

DIPLOMA (COMPUTER SCIENCE) – SECTION C

Group A & Group B +							
S.N	Code	Name of Module	CR	SN	Code	Name of Module	CR
1	CS04-21	English-III	5	2	CS04-22	Visual Basic	5
3	CS04-23	Computer Architecture	5	4	CS04-24	Multimedia Technology	5
5	CS04-25	Basic of Internet	5	6	CS04-26	Computer Graphics	5
7	CS04-27	Client Server Technology	5	8	CS04-28	Software Engineering	5
9	CS04-29	Project	4				

Subject Name: English-III

- The Seven C's of the Effective Communication:** Completeness, Conciseness, Consideration, Concreteness, Clarity, Courtesy, Correctness.
- Communication:** Its interpretation: Basics, Nonverbal Communication, Barriers to Communication.
- Business Communication at Work Place:** Letter Components and Layouts, Planning a letter, Process of Letter writing, Email Communication, Memo and Memo Reports, Employment Communication, Notice Agenda and Minutes of Meeting, Brochures.
- Report Writing:** Effective Writing, Types of Business Reports, Structure of Reports, Gathering Information, Organization of the Material, Writing Abstracts and Summaries, Writing Definitions, Visual Aids, User Instruction Manual.
- Required Skills:** Reading Skills, Note-making, Précis Writing, Audio Visual Aids, Oral Communication.
- Mechanics of Writing:** Transitions, Spelling Rules, Hyphenation, Transcribing Numbers, Abbreviating Technical and Non-Technical Terms, Proof Reading.

Subject Name:-Visual Basics

- Introduction to Visual Basics:** Object-Oriented Programming (OOP), What Is the Visual Basic ?, Visual Basic Application, Introduction to Visual Basic , Event-Driven Programming, Integrated Development Environment(IDE), Toolbox, Form Layout Window, Properties Window, Menu Bar, Immediate Window, Creating the interface, Resizing, Moving , and Locking Controls, To Lock all Control Positions, To Adjust the Position of Locked Controls, Setting Properties, Designing a form, Saving the Project, Working with Multiple Projects, Merging Text, Using Wizard and Add-Ins, Using Wizards, Making and Running an Executable File Adding Controls, OLE, Command Button.
- Data Types In Visual Basics:** Data Type, Operator, Precedence of Operators, Arrays.
- Controls Statements in Visual Basic:** Introduction to Control Statements, Decision Structures or Selection Statements, More Worked Out Programming Examples.
- Standards Library Functions in Visual Basics:**Introduction, Characters and Strings, String Data Types, Concatenation of Strings, Concatenation Operator (& Operator), Arithmetic Operators, String Functions, Numeric Functions, Date, Time and Now Functions, Date Arithmetic Functions (Date Add,, Data Diff), Data Type Functions, Arithmetic Functions, Remainder.

- 5. Visual Basic Forms, Procedures and Functions:** Introduction, to Forms, Single Documents Interface (SDI), Multiple Document Interface (MDI), Managing Projects, Using Procedures and Functions, Procedures, Calling Sub Procedures, Calling Function Procedures, Passing Arguments to Procedures, Using Optional Arguments.

Subject Name:-Computer Architecture

1. **Processor Organization:** General structure of CPU registers, Stack, operation of stack, ALU and control unit. Instruction format, mathematical operations, fixed point addition, multiplication or division. Principle of arrays and pipeline processors, principle of instruction decoding and implementation, hardware and micro-instruction based control unit.
2. **Design of Controller:** Identifying micro-instruction, minimizing micro-instruction, size, parallelism in micro instruction, encoding control instruction, timing cycle and clock generation, organization of micro-Programme based control unit.
3. **Memory Organization:** Static memory, dynamic memory, memory hierarchies, memory refresh, paging concept of memory compaction, interleave memory and principle of address interleaving associative memory, memory segmentation, block address calculation, concept of cache memory.
4. **Data Transfer Technique:** Various I/O devices, IOP, CPU configuration

Subject Name-Multimedia Technology

Unit-I

Introduction and Hardware:

Definition Of Multimedia, CD-ROMs and Multimedia applications, Multimedia requirements –Hardware, Software, Creativity and Organization, Multimedia skills and training Macintosh Verses PC, the Macintosh platform, PC platform, Connections, Memory and storage devices, input devices, Output hardware ,Communication devices.

Unit-II

Multimedia Software:

Basic tools, painting and drawing tools, OCR software, Sound editing programs, Animation devices and digital movies and other accessories, Linking multimedia objects , Office suites, word processor, spreadsheets presentation tools, Types of Authoring tools card and page based, icon based and time based authoring tools, Object oriented tools.

Unit-III

Production Building Blocks:

Test-Using test in Multimedia, Computers and Text, Font editing and design tools, Hypertext, Sounds-multimedia system sounds MIDI Verses Digital Audio, Audio file Formats, Working with sound in Windows, Notation interchange file format (NIFF),Adding sound.

Unit-IV

Production Tips:

Image-Creation, making still images, images colors, Images, File format, Animation-principles of animations, making workable animations Video, using video, Broadcast Video, Standard, Integrating Computer and TVs, Shooting and editing Video, Using Recording formats, Video tips, Video Compression.

