### Scheme of Examination - CBCS Pattern

<table>
<thead>
<tr>
<th>Part</th>
<th>Study Components</th>
<th>Course Title</th>
<th>Ins. hrs/week</th>
<th>Examinations</th>
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<tr>
<td>I</td>
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<td>II</td>
<td>English – I</td>
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<td>III</td>
<td>Core 1: Data Structures and C Programming</td>
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<td></td>
<td>Core 2: Computer Organisation and Architecture</td>
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<td>Core Lab 1: C Programming Using Data Structures</td>
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<td>III</td>
<td>Core 3: Object Oriented Programming with C++</td>
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<td>Core Lab 2: Programming in C++</td>
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<td></td>
<td>Allied 2: Discrete Mathematics</td>
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<td>IV</td>
<td>Value Education – Human Rights #</td>
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<td>I</td>
<td>Core 4: Introduction to Web Design and Applications</td>
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<td>III</td>
<td>Core 5: Internet &amp; Java Programming</td>
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<td>III</td>
<td>Core Lab 3: HTML, XML, JAVA Script</td>
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<tr>
<td>III</td>
<td>Allied 3: Client/Server Computing</td>
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<td>IV</td>
<td>Skill based Subject I – Diploma Paper - Data Communication and Networks</td>
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Non-major elective I (Yoga for Human Excellence)# / Women’s Rights#
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<td>Core 7: Multimedia &amp; its Applications</td>
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<td>Core 8: Animation Techniques</td>
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<td>Core 9: System Programming</td>
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<td>Core 10: Digital Image Processing</td>
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<td>Core Lab 5: Animation Lab</td>
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<td>Skill based Subject 3 - Diploma Paper - Network Security &amp; Cryptography</td>
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<td>Core 11: .Net Programming</td>
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<td>Core 12: Mobile Computing</td>
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<td>Core Lab 6: Web Technology</td>
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@ No University Examinations. Only Continuous Internal Assessment (CIA)
# No Continuous Internal Assessment (CIA). Only University Examinations.

### List of Elective papers (Colleges can choose any one of the paper as electives)

<table>
<thead>
<tr>
<th>Elective – I</th>
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<tbody>
<tr>
<td>A</td>
<td>Embedded Systems</td>
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<tr>
<td>B</td>
<td>Software Engineering</td>
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<tr>
<td>C</td>
<td>Management Information Systems</td>
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<tr>
<td>A</td>
<td>Flash</td>
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<tr>
<td>B</td>
<td>Distributed Computing</td>
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<td>C</td>
<td>E-Commerce</td>
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<tr>
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<td>3Ds MAX Animation</td>
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<tr>
<td>B</td>
<td>Web Services</td>
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<tr>
<td>C</td>
<td>Software Project Management</td>
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CORE 1: DATA STRUCTURES AND C PROGRAMMING

Subject Description:
This subject deals with the methods of data structures using C programming language.

Goal:
To learn about C programming language using data structural concepts.

Objective:
On successful completion of this subject the students should have:
- Writing programming ability on data structures dealing with Stacks, Queues, List, Searching and Sorting algorithms etc.,

UNIT – I:

Operators and Expressions – Formatted and Unformatted I/O functions – Decision statements – Loop control statements.

UNIT – II:
Arrays – String and its standard functions.

Pointers – Functions – Preprocessor directives: #define, #include, ifndef, Predefined macros.

UNIT – III:
Structure and Union: Features of structure, Declaration and initialization of structure, Structure within structure, Array of structure, Pointer to structure, Bit fields, Enumerated data types, Union.

Files: Streams and file types, Steps for file operation, File I/O, Structures read and write, other file functions, Command line arguments, I/O redirection.

UNIT – IV:

Single linked list, Linked list with and without header, Insertion, Deletion, Double linked list – Queues: Various positions of queue, Representation. Simple programs using the above methods.

UNIT V:
Searching and Sorting – Searching: Linear, Binary.

Sorting – Insertion, Selection, Bubble, Quick, Tree, Heap. Simple programs using above methods.
TEXT BOOK:

REFERENCE BOOK:

CORE 2 : COMPUTER ORGANISATION AND ARCHITECTURE

Subject Description:
This subject deals with fundamentals of digital computers, Microprocessors and system architecture.

