



PT. SUNDARLAL SHARMA (OPEN) UNIVERSITY CHHATTISGARH
POST GRADUATE DIPLOMA IN COMPUTER APPLICATION
SYLLABUS

Course I: Fundamental of Computer and Information Technology

Block I

Unit I - Know the Computer:

Introduction, What Does Computer Stand For, Strengths of Computer, Limitations Of Computer, Fundamental uses of Computer, Development of Computer, Types of Computer, Generations of Computer.

Unit II- Personal Computer:

Introduction, Personal Computer, Uses of Personal Computer, Components of Personal Computer, Evolution of PCs, Development of Processors, Architecture of Pentium IV, Configuration of PC.

Unit III-Computer Organization and Architecture;

Computer Organization and Architecture, Input Unit, Central Processing Unit (CPU), Output Unit.

Unit IV-Central Processing Unit:

Introduction, What is Central Processing Unit, Arithmetic & Logic Unit, Control Unit, Registers, Instruction Set, Processor Speed.

Block II

Unit V- Input Devices:

Introduction, Input Devices, Typing Input Devices, Pointing Input Devices, Scanning Input Devices, Audio Visual Input Devices.

Unit VI -Output Devices:

Introduction, Output Devices, Soft copy Vs Hard Copy Output), Monitor, Printers, Plotter, Electrostatic technique, Special Purpose Output Equipment.

Unit VII- Storage Devices:

Introduction, Storage Devices and its need, Brain Vs Memory, Storage Evaluation Unit, Data Access Methods, Primary Storage, Secondary Storage, Role of Hard Disk, Hard Disk Operations, Floppy Disk-drives, Winchester Disk, Optical Disk, VCD, CD-R, CD-RW, DVD, Zip Drive, Flash Drives, Blue Ray Disk, Memory Card, Drive naming Conventions in a PC.

Unit VIII- Basics of Software:

Introduction, Software, Need of Software, Types of Software.

Block III

Unit IX- Operating System:

Introduction, Operating System, Why an Operating System, Functions of Operating System, The Booting Process, Types of Reboot, Types of Operating System, Some Prominent Operating Systems.

Unit X- Programming Language:

Introduction, Data and Information, Quality of Information, Comparison between human language and computer language, Program, Programming Language, Programming Development Cycle,



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Algorithm, Program Flow Charts, Pseudocode, Programming Approaches, Programming Paradigm, Types of programming Languages, Third Generation Language, Fourth Generation Language.

Block IV

Unit XI -Virus:

Introduction, Virus, History, Mechanism of Virus, How Virus Spreads, How Virus is named, A few prominent Viruses, Types of Computer Virus, Related Concepts, Anti-Virus Programs, NORTON Anti-Virus, Executing NORTON Anti-Virus.

Unit XII- Communication and IT:

Introduction, Use of Communication and Information Technology, Computer Networks, Communication Process, Simplex, Half-Duplex and Full-Duplex, Transmission Media, Serial and Parallel Communication, Modem- Working and Characteristics.

Unit XIII- Networks:

Introduction, Internet Vs Intranet, Types of Networks, Virtual Private Network, Wifi, Topology, Types of Connectivity, Enabling Internet Connection Sharing on a network, Configuring Internet-Explorer Options for Internet Connection Sharing, Network Devices.

Unit XIV -Number System:

Introduction, Decimal Number System, Binary Number System, Octal Number System, Hexadecimal Number System, Number system conversion, Binary Number System.



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Course II: Operating System

Block I

Unit I -Operating System:

An Introduction: Introduction, Operating System, Purpose of Operating System, Functions of Operating System, Processor Management, Memory Storage and Management, Device Management, Interfacing, Kinds of Operating System.

Unit II-Disk Operating System:

Introduction, History & Versions of DOS, Physical Structure of Disk, Drive Name, File Allocation Table, File, DOS Prompt, Directory, Booting Process, DOS System Files, Commands of DOS, Executable Vs Non-Executable Files In DOS.

Unit III-Windows 98:

Introduction, Hardware Requirements of Windows, Features of Windows 98, Windows Concepts, Windows Structure, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin.

Block II

Unit IV-Windows Accessories:

Introduction, Calculator, Notepad, Paint, WordPad, Character Map.

Unit V- Windows Explorer:

Introduction, Using Windows Explorer, Opening Windows Explorer, Changing the name of a file or a folder, Creating A Folder, Copying a Disk, Moving a file or folder, Creating A Shortcut on Desktop, Menu bar of Windows Explorer, Explorer Structure.