Unit-V

Multimedia Project Development and case Studies:

Project planning, Estimating, RPFs and Bid proposals, Designing, Producing acquiring and using contents, Using Telnet, Testing, Preparing for delivery , CD-ROM Technology and Standards. Designing for the Word Wide, Working on the Web, Text for the Web, Images for the Web, and Animation for the Web.

Subject Name: Basics of Internet

Unit-I

Internet Technology

- 1. Evolution & Protocols:** Internet Evolution, Protocols, Interface Concept, Internet V.s. Internet growth of internet ISP, Connectivity - dial up, leased line, VSAT etc. URLs. Domain names, Portals, Application E-mail File Transfer Protocol, Telnet, Chatting, Data Transmission Protocol, Client/Server, architecture and its characteristics, FTP and its Usages. Telnet Concepts, remote logging, protocols, terminal emulation, message board, Internet Chatting, Voice chat, Text chat.
- 2. Web Concept:** World Wide Web, Web Publishing, HTML, Design tools, HTML edition, Image edition, Issue in website creation & maintenance FTP s/w for uploading Use of frames and forms in web pages.

Unit-II

E-Commerce

Introduction to E-Commerce: Introduction, Concept technology in E-Commerce, Internet business, Advantage of E-Commerce, Application, Feasibility and constrain.

Subject Name-Computer Graphics

1. Keyboard, Touch Panel, Light pens, Graphic tablets, Joysticks, Touch balls, Image scanner, Mouse, Handy copy device:-Zero impact and Non-Impact printers, Dot matrix, Laser printer, Inkjet printer, Dectrostate, Flatted and drum plotters. Video display devise:-Cathode Rey tube, Resistance, Resolution ,Aspect ratio vertical and horizontal ,Color CRT monitors, Direct view storage tube, Flat panel displays, LCD Virtual reality, Faster scan system, Random scan system. Memory device:-Memory (RAM, ROM), CD, Floppy disk, Magnetic tapes, Magnetic disks.
2. Scan conversion algorithm for line (DDA & Bresenham's algorithm) ,Midpoint circle ,Circle & ellipse, Midpoint ellipse, Midpoint ellipse ,Bresenham's algorithm ,Area filling techniques, Scan line polygene fill, Boundary fill character generation.2-dimensional Graphics: Cartesian & Homogeneous coordinate system, Geometric transformations, Affine transformation (Translation, Scaling ,Rotation, Reflection, Shearing),Composite transformation ,Affine Viewing pipeline, Two dimensional viewing transformation and clipping(Line, Polygon and Text).
3. Three Dimensional Graphics:-Geometric transformation (Translation, Scaling, rotation, reflection, shearing), Composite transformations, Mathematics of projections (parallel & perspective), View pipeline, 3D viewing transformations and clipping (normalized view volumes, view port, clipping).
4. Hidden line and surface elimination algorithms, Z-buffer, Scan-line, Sub-division, and Painter's algorithm. Illumination Models: Diffuse reflection, specular reflection, refracted light, Texture surface patterns, half toning, dithering. Surface rendering methods: Constant intensity method, Gourmand shading, Hong shading. Color Model: Introduction to RGB, CMY & HSV color models.

Subject Name-Client Server Technology

- 1. Introduction:** Client Server Technology, Evolution Of Architectures, Thin Characteristics, General Issues In Client-Server Computing, Overview Oracle Distributed Database System, Other Issues in Client-Server Computing Development, Applying Client/Server In Businesses.

2. **Client-Server Technology and Heterogeneous Computing:** Categories Of Clients, Clients/Server Systems, The Role Of The Server, Single-System Image, Client/Server Software Architectures-an Overview, Technical Detail, Mainframe-Centric Client/Server Computing, Client Server Development Tools Samson Kifle Is, Client/Server Development Tools.
3. **The Evolution of Client/Server Computing and Architectures:** Tier Architectures, Tier Architectures-Tier Architectures.
4. **Interaction of Client and Server Communication Techniques and Protocols:** Network, Network Structure, Protocol, Hardware, Cabling, Topology, Star Network Operating Sys Tem Software. **Distributed Systems:** Distributed System Model.
5. **UNIX Client Server Technology:** Understanding the Role of UNIX, General Overview and Structure, UNIX Components, Impact/Contributions.
6. **Database Management Systems:** What is database management systems ,Peoples who deals with database, Overall system structure ,Cgdp's 12 rules'' fdr a fully ralatios DBMS, The role of DBAa in dbms,pl/sql, operators, Fundamental SQL commands, Data definition command of sql, program, is null operator, Alter table ,Aggregate functions ,Controls structure ,introduction to stored procedures.
7. **Basic UNIX and Shell Programming:** Unix Operating System ,History Of Unix, Features Of Unix ,Kernel, Process Managements ,File Systems ,Unix ,Kernel, Process Managements ,File System, Unix Commands, Files & Directories ,General Purpose Utilities, Compression Utilities ,Processes ,She 11Phoqw.
8. **CPU/Process Scheduling:** Goals of Scheduling (objectives) ,Preemptive Vs N On Preemptive Scheduling
9. **Unit-10-Memory Management:** Memory Management, Principles of Virtual Management, Memory, Memory Management in Ms-DOS

Subject Name-Software Engineering

1. The Software Problem
2. Software Process
3. Software Requirements Analysis and Specification
4. Software Architecture
5. Planning a software project
6. Design
7. Coding and Unit Testing
8. Testing