Goal:
To learn about computer fundamentals and its organization.

Objective:
On successful completion of this subject the students should have:
- Knowledge on digital circuits
- Interfacing of various components

Unit I
Number System and Binary Codes: Decimal, Binary, Octal, Hexadecimal – Binary addition, Multiplication, Division – Floating point representation, Complements, BCD, Excess3, Gray Code.


Unit II
Combinational Logic Circuits: Boolean algebra –Karnaugh map – Canonical form 1 – Construction and properties – Implicants – Don’t care combinations - Product of sum, Sum of products, simplifications.


Unit III
CENTRAL PROCESSING UNIT: General register organization – control word – examples of Micro operations – Stack organization – Instruction formats – Addressing modes – Data transfer and manipulation control.

Unit IV

Unit V


Text Books:

CORE LAB 1 : C PROGRAMMING LAB USING DATA STRUCTURES

1. Write a C program to create two array list of integers. Sort and store the elements of both of them in the third list.
2. Write a C program to experiment the operation of STACK using array implementation.
3. Write a C program to create menu drive program to implement QUEUE to perform the following:
   I. Insertion
   II. Deletion
   III. Modification
   IV. Listing of elements using pointers
4. Write a C program to create LINKED LIST representation of employee records and do the following operations using pointers:
   I. To add a new record
   II. To delete an existing record
   III. To print the information about an employee
   IV. To find the number of employees in the structure
5. Write a C program to count the total nodes of the linked list.
6. Write a C program to insert an element at the end of the linked list.
7. Write a C program to insert an element at the beginning of the Double linked list.
8. Write a C program to display the hash. table, which is to be prepared by using the Mid-square method.
9. Write a C program to demonstrate Binary search.
10. Write a C program to insert nodes into a Binary tree and to transverse in pre-order.
11. Write a C program to arrange a set of numbers in ascending order using QUICK-SORT.
12. Write a C program to arrange a set of numbers in descending order using EXCHANGE-SORT.
Allied Paper 1: MATHEMATICAL STRUCTURES FOR COMPUTER SCIENCE

Subject Description:
This subject deals with mathematical concepts like Matrices, Numerical analysis and Statistical methods for computer science and applications.

Goal: To learn about the mathematical structures for computer based applications.

Objective:
On successful completion of this subject the students should have:
- Understanding the concepts of mathematics
- Learning applications of statistical and numerical methods for Computer Science.

Unit I

Unit II

Unit III

Unit IV
Measures of central tendency – Mean Media and Mode – Relationship among mean media and mode. Measures of dispersion – Range, quartile deviation, mean deviation and Standard deviation

Unit V

Text Book:
1. Engineering Mathematics Volume II – Dr M.K. Venkataraman - NPC (Unit I)
3. Business Statistics - S.P. Gupta & M.P. Gupta Sultan Chand and Sons (Unit IV & V)

Reference Book:
2. Fundamental of Mathematical statistics S C Gupta, V. K. Kapoor Sultan Chand and Sons
CORE 3 : OBJECT ORIENTED PROGRAMMING WITH C++

Subject Description:
This subject deals with Object-oriented programming concepts using C++.

Goal:
To learn about on Object-oriented Programming concept.

Objective:
On successful completion of this subject the students should have:
- Writing programming ability on OPPS concepts like Encapsulation, Abstraction, Inheritance, Polymorphism and Exception handling etc.,

UNIT-I
Introduction to C++ - key concepts of Object-Oriented Programming –Advantages – Object Oriented Languages – I/O in C++ - C++ Declarations. Control Structures : - Decision Making and Statements : If .. else ,jump, goto, break, continue, Switch case statements - Loops in C++ : For,While, Do - Functions in C++ - Inline functions – Function Overloading.

UNIT-II
Class and Objects: Declaring objects – Defining member functions – Static member variables and functions – Array of objects – Friend functions – Overloading member functions – Bit fields and Class – Constructor and Destructors – Characteristics – Calling constructor and Destructors – Constructor and Destructor with static member.

UNIT-III

UNIT-IV
Pointers: Declaration – Pointer to Class , Object – this pointer – Pointers to derived classes and Base classes – Arrays – Characteristics – array of classes – Memory models – new and delete operators – dynamic object – Binding , Polymorphism and Virtual Functions.

UNIT-V

TEXT BOOKS :
REFERENCE BOOKS:

CORE LAB 2 : PROGRAMMING IN C++

1. Create a class to implement the data structure STACK. Write a constructor to initialize the TOP of the stack to 0. Write a member function POP( ) to delete an element. Check for overflow and underflow conditions.

2. Create a class ARITH which consists of a FLOAT and an integer Variable. Write member ADD( ), SUB ( ), MUL ( ), DIV ( ), MOD ( ) to perform addition, multiplication, division and modulus Respectively. Write member functions to get and display values.

3. Create a class MAT has a 2-d matrix and R&C represents the rows and columns of the matrix. Overload the operators +, -, * to add subtract and multiply two matrices. Write member functions to get and display MAT object values.

4. Create a class STRING. Write member function to initialize, get and display strings. Overload the operator + to concatenate two strings, = = to compare two strings and a member function to find the length of the string.

5. Create a class which consists of EMPLOYEE detail like eno, ename, dept, basic-salary, and grade. Write member functions to get and display them. Derive a class PAY from the above class and write a member function to calculate da, hra, pf depending on the grade and Display the Payslip in a neat format using console I/O.

6. Create a class SHAPE which consist of two VIRTUAL FUNCTIONS Cal_Area( ) and Cal_PERI to calculate AREA and PERIMETER of various figures. Derive three classes SQUARE, RECTANGLE and TRIANGLE from the class SHAPE and calculate AREA and PERIMETER of each class separately and Display the result.

7. Create two classes which consists of two private variables, one float And one integer variables in each class. Write member functions to get and display them. Write FRIEND function common to arguments And the integer and float values of both the objects separately and Display the result.

8. Write a user defined function USERFUN( ) which has the formatting commands like setw( ) , showpoint , showpos precision( ). Write a program which prints an multiplication table and uses USERFUN( ) for formatting.

9. Write a program to perform Insertion, Deletion and Updation using files.

10. Write a program which takes a file as argument and copies in to another file with line numbers using Command Line Arguments.
ALLIED PAPER 2 : DISCRETE MATHEMATICS

Subject Description:
This subject deals with discrete structures like set theory, mathematical logic, relations, languages, graphs and trees.

Goal: To learn about the discrete structures for computer based applications.

Objective:
On successful completion of this subject the students should have:
- Understanding the concepts of discrete mathematics
- Learning applications of discrete structures in Computer Science.

Unit I

Unit II

Unit III
Relations – Binary Relations – Set operation on relations-Types of Relations – Partial order relation – Equivalence relation – Composition of relations – Functions – Types of functions – Invertible functions – Composition of functions.

Unit IV

Unit V

Text Books:

Reference Books:
Core 4: INTRODUCTION TO WEB DESIGN AND APPLICATIONS

UNIT I:

UNIT II:

UNIT III:

UNIT IV:

UNIT V:

TEXT BOOK:
Reference Books
Core 5: INTERNET AND JAVA PROGRAMMING

UNIT I:

UNIT II:
Java Programming: Constants, Variables and Data Types – Operators and Expressions – Decision Making and Branching – Decision Making and Looping

UNIT III:
Classes, Objects and Methods – Arrays, Strings and Vectors – Interfaces : Multiple Inheritance

UNIT IV:

UNIT V:

TEXT BOOK:

Reference Books

Core Lab 3 : HTML, XML, JAVA Scripts
Students are required to write code snippets, which covers the following objectives
- Design Simple Web Pages using standard HTML tags like, HEAD, TITLE, BODY
- Design HTML web pages, which make use of INPUT, META, SCRIPT, FORM, APPLET, BGSOUND, MAP.
- Working with various attributes of standard HTML elements.
- Using Java Script's Window and document objects and their properties and various methods like alert (), eval (), ParseInt () etc. methods to give the dynamic functionality to HTML web pages.
- Writing Java Script snippet which make use of Java Script's inbulit as well as user defined objects like navigator, Date Array, Event, Number etc.
- Write code which does the form validation in various INPUT elements like TextField, Text Area, Password, Selection list etc.
- Writing XML web Documents which make use of XML Declaration, Element Declaration, Attribute Declaration.
- Usage of Internal DTD, External DTD, Entity Declaration.
Allied Paper 3: CLIENT / SERVER COMPUTING

Subject Description: This Subject deals with the C/S Computing

Goal: To learn about C/S Computing

Objective: On Successful Completion of this subject the students should have:
- C/S Applications, GUI ETC.,

UNIT I:

UNIT II:

UNIT III:

UNIT IV:

UNIT V:

TEXT BOOK:
DIPLOMA 1: DATA COMMUNICATION AND NETWORKS

UNIT- I


UNIT- II
Analog and digital transmission methods: Introduction - Analog signal, Analog transmission - Digital signal, Digital transmission - Digital signal , Analog transmission - Baud rate and bits per second - Analog signal, Digital (Storage and) transmission - Nyquist Theorem.

Modes of data transmission and Multiplexing: Introduction – Parallel and Serial communication - Asynchronous, Synchronous and Isochronous communication - Simplex, Half-duplex and Full-duplex communication – Multiplexing - Types of Multiplexing - FDM versus TDM.


UNIT- III


UNIT- IV


UNIT- V

Text book:

Reference books
Core 6: COMPUTER GRAPHICS

Subject Description: This subject deals with Graphics Concepts and methodologies.
Goal: Mathematical Knowledge on Graphics and Technical background.
Objective: To inculcate knowledge on Graphics with various concepts.


TEXTBOOKS:
1. COMPUTER GRAPHICS – Donald Hearn, M. Pauline Baker, 2nd edition, PHI.

REFERENCE BOOKS:
Core 7: MULTIMEDIA & ITS APPLICATIONS

Subject Description: This Subject deals with the Multimedia & its Applications
Goal: To learn about Multimedia
Objective: On Successful Completion of this subject the students should have:
- Media, Sound & Audio, Images, Animation, Video etc.,

UNIT I:

UNIT II:

UNIT III:

UNIT IV:

UNIT V:

TEXT BOOK:

REFERENCE BOOK:

Core Lab 4: COMPUTER GRAPHICS AND MULTIMEDIA LAB

Graphics Lab:
Design and implement the following algorithms:
1. Line Drawing (DDA, Bresenham’s)
2. Circle Generation
3. 2D Transformation
4. Simple Animation (Bouncing ball, Blinking eye etc.)
5. Histogram and Bar chart
6. Free hand drawing
7. Displaying text on different fonts.
Multimedia Lab:

Flash:-
1. Creating movies.
2. Twined animation
3. Action scripts.

Macro Media-Director
1. Play school Teaching aid.
3. Animation of 3D object with sound.

Free hand:-
1. Designing the Gate, window etc.
2. Greeting card Design – Designing the Greeting card.

Adobe Photoshop:-
1. Editing the Images.
2. Design an Invitation.

Allied Paper 4: COMPUTER AIDED DESIGN AND MANUFACTURING

UNIT – I:

UNIT –II:

UNIT – III:

UNIT – IV:


UNIT – V:

Production Planning and Control:
Introduction – Traditional Production Planning and Control – Problems with Traditional Production Planning and Control – Computer-Integrated Production Management System – Cost Planning and Control.


Text Books:

Diploma Paper 2 (Lab): NETWORK LAB

Design and implement the following tasks:

1. Sending message to client using TCP/UDP.
2. Client/Server Communication using TCP and UDP.
3. Stop and wait protocol.
4. Display network configuration and system details.
5. Simulation of sliding window protocol
6. RPC.
7. FTP
8. Chatting Process
9. HTTP
10. Socket implementation
Core 8: ANIMATION TECHNIQUES

Subject Description: This Subject deals with the Animation Techniques.
Goal: To learn about Animation Techniques.
Objective: On Successful Completion of this subject the students should have:
- 2D & 3D Animation, Script Animation, Motion Caption, Audio & Video Format etc.