Unit VI-Tools:

Introduction, Entertainment Group, Using CD Player, Using DVD Player, Viewing The Interactive CD Sampler, Making CDs Play Automatically, Using Sound Recorder, Recording a Sound, Playing a Sound, Inserting Sound into a Document, Linking a Sound File to a Document, Using Volume Control, Using Media Player.

Unit VII-Advanced Features of Windows:



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Introduction, Installing New Hardware, Viewing or Changing Resources for a Hardware Device, Installing a Program, Adding or Removing a Windows Component, Installing a Program from a Network, Using Scanners and Cameras, Installing a scanner or Digital cameras, Testing a scanners or Digital cameras.

Block III

Unit VIII- System Tools:

Introduction, Backup, Using Character Map, Clipboard Viewer, Disk Defragmenter, Drive Space, Using Scandisk, System Information, System Monitor, Drive Converter - FAT 32.

Unit IX- Communication:

Using Dial-up Networking, Hyper Terminal, Phone Dialer, NetMeeting, and Internet Connection Wizard.

Unit X-Multiple Users Features and Accessibility Features of Windows:

Embedding and Linking Concepts, Using the Accessibility Wizard, Assigning Sounds to Program Events, Turning on MouseKeys, Turning FilterKeys on, Turning on Stickey Key, Turning on ToggleKey, Embedding Information in Another Document, Linking information between Documents, Linking Objects.

Block IV

Unit XI-Windows NT:

Introduction, Client Server And Windows NT Server, Minimum System Requirements For Installing Windows NT Server, Windows NT Login, Logoff And Control Panel, Features Of Windows NT 4, Working in Windows NT, Ways to Running Programs In Windows NT, Windows NT Control Panel.

Unit XII-Linux:

Introduction, History & Features of Linux, File Structure, Types of files in Linux, Linux Kernel, Login to Linux System, GNOME Desktop, Linux Commands.



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Course III: RDBMS Programming in FoxPro

Block I

Unit I – FoxPro - Relational Database Management System For Personal Computers: Introduction, FoxPro - Versions, Features, Requirements of Hardware and Software, FoxPro - Menu System Working with FoxPro, Creating Database File, Some common operations on data, CREATE, LIST, APPEND, CLOSE, QUIT commands, Data Types in FoxPro.

Unit II- View and Edit Data: Introduction, Data Displaying and Monitoring, commands, DISPLAY, LIST, LOCATE, EDIT, CHANGE commands, BROWSE, REPLACE, DELETE, RECALL, PACK commands.

Unit III- Modify Structure, Memo Field and File Utilities: Introduction, File Utilities in FoxPro, Modify Structure, Memo Field, DISPLAY DIRECTORY Command, COPY Command, DELETE command, RENAME Command.

Unit IV- Sorting and Indexing Database Files: Introduction, Sorting & Indexing Concept, Sort Commands- Single & Multiple Key, Advantages and Disadvantages of SORT, Indexing VS Sorting, Single & Multiple Key, FIND, SEEK Commands, Rushmore Technology.

Unit V- Reports and Labels: Introduction, Printing Reports and Labels, FoxPro Reports- Its creation, features & utilities, Preview, Printing Custom Report, Grouping & Subgrouping, FoxPro Label-Designing & Printing.

Block II

Unit VI- Memory Variables, Date and Time Functions and Keyboard Macros: Memory Variables- Creation and Uses, Simple Vs Array, Saving and Restoring Memory Variables, Time & Date Functions and Commands, Date Arithmetic, Converting & Defining Function Keys, Keyboard Macros, Creating and Using.

Unit VII - Mathematical Commands and Functions: Introduction, Arithmetic operations, Mathematical function, Mathematical commands, Statistical functions.

Block III

Unit VIII- Programming in FoxPro: Introduction, Concepts of FoxPro Commands, Modify Commands, Conditioning, Branching and Looping within Program files, DO WHILE-ENDDO, IF-ENDIF, SCAN-ENDSCAN, FOR-ENDFOR, DO CASE-ENDCASE, TEXT-ENDTEXT, Executing commands from other commands files, Macro Substitution.

Block IV

Unit IX - Multiple Database Files: Introduction, Concept of Multiple Database Files, Using Multiple Database Files, Relationing the database, SET RELATION, UPDATE, APPEND FROM, COPY TO, JOIN, Relation Query by Example and SQL.

Unit X- The Structured Query Language: Introduction, WHAT IS SQL?, DATA DEFINITION LANGUAGE, CREATE TABLE Command, DATA MANIPULATION LANGUAGE, SELECT Statement.



