array – Arrays within UDTs – Array within another Array.

12 Hrs

UNIT IV

PROCEDURES, FUNCTIONS AND MODULES: Introduction – Procedures – Sub Procedures(Sub-routines) – Function Procedure – Passing Parameters to Procedures – Property Procedure – Code module – Library Function.

12 Hrs

UNIT V

VB INTERFACE STYLE: Introduction – Interface Style – Creating Menus – Designing Menus – Popup Menus. ERROR HANDLING AND FILE HANDLING: Introduction – Types of Error – Handling Errors – Trap the Error – Handle the Error – File Handling. DATABASE CONNECTIVITY AND VISUAL DATABASE TOOLS: Introduction – DB Concepts – Data access
mechanism – DB Engine – VB Data Control – Company Database – Visual Database Tools.

Text Book:

Dr.Narendra Kumar, Shilpi Srivastava, Rajesh Chadhary, Hariom Pancholi. “VISUAL BASIC”, - VAYU EDUCATION OF INDIA – First Edition – 2011.

Reference Book:

1.Mohammed Azam, “Programming with VISUAL BASIC 6.0”, – VIKAS PUBLISHING HOUSE PVT LTD – First Reprint – 2009.

2.Gray Cornell, “VISUAL BASIC 6.0 FROM THE GROUND UP” - Tata McGraw Hill.

B.Sc CS - SEMESTER - V

(Common for CS, BCA & CT)

WEB DESIGN

Instructional Hours: 90

Objectives : 1. To learn the concepts of static web design using HTML
2. To learn the concepts of dynamic web design using DHTML, SCRIPTING & ASP

UNIT I **18 Hrs**

Hyper Text Markup Language – HTML Tags, Structure of HTML program, Titles and Footers, Text Formatting, Heading Styles, Text styles and other text effects – Lists - Adding Graphics to HTML documents - Tables - Linking documents - Frames - Forms - Sample applications.

UNIT II **18 Hrs**

Introduction to Java Script- Java script in web pages, Advantages of Java script,Writing Java script into HTML, Basic Programming Techniques, Operators and expressions in Java script, Java Programming Constructs, Condition Checking, Loops , Built-in and User Defined Functions, Placing text in a Browser, Dialog boxes - Sample applications.

UNIT III **18 Hrs**

Dynamic HTML - Cascading Style Sheets - Font attributes, Color and background attributes, Text attributes, Border attributes, Margin attributes, List attributes - Class - using the <SPAN> tag-External style sheets - using the <DIV> tag - Sample applications.

UNIT IV **18 Hrs**

XML - Introduction to XML - DTD - XML Style Sheets (XSL) - Sample applications.

UNIT V **18 Hrs**

Introduction to ASP - Understanding Objects: Built-in objects: Application, Request, Response, Server and Session Objects - Cookies: Working with Cookies - Application of Cookies.

TEXT BOOKS:

1. Ivan Bayross, Web Enabled Commercial Applications Development Using HTML, JavaScript, DHTML and PHP, BPB Publications, 4th Revised Edition, 2010. [UNITS – I, II, III]

2. A.K.Saini and Sumint Tuli, “Mastering XML” , First Edition, New Delhi, 2002. [UNIT IV]

3. Ivan Bayross, “Practical ASP”, BPB Publiations, 2000, New Delhi. [UNIT V]

SEMESTER V

COMPUTER NETWORKS

Instructional Hrs: 75

Objectives: 1. How transfer the data through networks communication purpose.

2. How Internet works all over the world.

UNIT-I **15 Hrs**

INTRODUCTION – Uses of Computer Networks – Network Hardware – Network Software – Reference models – PHYSICAL LAYER – Guided transmission media, the public switched telephone network.

UNIT-II **15 Hrs**

DATA LINK LAYER – Data link layer design Issues – Elementary data link protocols – Sliding window protocols.

UNIT-III **15 Hrs**

NETWORK LAYER –Network layer design issues – Routing algorithms – Congestion control algorithms.

UNIT-IV **15 Hrs**

TRANSPORT LAYER – The transport service – Elements of transport protocols – The internet transport protocols: UDP

UNIT-V **15 Hrs**

THE APPLICATION LAYER – DNS – The Domain Name System – Electronic Mail – The World Wide Web.

TEXT BOOK:

Andrew S. Tanenbaum, “Computer Networks”, PRENTICE HALL OF INDIA, Fourth Edition, [UNIT I-V]

SEMESTER V
SOFTWARE ENGINEERING

Instructional Hrs: 60

Objectives: 1. To know about the role of software engineers.

2. To know how to develop project.

UNIT-I **12 Hrs**

INTRODUCTION TO SOFTWARE ENGINEERING: Definitions and size of factors – Quality and Productivity Factors – Managerial issues – Process Strategy – Software Measurement – Metrics for Software quality.

UNIT-II **12 Hrs**

PLANNING A SOFTWARE PROJECT: Definitions of the problem:- Goals and requirements – Developing a solutions strategy – The phased life cycle model – Milestones, Documents and Reviews – The Cost Model – The Prototype Life Cycle Model – Successive versions – Project structure – Programming team structure – Management objectives – Other Planning activities.

UNIT-III **12 Hrs**

SOFTWARE REQUIREMENT DEFINITIONS: The software requirement specifications – Formal specification techniques – Relational and state oriented notations – Languages and processors for requirements specifications – PSL/PSA, RSL/REVS – SADT – SSA – GIST.

UNIT-IV **12 Hrs**

SOFTWARE COST ESTIMATION: Software cost factors – The Software cost estimation techniques: Expert Judgement, DELPHI cost estimation – Work Break Down Structures – Algorithmic cost models – Staffing Level Estimation – Estimating software maintenance.

UNIT-V **12 Hrs**

SOFTWARE DESIGN & IMPLEMENTATION: Fundamental design concepts – Modules and Modularization Criteria – Design Notations – Design techniques – Detailed design consideration – Real time and Distributed System Design – Test plans, Milestones, Walkthroughs and Inspections, Structured coding techniques, Coding Style – Standards and Guidelines – Documentation Guidelines.

TEXT BOOK:

1. Richard E. Fairley, “Software Engineering Concepts”, Tata McGraw Hill Publications, 1997 edition.

REFERENCE BOOK:

1. Roger S. Pressman, “Software Engineering: A Practitioners Approach”, 4th Edition. McGraw Hill Publications, 1997

B.Sc IT - SEMESTER-V

PROGRAMMING LAB - VII (VISUAL BASIC)

List of Programs:

1. Write a Visual Basic Program to find the sum of digits of the given number.
2. Write a Visual Basic Program to exchange items among two list boxes.
3. Write a Visual Basic Program to change the text foreground color and textbox Background color using scroll bar.
4. Write a Visual Basic Program to check whether the given string is palindrome or not.
5. Write a Visual Basic Program to replace the given character and to find the number of occurences of the given character.
6. Write a Visual Basic Program to find the factorial value and generate the fibonacci series for the given number.
7. Write a Visual Basic Program to move the text in the label box using slider control.
8. Write a Visual Basic Program to change the size of an image in a picture box.
9. Write a Visual Basic Program to use the various options of the common dialog boxes.
10. Write a Visual Basic Program for moving an image randomly within a window using timer control.
11. Write a Visual Basic Program to design a calculator for performing arithmetic Operations.
12. Write a Visual Basic Program to draw different shapes using menu editor.
13. Write a Visual Basic Program to view the employee details stored in a database table using MYSQL.
14. Write a Visual Basic Program to generate a telephone bill stored in a database table using MYSQL.
15. Write a Visual Basic Program to generate student mark sheet stored in a database table using MYSQL.

SEMESTER-V

(Common for CS, BCA & CT)

MAJOR CORE PROGRAMMING LAB - VIII (WEB DESIGN)

Instructional Hours: 60

Objectives : 1. To develop static web design using HTML
2. To develop dynamic web design using DHTML, SCRIPTING & ASP

HTML

1. Write a HTML program to design invitation card using text level tags.
2. Write a HTML program to display transfer certificate form using list.
3. Write a HTML program to display student mark sheet using table.
4. Write a HTML program to design Gobi Arts & Science College website using hyperlinks.
5. Write a HTML program to design a website for product advertisement using frames.
6. Write a HTML program to design student Bio-data using forms.

DHTML

7. Write a Java Script program to display stars based on the user input.
8. Write a Java Script program to display Current Date and Time.
9. Write a DHTML program to design a web page for supermarket offers using Internal Style Sheet.
10. Write a DHTML program to design a web page for company profile using External Style Sheet.
11. Write a DHTML program to display dynamic content based on the mouse place operations.