TEXT BOOK:

1. PRINCIPLES OF MULTIMEDIA – Ranjan Parekh, 2007, TMH. (Unit I, Unit V)
CORE-9: SYSTEM PROGRAMMING

Subject Description: It deals Fundamentals of System Software and Resources of Operating System.

Goal: Knowledge on various System Software and Operating System concepts.

Objective: Enable the student to get sufficient knowledge on various system resources.


UNIT- II: Macroprocessor: Basic macroprocessor functions - Machine independent macroprocessor features - concatenation of macro parameter macro processor design options-recursive macro expansion - general purpose macro processor - macro processing within language translators. Text Editors: Overview of editing process - user interface - editor structure.


TEXT BOOK:

REFERENCE BOOKS :
Core 10: DIGITAL IMAGE PROCESSING

UNIT – I
Introduction to Digital Image Processing and its origins; Example fields using digital image processing; Fundamental steps in digital image processing; Components of an Image Processing system;

UNIT – II
Image Enhancement: Intensity transformations and spatial filtering; Histogram processing; Fundamentals of spatial filtering; Smoothing and sharpening spatial filters; Filtering in frequency domain: Fourier Series and Transform; Sampling; Fourier Transform of Sampled Functions; Discrete Fourier Transform; Frequency Domain Filtering Fundamentals; Image smoothing and sharpening using Frequency Domain Filters; Homomorphic Filtering;

UNIT – III
Image Compression Fundamentals: Lossless and Lossy Compression; Basic Compression Methods: Huffman Coding; Run-Length Coding; LZW Coding; Bit-Plane Coding; Predictive Coding; Transform Coding; Wavelet Coding;

UNIT – IV
Image Segmentation: Fundamentals; Point, Line, and Edge Detection; Thresholding; Region-Based Segmentation; Motion-Based Segmentation;

UNIT – V
Image Representation: Boundary Representation; Chain Codes; Polygonal Approximations; Signatures; Boundary Segments; Skeletons; Boundary Descriptors: Simple Descriptors; Shape Numbers;

Text Book:
1. Rafael C. Gonzalez, Richard E. Woods, Digital Image Processing, PHI.

Reference Books:
2. B. Chanda, D. Dutta Majumder, Digital Image Processing and Analysis, PHI.
Diploma 3: NETWORK SECURITY & CRYPTOGRAPHY

UNIT I

UNIT II

UNIT III

UNIT IV

UNIT V

Text Book:

Reference Books:

Core Lab5 : ANIMATION LAB -Using Photoshop/Flash/Macro Media

- How to Create Sun Flower?
- How to Create Water Drops?
- How to Animate Plane Flying the Clouds?
- How to Create Plastic Surgery For Nose?
- How to Create Mouse?
- How to Create See thru text?
- How to Create Military Clothe?
- How to Create Stone Texture?
> How to Create Rollover Buttons?
> How to Create Realistic Stone Structure?
> How to Create Web Page?
> How to Convert Black and White to Color Photo?
> How to Create IceText?
> How to Create Realistic Blood Structure?
> How to Create Fog Effects.

**Core 11 : .NET PROGRAMMING**

**UNIT I**
Introduction to .Net: .net framework- difference between VB6 and VB.Net-Object-Oriented programming and VB.Net-Data types-Variables-Operators-Arrays-Conditional logic.

**UNIT II**
Procedures- Dialog boxes- File IO and System objects- Error handling- Namespaces- Classes and Objects- Multithreading- Message Queue- Programming MSMQ.

**UNIT III**

**UNIT IV**

**UNIT V**
Web Services: Introduction- Infrastructure- SOAP-Building web services- Deploying and publishing web services- Finding and consuming web services.

**Text Book:**
1. Bill Evjen, Jason Beres, et.al, “Visual Basic .Net programming”, Wiley Dreamtech India (p) Ltd. ISBN 81-265-0254-1. (Chapters: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 25, 26, 27, 29, 31, 32, 33, 34, 35, 36, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50).

**References:**
CORE 12 : MOBILE COMPUTING

UNIT I :

UNIT II :
MOBILE COMPUTING THROUGH TELEPHONY: Evaluation of telephony – Multiple access procedures – Mobile computing through telephone – IVR Application – Voice XML – TAPI.