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Unit XI- Custom Screens, User-Defined Functions and Other Tools: Introduction, Creating Custom Screen with @, @_GET, @_EDIT, @_GET_READ, Creating Box & Rows, User Defined Functions, Designing Custom Screens and their Use, Custom Design of Input and Output Screen.



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Course IV: PC Package

Block I

Unit I – Know the Windows OS

Introduction, What is Windows OS?, Evolution of Windows Operating System, Features of Windows OS, What's new in Windows OS, Windows & its Elements, Advanced Features of Windows OS.

Unit II- Accessories and Other Tools

Introduction, The Calculator, Using the Calculator, The Character Map, Private Character Editor, Using Outlook Express, The Address Book, The Paint, Note Pad, The Wordpad, The Net Meeting, The Internet Explorer, The Windows Media Player, MS DOS, The Control Panel, The Windows Picture and Fax Viewer, The Hyper Terminal, The Windows Messenger, Using Windows Movie Maker.

Unit III- Managing Files and Folders

Introduction, Viewing Files and Folders, Arranging Files and Folders, Creating a New Folder, Creating a File using Short-cuts, Renaming a File or Folder, Searching a File or Folder, Deleting Files or Folders, E-Mailing Files or Folders.

Block II

Unit IV- Microsoft Office Suite and other office suites

Introduction, Different Office Suites, Microsoft Office Suite, Word, Excel, Power Point, Outlook, Access, Frontpage, What is special about Office?

Unit V- Common Element of the Suite

Introduction, Menu bars and Toolbars, Shared Tools, Office Assistant and Online Help, Object, Linking, Embedding.

Unit VI- Word Processing and MS-Word

Introduction, What is word processing, Features of Electronic Word-Processor, What is MS-Word, Starting MS-Word, Chief Elements of Microsoft Word Window, File Operations in Microsoft Word, Customizing the Office Assistant.



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Unit VII- Word Processing and MS-Word

Introduction, what is word processing, Features of Electronic Word-Processor, what is MS-Word, Starting MS-Word, Chief Elements of Microsoft Word Window, File Operations in Microsoft Word, Customizing the Office Assistant.

Unit VIII- Document Formatting

Introduction, Using Page Border, Inserting Bullets, Inserting Numbering, Using Auto text, Using AutoCorrect, Headers and Footers, Formatting The Page Numbers, Manual and Automatic Page Break Using GoTo.

Unit IX-Table and Graphics

Introduction, Creating Tables, Editing Tables, creating a Shape, Using Word Art, inserting a Text Box, What is a drawing canvas, Using auto shapes.

Unit X- Mail Merge, Views, Template and Wizard

Introduction, Mail merge, Views, Templates, Ruler, Zoom, Using Wizard, Inserting Hyperlink into a Web Page or a Word Document.

Block III

Unit XI -Spreadsheet and MS-Excel

Introduction, Starting MS-Excel, MS Excel and its Elements, Handling Files, Using Help Online, Getting Help.

Unit XII-Worksheet Formatting

Introduction, Entering Text Data, Entering Formula, Editing the Cell Content, Movement of Cell Pointer in the Worksheet, Setting Border Around Cell, Using Gridlines, Hiding Cell Gridlines, Using Format Painter, Using Spelling Checker.

Unit XII-Function and Operator

Introduction, Entering Functions, Editing Functions, Using Mathematical Functions, Using Statistical Function, Using Date & Time Function, Text Function, Logical Functions, Financial Function, Operators, Auto Sum, Function Wizard.

Unit XIV-Chart and Web Object



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Introduction, Parts of a Chart, Types of Charts, creating a Chart Using Wizard, selecting a Chart, Using Pivot Table, Object Linking and Embedding (OLE), Hyperlinks, Previewing Charts, Printing Charts.

Unit XV-Chart and Web Object

Introduction, Parts of a Chart, Types of Charts, creating a Chart Using Wizard, selecting a Chart, Using Pivot Table, Object Linking and Embedding (OLE), Hyperlinks, Previewing Charts, Printing Charts.

Unit XVI-Slides Formatting

Introduction, adding text to slides, Copying and moving the text, Changing The Case, Using Format Painter, Setting Paragraph Indents, Checking Spelling of the Text, Personalizing AutoCorrect, Moving Slides.

Unit XVII-Table, Chart and other Drawing Objects

Introduction, Creating a Table, Creating An Embedded Word Table, Adding Columns and Rows In Table, (Deleting Columns and Rows, Changing Table Borders, Using Auto shapes, Chart, Inserting a clip to your slide, Using Word Art, Inserting a Word Art, