

DIPLOMA (COMPUTER SCIENCE) – PART FIVE

Optional Early Certificate: - Certificate (Computer Science)

Syllabus:-

Sr. No.	Module Code	Name of Module	Credits	Total Marks
1	CS04-21	English-III	5	100
2	CS04-22	Visual Basic	5	100
3	CS04-23	Computer Architecture	5	100
4	CS04-24	Multimedia Technology	5	100
5	CS04-25	Basic of Internet	5	100

Module Name: English-III

- 1. The Seven C's of the Effective Communication:** Completeness, Conciseness, Consideration, Concreteness, Clarity, Courtesy, Correctness.
- 2. Communication:** Its interpretation: Basics, Nonverbal Communication, Barriers to Communication.
- 3. 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.
- 4. 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.
- 5. Required Skills:** Reading Skills, Note-making, Précis Writing, Audio Visual Aids, Oral Communication.
- 6. Mechanics of Writing:** Transitions, Spelling Rules, Hyphenation, Transcribing Numbers, Abbreviating Technical and Non-Technical Terms, Proof Reading.

Module Name:-Visual Basics

- 1. 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.
- 2. Data Types In Visual Basics:** Data Type, Operator, Precedence of Operators, Arrays.
- 3. Controls Statements in Visual Basic:** Introduction to Control Statements, Decision Structures or Selection Statements, More Worked Out Programming Examples.
- 4. 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.

Module 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

Module 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.

Module 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.