UNIT III :

UNIT IV :

UNIT V :

Text Book:
MOBILE COMPUTING, Asoke K Talukder , Roopa R Yavagal, TMH, 2005

CORE LAB 6: WEB TECHNOLOGY LAB

1. Design a personal web page using HTML.
2. Design a data entry form in HTML.
3. Write a Program in ASP to get data using a form, validate the data and returns the same data for correction if any using the same form.
4. Write a program in ASP to display the Session properties.
5. Write a program in ASP that makes use of Ad Rotator component.
6. Write a program in ASP that makes use of Browser Capabilities component.
7. Write a program in ASP that makes use of Content Rotator component.
8. Write a program in ASP that makes use of page counter component.
9. Write a program in ASP to get the data of students using forms and stores them in database.
10. Write a program in ASP to perform record navigation using a form.

DIPLOMA 4 (LAB): NETWORK SECURITY LAB

1. Write a program to encrypt the data using the encryption method using Substitution Ciphers
2. Write a program to implement DES algorithm.
3. Write a program to implement the Public Key Cryptography using Diffie -Hellman Algorithm.
4. Write a program to implement the Public Key Cryptography using RSA algorithm.
5. Write a program to secure the Database using User Authentication Security.
7. Write a program for generation of random numbers.
8. Write a program to encrypt the data using the encryption method Transposition ciphers.
9. Write a program to implement a Simple Digital Signature Algorithm.

ELECTIVE I – A : EMBEDDED SYSTEMS

UNIT I :

UNIT II :

UNIT III :
Software Programming in Assembly Language & in High Level Language “C” – C Program Elements : Headers & Source Files & Preprocessor Directives – Macros & Functions –
Data Types, Data Structures, Modifiers, Statements, Loops and Pointers – Queues – Stacks – List & Ordered Lists.

UNIT IV:

UNIT V:

Text Book:

REFERENCES:

ELECTIVE I – B: SOFTWARE ENGINEERING

Subject Description: This subject deals with Software Engineering concepts like Analysis, Design, Implementation, Testing and Maintenance.

Goal: Knowledge on how to do a software project with in-depth analysis.

Objective: To inculcate knowledge on Software engineering concepts in turn gives a roadmap to design a new software project.


**TEXTBOOK:**
1. SOFTWARE ENGINEERING CONCEPTS – Richard Fairley, 1997, TMH.
   (UNIT-I: 1.1-1.3, 2.3-2.4  UNIT-II: 3.1-3.4  UNIT III: 4.1-4.2, 5.1-5.2  UNIT-IV: 5.3-5.4, 6.1-6.4  UNIT-V: 8.1-8.2, 8.5-8.6, 9.1-9.3)

**REFERENCE BOOKS:**
1. SOFTWARE ENGINEERING FOR INTERNET APPLICATIONS – Eve Anderson, Philip Greenspun, Andrew Grumet, 2006, PHI.
2. SOFTWARE ENGINEERING PROJECT MANAGEMENT – 2nd Edition, Wiley India.

**ELECTIVE I – C : MANAGEMENT INFORMATION SYSTEMS**

Subject Description: This subject deals with various management approaches of Information Systems.

Goal: Knowledge on how to manage Information like an experienced manager.

Objective: To inculcate knowledge on managing different information systems.


Information Collection – Value of Information – General Model of a Human as an Information Processor.


TEXTBOOKS:

REFERENCE BOOKS:
2. MANAGEMENT INFORMATION SYSTEMS for the Information Age – Haag, Cummings, McCubbrey, 4th edition, TMH.
3. MANAGEMENT INFORMATION SYSTEMS a Concise Study – S.A. Kelkar, 2005, PHI.

ELECTIVE II – A : FLASH

UNIT I:

UNIT II:

UNIT III:

UNIT IV:
Using Masking Techniques – Guiding Animations – Optimizing Your Movies – Creating Flash Movies – Creating Flash Movies for the Pocket PC.

UNIT V:
TEXT BOOK:
Reference Books
1. FLASH MX 2004 , Thyaghraran Anbumani , TMH .

ELECTIVE II – B : DISTRIBUTED COMPUTING

Subject Description This Course presents the distributed computing techniques emphasizing the client server model

Goals
To enable the students to learn the concepts of distributed computing

Objectives
On successful completion of the course the students should have:
• Understood the trends and principles of distributed computing

Contents
UNIT I
Distributed Systems: Fully Distributed Processing systems – Networks and interconnection structures – designing a distributed processing system.

UNIT II
Distributed systems: Pros and Cons of distributed processing – Distributed databases – the challenges of distributed data – loading, factors – managing the distributed resources division of responsibilities.

UNIT III
Design considerations: Communication Line loading – line loading calculations-partitioning and allocation - data flow systems – dimensional analysis- network database design considerations- ration analysis- database decision trees- synchronization of network databases

UNIT IV
Client server network model: Concept – file server – printer server and e-mail server

UNIT V
Distributed databases: An overview, distributed databases- principles of distributed databases – levels of transparency- distributed database design- the R* project techniques problem of heterogeneous distributed databases

Reference:
1. John a. Sharp, “An introduction to distributed and parallel processing g” Blackwell Scientific Publication(Unit I & III)
2. Uyless D. Black, “Data communication and distributed networks”(unit II)
3. Joel M.Crichlow “introduction to distributed & parallel computing (Unit IV)
ELECTIVE II – C : E-COMMERCE

Subject Description: This subject deals with E-commerce concepts like E-Commerce, M-Commerce, E-Security and E-payment.

Goal: Knowledge on E-commerce and Real World and Cyberspace problem awareness.

Objective: To inculcate knowledge on E-Commerce concepts in the present IT world.


TEXTBOOK:
1. ELECTRONIC COMMERCE from Vision to Fulfillment – Elias M. Awad, 3rd edition, PHI.  
(Chapters: 1, 6, 11, 13 &15)

REFERENCE BOOKS:
2. INTRODUCTION TO E-COMMERCE – Jeffrey F. Rayport, Bernard J. Jaworski, TMH.
UNIT I:

UNIT II:

UNIT III:

UNIT IV:
- Animating with Cameras – Types of Cameras – Camera View Port – Camera Parameters – Cameras in Animations – Animating with the Target and Free Cameras – Camera Matching.

UNIT V:

Text Book:
3D Animation – An overview – Prentice Hall India.

Reference Books

ELECTIVE III – B : WEB SERVICES

Subject Title : Web Services
Course Number: 
Number of Instruction Hours: 3   Number of Credits : 4

Subject Description
This Course presents the Web Services Provided.

Goal: To enable the students to learn what is web service and Protocols used for Web services
Objective
On successful completion of the course the students should have:
• Understood how to build the real world applications using Web Services.

Contents
Unit I

Unit II

Unit III
A brief outline of Web Services – Conversation – static and interactive aspects of system interface and its implementation, Work Flow – Orchestration and refinement, Transactions, Security issues – the Common attacks – security attacks facilitated within Web services Quality of Services – Architecting of systems to meet users requirement with respect to latency, performance, reliability, QOS metrics, Mobile and wireless Services – energy consumption, network bandwidth utilization, Portals and Services Management.

Unit – IV
Building real world Enterprise applications using Web Services – sample source codes to develop Web Services – Steps necessary to build and deploy Web Services and Client applications to meet Customer’s requirement – Easier development, Customisation, maintenance, Transactional requirements, seamless porting to multiple devices and platforms.

Unit – V
Development of Web Services and applications onto Tomcat application Server and Axis SOAP server (both are freewares) – Web Services Platform as a set of Enabling technologies for XML based distributed Computing.

REFERENCE BOOKS:
ELECTIVE III – C : SOFTWARE PROJECT MANAGEMENT

Subject Description: This subject deals with various Techniques for Software Project Management.
Goal: Enables to have sound knowledge on Software Project Management.
Objective: To inculcate knowledge on how to manage a Software Project.


TEXTBOOK:
1. SOFTWARE PROJECT MANAGEMENT – Bob Hughes & Mike Cotterell, 4th ed, PHI.