XML

12. Write a XML program to display bank details using XSL style sheet.
13. Write a XML program to display employee details using CSS style sheet.
14. Write a XML program to display book details using CSS style sheet.

ASP

15. Write a ASP program to display the student’s details.

Department of Information Technology
B.Sc. [IT] Semester - VI
MULTIMEDIA SYSTEMS AND DESIGN

Instruction Hrs:90

Objectives:

1) Write and report stories across media platforms.
2) Explore and experiment with long-form Journalistic Writing.
3) Proficiency in using visual and audio tools to enhance story telling.

15 Hrs

UNIT I

Introduction:What is Multimedia-Definitions-Where to use Multimedia-Introduction to making Multimedia-Basic Software Tools-Text Editing and Word Processing Tools-Painting and Drawing Tools-3-D Modeling and AnimationTools-Image Editing Tools-Sound Editing Tools-Animation,Video and Digital Movie Tools.

15 Hrs

UNIT II

Text-The Power of Meaning-About Fonts and Faces-Using Text in Multimedia-Computers and Text-Font Editing and Design Tools-Hypermedia and Hyper Text.

15 Hrs

UNIT III

Sound-The Power of Sound-Multimedia System Sounds-MIDI versus Digital Audio-Digital Audio-Making MIDI Audio-Audio File Formats-Adding sound to Multimedia Projects-Production Tips.

15 Hrs

UNIT IV

Images before start to Create-Making Still Images-Color-Image File Formats-Animation-The Power of Motion-The Principles of Animation-Making Animations That Work.

15 Hrs

UNIT V

Video-Using Video-How Video Works-Broadcast Video standards-Integrating computers and Television-Shooting and Editing Video-Video Tips-Recording Formats-Digital Video.

Text Book:

Tay Vaughan, “Multimedia Making It Work” - Fifth Edition, 2001, Tata McGraw-Hill Publications(Unit I - V).

Reference Book:

1.”Multimedia Computing,Communications & Application” - Ralf Steinmetz,Klara Nahrstedt, 14th Edition – 2013 , Pearson Education.
2.”Digital Multimedia”- Nigel Chapman,Jenny Chapman, 2nd Edition, John Wiley & Sons Ltd., 2004.

SEMESTER VI

SKILL BASED PAPER – COMPUTER GRAPHICS

Instructional Hrs: 90

Objectives: 1. Help to understand how display graphics concepts in computer.

2. Clearly explain 2D & 3D display methods.

3. Help to develop the system based graphical software and packages.

UNIT-I **18 Hrs**

Graphics Input Device – Storage Devices – Common Display Devices, Raster Scan CRT – Scan Converting - a Point, a Straight Line, a Circle, an Ellipse, Region Filling – Side Effects of a Scan Conversion.

UNIT-II **18 Hrs**

2-D Transformations – Translation, Scaling, Rotation – Matrix Representations and Homogeneous Co-ordinates – Composite transformations, reflection and Shear, Transformation Commands, Windowing and Clipping – Windowing Concepts, Clipping algorithms – Point, Line, Area, Text and Blanking – Interactive Picture Construction Techniques – Positioning Methods, Rubber Band Methods.

UNIT-III **18 Hrs**

3-D Transformations – Translation, Rotation & Scaling, Three Dimensional Concepts – Co-Ordinate Systems, Display Techniques, Graphics Packages – Three Dimensional representations – Polygon Surfaces, Curved Surfaces.

UNIT-IV **18 Hrs**

Hidden Surface and Hidden Removal – Classification of Algorithms – Back face, Depth Buffer, Scan Line, Depth – Sorting, Area Subdivision, Octree, Hidden Line Elimination and Curved Surfaces.

UNIT-V **18 Hrs**

Shading and Color Models – Modeling Light Intensities – Displaying Light Intensities – Surface Shading Methods – Color Models. Properties of Light, Standard Primaries, Intuitive Color Concepts, RGB Color Model, HSV Color Model – HLS Color Model.

TEXT BOOKS:

1. Roy A. Plastock & Gorden Kalley, “Theory & Problems of Computer Graphics”, Schaum’s Outline Series, 1987, [UNIT-I].
2. Donald Hearn & M. Pauline Baker, “Computer Graphics”, Prentice Hall Of India, 1983, First Edition, [UNIT II, III, IV, V]

Department of Information Technology
B.Sc. [IT] Semester - VI
PROGRAMMING LAB IX (Multimedia)

1.Write a program to design a Greeting card using Text.
2.Write a program to design an Invitation card.
3.Write a program to design a logo of our college.
4.Write a program to create a Rainbow an existing Images.
5.Write a program to create a Natural scene.
6.Write a program to animate Fish in a fish tank.
7.Write a program to animate blooming and budding flower .
8.Write a program to animate walking and dancing of a doll.
9.Write a program to animate shape change.
10.Write a program to animate shooting of two layers.
11.Write a program to building crash with animation.
12.Write a program to animate text.
13.Write a program to animate a flying butterfly.
14.Write a program to animate Natural scenery.
15.Write a program to demo a product with animation.

SEMESTER VI

B.Sc – CS / B.Sc – IT /BCA SEMESTER – VI

B.Sc – CT SEMESTER - III

PROGRAMMING LAB – X (COMPUTER GRAPHICS)

Instructional hours: 60

Objectives:

1. To learn about graphical algorithms with programming.
2. To learn about displaying principles.
3. To learn fundamental graphical functions in C language.

1. Write a C program to plot a Line using DDA Line Drawing Algorithm.
2. Write a C program to plot a Line using Bresenham's Line Drawing Algorithm.
3. Write a C program to plot a Line using Bresenham's Circle Drawing Algorithm.
4. Write a C program to plot a Line using Mid Point Circle Drawing Algorithm.
5. Write a C program to display a Man Walking.
6. Write a C program to Clip a Line Using Line Clipping Algorithm.
7. Write a C program for Flag Hoisting.
8. Write a C program for Text Animation.
9. Write a C program to display different shapes.
10. Write a C program for Eye Blinking.
11. Write a C program to display a Chess Board.
12. Write a C program to display a clock.
13. Write a C program for 2D Translation and Scaling about fixed point.
14. Write a C program for 2D Rotation about fixed point.
15. Write a C program for movement of an object using 3D object representation.

PROGRAMMING WITH PHP

Instructional Hrs: 90

Objectives:
1. To know about the PHP and MySQL basics.
2. Working with Database for PHP scripts.
3. To develop a dynamic web page by using PHP.

UNIT-I **18 Hrs**

Introduction of PHP: What is PHP? Advantages of PHP –**PHP Language structure:** The Building blocks of PHP – Variables – Data types – type casting – Operator and Expressions – Constants - **Introduction to MYSQL:** Data types – table creation - insert, select, replace, update and delete commands – using where in your Queries.

UNIT-II **18 Hrs**

Flow control function in PHP: Switching Flow – Loops – code block and browser output -**Working with arrays:** Array definition – creating arrays – Array related functions – **working with function**: Definition - calling functions – Defining a function – returning values from user defined functions – variable scope – static statement – more about arguments – testing for existence of a function.

UNIT-III **18 Hrs**

Working with Strings, Date and Time: Formatting strings with PHP – Investigating strings in PHP – Manipulating strings with PHP – using Date and Time functions– **Working with objects:** Creating an object – properties of object – object methods – constructors - Object Inheritance.

UNIT-IV **18 Hrs**

Working with forms: Creating a simple input form – Accessing form – combining HTML and PHP code on a single page – using hidden fields to save state – redirecting the user – sending mail on form submission - working with file uploads – **Working with cookies and user sessions:** Introducing cookies – setting a cookies– Deleting a cookie – session function – starting a session - working with session variables – passing session IDs - Destroying sessions and unsetting variables.

UNIT-V **18 Hrs**

Working with files and Directories: Including files with include() – validating files - Creating and Deleting file – opening a file for writing, reading and appending – reading from files – Writing or appending to a file - working with directories - Opening pipes to and from processes using popen()- Running commands with exec(), system() or passthru() – **Working with images:** Image creation process – Drawing a new image – Creading pie charts - modifying existing images – using images created by scripts – **Working with XML:** Accessing XML in PHP using DOM – Using simple XML function in PHP.

TEXT BOOKS:

1. Julie C.Meloni, “PHP, MYSQL and Apache”, Dorling Kindersley (India) Pvt. Ltd., 2005.

REFERENCE BOOKS:

1. Jeremy Allen & Charless Hornberger “PHP, Apache, Mysql, Web development”, Wiley Publications, 2006.
2. Vikram, Vaswani, “A Beginner’s Guide PHP” Tata McGraw Hill, Fourth Edition, 2005.

BCA / B.Sc CS / B.Sc IT / B.Sc CT - SEMESTER VI

PROGRAMMING LAB – XI (PHP)

Instructional Hrs: 60
Objectives: 1. It helps the create a web page designing

2. To know about Database connectivity between MYSQL & PHP.

3. TO know about cookies & session concepts.

1. Write a PHP program to validate the text box.
2. Write a PHP program to draw different shapes.
3. Write a PHP program to perform the string manipulation.
4. Write a PHP program to perform the file uploading.
5. Write a PHP program to perform the user registration form using HTML tags.
6. Write a PHP program to display the date and time using AJAX.
7. Write a PHP program to check the user login.
8 Write a PHP program to create a college website.
9. Write a PHP program for cookies and session concepts.
10. Write a PHP program to perform the file read, write, open and append operation.
11. Write a PHP program to create a library information using inheritance.
12. Write a PHP program for online examinations.
13. Write a PHP program to send the mail using mail concept.
14. Write a PHP program for supermarket.
15. Write a PHP program for online recharging.

B.Sc., Information Technology

Question paper pattern:

SECTION-A

Answer all Questions. No choice. One question from each unit. Each question carries two Marks. (5 x 2 = 10)

SECTION-B

Short answer questions of either or type – 5 questions – One question from each unit. (5 x 4 = 20)

SECTION-C

Essay type questions – Answer any three out of five – One question from each unit. (3 x 15 = 45)

ALLIED OPTIONAL
For students of other than Information Technology Department
SEMESTER IV
PRINCIPLES OF INFORMATION TECHNOLOGY

Instructional Hrs: 90
Objectives: 1. Communicate information technology to a range of audiences.

2. To get the information about IT field.

3. To gather information about H/W and S/W and internet applications.

UNIT-I **18 Hrs**

Data and Information: Introduction – Types of Data – A simple model of a computer – Data processing using a computer – Desktop computer. Input units – Internal representation of Numeric Data – Representation of Characters in computers – Acquisition of Textual Data.

UNIT-II **18 Hrs**

Data storage – Introduction – Memory Cell – Physical Devices used as Memory Cells – Ram – Rom – Secondary memory – Floppy Disk Drive – CDROM – Archival Memory – The Structure of a Central Processing Unit – Output Devices – Printers.

UNIT-III **18 Hrs**

Computer Networks – LAN – Applications of LAN – WAN – Internet – Computer S/W – Operating System – Programming Languages – A classification of programming Languages.

UNIT-IV **18 Hrs**

Data Organization – Organizing a Database – Structure of a Database – Database Management System – Use of SpreadSheets – Word Processor – Desktop Publishing.

UNIT-V **18 Hrs**

Internet Applications – E-mail – WWW – Information Browsing service – Electronic Commerce – Classification – Advantages & Disadvantages – EDI – Social Impacts of IT.

Books for Study:

1. Introduction to Information Technology – V. Rajaraman, PHI – New Delhi 2005

QUESTION PAPER PATTERN

PART – A

Answer all questions. No choice. One question from each unit. Each question carries two marks. (5 x 2 = 10)

PART – B

Short answer questions of either or type – 5 questions – One question from each unit (5 x 4 = 20)

PART – C

Essay type questions – Answer any three out of five – One question from each unit. (3 x 15 = 45)

ALLIED OPTIONAL
For students of other than Information Technology Department
SEMESTER-IV
INTRODUCTION TO WEB TECHNOLOGY

Instructional Hrs: 90
Objective: 1.Design and implement a basic website.

2. To know about Client side and server side technologies.

3. Website organizational structure and design elements.

UNIT-I **18 Hrs**

Basic Concepts of Internet: Introduction – How the Internet Works? – Role of an ISP in the internet – Internet Connection Types – Web Hosting – Virtual Private Network(VPN) – Voice over Internet – E-Mail – Internet Relay Chat(IRC) – File Transfer Protocol(FTP) – Telnet – GOPHER – VERONICA – WAIS.

UNIT-II **18 Hrs**

Mobile Internet Connectivity: Introduction – Types of Mobile Internet Connectivity – Mobile Internet Connectivity Works – Content/Applications for Mobile Internet Connectivity – Current Use of Mobile Internet Connectivity – Future Use of Mobile Internet Connectivity – Advantages – Disadvantages – Implementation Issues for Mobile Internet Connectivity.

