

Udai Pratap College, Varanasi
(An Autonomous Institution)



Syllabus of Subject: Diploma in Information and Computer Technology

For One year of Diploma Course

Session: 2022-2023

Department of Computer Science
Udai Pratap College, Varanasi, 221002
(An Autonomous Institution)

Diploma in Information and Computer Technology

Paper 1: Fundamentals of Information Technology

Marks: 100

UNIT-I

Definition of an Electronic Digital Computer Characteristics Capabilities and Limitations of computers. Generations of Computers, Types and classification of Computers on size. Computer hardware component and their functions. Characteristics and applications of Computers

UNIT-2

Introduction to OS, components of OS. Multiprogramming multitasking & Time sharing, Files and directories & their use in different OS, Window and Unix OS Dos Commands. Types of Dos commands.

Unit-3

Need of Software.Types of software-System, Software and Application Software, utilities programs, Introduction to programming language- Assembly languages, Machine Languages High Level Languages.

Unit-4

Number System. Binary Number. Decimal Number, Octal Number, Hexa Decimal Number, Conversion of Binary to Decimal, Decimal to Binary, Binary to Hexadecimal, First Compliment's, Second Compliment's Code, gray Code and Ascii code.

Unit-5

Types of Networks LAN,MAN, WAN Internet , Intranet, Topologies of LAN- Ring, Bus, Star, Mesh and Tree. Website, Web Browser, Web Pages, E-mail, uploading, downloading, chatting, usenet, bulletin board FTP, TELNET, domain name IP address

Diploma in Information and Computer Technology

Paper-II: PC Software

Marks : 100

Unit -1

Definition of PC and its Components. Concepts of Software, Hardware and Firmware Type of Software.

Unit -2

Basic of Window O.S., GUI, Folders, Concept of Login, logout, log off, Desktop, My Computer, My Document, Recycle Bin, My Network, Start Button, Task Bar, Date and Time Setting, Control Panel, Calculator, Word Pad, Note Pad, System Tools.

Unit -3

MS-WORD. Opening, Creating, Saving a Document, Editing, Finding & Replacing Texts, Using the interface (Toolbars and Menus) Table, Mail Merge, Letter Formatting and Print Setup.

Unit -4

MS EXCEL : Concept of Work Book , Opening, Creating, Saving a workbook, Concept of worksheets, cell and their formatting. Functions and formula.

Unit- 5

MS POWER POINT: Business presentation and their advantages Opening, creating, saving a presentation Slide setting and show.

Diploma in Information and Computer Technology

Paper III: Programming in C++

Marks : 100

Unit-I

Algorithm, Flow Chart- Symbols Rules for making flow charts, Types of flow Chart, Advantage and disadvantage, Pseudo Codes, Programming techniques- Top Down and Bottom Up, Functional & Object Oriented.

Unit- II

Object-Oriented Programming Paradigm, Basic Concepts of Object-Oriented Programming Benefits of OOPS, C++ Statements, class, Structure of C++ Program, Creating the source file, compiling and linking.

Unit- III

Tokens, Expression and Control Structures, Introduction, Tokens, Keyword, Identifiers. Basic Data types, User Defined Data Types, Symbolic Constants Reference Variables

Unit- IV

Operators in C++ , Scope Resolution Operators, Member Differencing Operators, Control Structures, Structures, Functions, arrays Specifying a class, Defining Member Functions, Memory allocation for objects, Static Data Member, Static Member Functions, Array of Objects, Object as Function arguments.

Unit- V

Introduction, constructors, parameterized Constructors, Multiple constructors with Default Arguments, Dynamic Initialization of Objects. Copy Constructors, Dynamic Constructors, and Destructor.

Diploma in Information and Computer Technology

Paper IV : Database Management System & HTML

Unit-1

Marks : 100

Introduction: An overview of database management system. Database system concepts and architecture, data models schema and instances, data independence and data base language and interfaces, Data definitions language DDL.

Unit-2

Data Modelling using the Entity Relationship Model : ER model concepts, notation for ER diagram, mapping constraints, keys, Concepts of Super Key, Candidate Key, Primary Key, Generalization, aggregation.

Unit-3

Introduction to SQL : Characteristics of SQL. Advantages of SQL, SQL data types and literals, Types of SQL ,commands, SQL operators and their procedure, Tables, views and indexes, Queries and sub queries, Aggregate functions, Insert, update and delete operations, Joins, Unions, Intersection, Minus, Cursors in SQL, PL/SQL, Triggers and clusters.

Unit-4

HTML: HTML, Design Tools, HTML editors, Image editors, Issues in web site creation & maintenance, FTP S/W for upload web site, Concepts of Hypertext, versions of HTML, Elements of HTML Syntax, Head & Body Sections.

Unit-5

Building HTML Documents, Inserting texts, Images, Hyperlinks, Backgrounds and Color Controls, Different HTML Tags, Table Layout and Presentation, use of Font size & attributes, List types and its tags, use of Frames and forms in web pages.

DICT-5(Practical's and Assignments)

Max. Marks: 100

Practicals related to Paper II, Paper III and Paper IV

Assignment: 15 Marks

Practicals: 60 Marks

Viva : 25 Marks