UNIT-III **18 Hrs**

Domain Name Services (DNS): Introduction – Top Level Domains – Top Level Domains in India – IP Address: Introduction – The Network Part of the IP Address – The Local or Host Part of the IP Address – IP Address Classes and their Formats – Relationship of the IP Address to the Physical Address – Static versus Dynamic IP Address – Comments of Internet Security Alliance(IS Alliance).

UNIT-IV **18 Hrs**

Word Wide Web: Introduction – The Client Side – The Server Side – Web Client/Server – Network Components – Retrieving Documents on the Web – World Wide Web Service – Home Pages on the web – Programming languages and Functions – Featured Collaboration Tools.

UNIT-V **18 Hrs**

Graphics: Introduction – Bitmapped Graphics – Vector Graphics – Web Graphics Formats – Summary of Image Formats – Making Good Use of Images – Tips for Reducing File Size – Working with Scanned Images – Useful Graphics Tools.

TEXT BOOK:

Bankim Patel & Lal Bihari Barik, "INTRODUCTION TO WEB TECHNOLOGY & INTERNET", Acme Learning Pvt. Ltd, 1st Edition, New Delhi, 2009. (Unit I-V).

REFERENCE BOOK:

Achyut S Godbole & Atual Kahate, "WEB TECHNOLOGIES", Tata McGraw HILL, 2nd Edititon, 2006.

Question paper pattern

PART-A

Answer all questions. No choice. One question from each unit. Each question carries two marks.

(5 x 2 = 10)

PART-B

Short answer questions of either or type – 5 questions – One question from each unit.

(5 x 4 = 20)

PART-C

Essay type questions – Answer any three out of five – One question from each unit

(3 x 15 = 45)

SEMESTER-V

MAJOR OPTIONAL-PRINT MEDIA TECHNOLOGY

INSTRUCTION-Hrs:60

OBJECTIVES :

- Working with objectives
- Working with tools of LibreOffice
- To work with shapes

UNIT -I **12-Hrs**

Creating and Modifying Objects Using Draw:Working with Objects -Creating & Selecting an Object-Changing Outline & Fill Properties of an Object-Working with Slides-Saving the Draw Document-Modifying Objects-Working on a Group-Quiting the Application.

UNIT-II **12-Hrs**

Tools:Knife Tool-Eraser Tool-Smudge Tool-Cloning objects-working with Artistic Text-Paragraph Text-Text and Styles.

UNIT-III **12-Hrs**

Exploring the Openoffice.org Writer Interface:Working with a Document-Editing Document in Writer-Write Document-Exploring Selection Modes-Making Changes to a Document-Find and Replace Features-Autocorrect Context menu and Word Completion Features-Spelling & Grammar Checker-Hyperlinks-Merging & Saving to a Document.

UNIT-IV **12-Hrs**

Formatting the Document:Setting Page Margins-Headers and Folders working with a Table-Formatting a Text in a Document-Working with Graphics Templates-Designing & Navigating the Document-Styles-Previewing & Printing a Document.

UNIT-V **12-Hrs**

Creating Basic Shapes-Rectangle-Ellipse and Polygon-Using the Artistic Media Tool-Applying Preset to Lines-Drawing with Brushes-Applying the Sprayer-Combining Objects-Converting Objects to Curves.

TEXT BOOK:

1.Vikas Gupta "Comdex Linux and Open Office Course Kit",Dreamtech Press,First Edition 2010 [Unit I,III,IV].

2.Steve Bain,"CORELDRAW 12:The Official Guide",Dreamtech Press,First Edition,2004.[Unit II,V].

REFERENCE BOOKS:

1.Andy Channelle,"Beginning Open Office3",Apress,First Edition,2009.

2.Shalini Gupta,Adity Gupta,"CORELDRAW 12 IN SIMPLE STEPS",Dreamtech Press,First Edition,2006.

3.A.K.Lodha,"CORELDRAW 12",Law Point,First Edition,2004.

URL REFERENCE

http://www.spoken-tutorial.org

SEMESTER-V

MAJOR OPTIONAL -PROGRAMMING LAB

PRINTMEDIA TECHNOLOGY

1.Design a Blinking Text by using LibreOffice Draw.
2.Create a Invitation Card using LibreOffice Draw.
3.Create a Christmas Tree using a LibreOffice Draw.
4.Design a Logo by using LibreOffice Draw.
5.Design a National Flag using LibreOffice Draw.
6.Design a Natural Scenery by using LibreOffice Draw.
7.Design Traffic Signal by using LibreOffice Draw.
8.Design a Bool Cover by using LibreOffice Draw.
9.Design a Flower by using LibreOffice Draw.
10.Design an General Advertisment by using LibreOffice Draw.

Question Paper Pattern

PART-A

Answer all question.No choice.One question from each unit.Each question carries two marks.
(5*2=10)

PART-B

Short answer questions of either or type-5 questions-One question from each unit.
(5*4=20)

PART-C

Essay type questions-Answer any three out of five-One question from each unit.
(3*15=45)

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MAJOR OPTIONAL

For students of other than Information Technology Department
SEMESTER – V
INTERNET & E - COMMERCE

Instructional Hrs: 60

Objectives:1. Effective E-Commerce professionals with in dual disciplinary environments.

2. To provide a well balanced foundation of knowledge in both Business and IT disciplines.

3. To develop the skill sets specific to E-Commerce.

UNIT - I **12Hrs**

Creating Web Pages - Hypertext markup language - Simple Examples - Linking - Adding Images - Displaying Data and Controlling pages layout with Tables - Controlling Navigation with Frames - Forms - HTML Editors.

UNIT - II **12Hrs**

Foundations of E-Commerce: Definitions - Electronic Markets - Interorganizational Information Systems - Classification of E – Commerce field by nature of the transactions - Benefits and Limitations - The Driving Forces of Electronic Commerce - Business Pressures - Business processing Reengineering.

UNIT - III **12Hrs**

Retailing in Electronic Commerce: Business to Consumers(B2C) Electronics Market - Online Customer Service - Electronic Intermediaries - Procedures for Internet Shopping - Internet Consumers and market Research: Building Customer Relationship - Consumer Behaviour Model - Consumer purchasing decision
making.

UNIT - IV **12Hrs**

Business to Business Electronic Commerce (B2B) - Characteristics - Models - Supplier Oriented market places - Buyer oriented Market places - Intermediary Oriented Market Places - other B2B models - EDI - Electronic Marketing - Electronic Payment Systems and Protocols: Electronic credit cards – electronic fund transfer and debit cards - Electronic check system - Unified Payment Systems.

UNIT - V **12Hrs**

Infrastructure for Electronic Commerce: Internet Protocols - TCP/IP -Domain Names - Internet Client / Server Applications - Internet Security-Selling on the Web: Functional Requirements – Outsourcing vs. Insourcing - In sourcing - Chatting on the WEB.

Text Book:

Efraim Turban, Jae Lee, David King, H.Michael Chung “ELECTRONIC COMMERCE - A Managerial Perspective” - Pearson Education - 2005 (Seventh Indian Reprint).

Reference Books:

1. Mamta Bushry “E - Commerce” - FireWall Media - 2005.
2. “Basics of E - Commerce Legal and Security Issue” - NIIT - 2004.

MAJOR OPTIONAL - HTML Lab

LAB PROGRAM LIST

Instructional Hrs: 30

Objectives:
1. To make students to work practically in creating web pages.
2. To make students practically aware of dynamic web pages.
3. To familiarize the standards in creating web pages using frames, Hyper links.

1. Write a HTML program for Simple Tags
2. Write a HTML program for Changing Font Size and style
3. Write a HTML program for Alignment of Text
4. Write a HTML program to Display Text Effects
5. Write a HTML program for Time Table using Table
6. Write a HTML program for College Student Market Sheet
7. Write a HTML program to display Reversing Text
8. Write a HTML program to Hyper Link Pages
9. Write a HTML program for Display College Webpage using Frames
10. Write a HTML program for Ordered and Unordered List
11. Write a HTML program for Text Submission using forms
12. Write a HTML Program for Advertisement using Marquee

Question paper pattern:

PART - A

Answer all questions. No choice. One Question from each unit. Each Question Carries Two Marks (5 x 2 = 10)

PART - B

Short Answer Questions of either or type - 5 Questions - One Question from each Unit (5 x 4 = 20)

PART - C

Essay type questions - Answer any three out of five - One Question from each Unit (3 x 15 = 45)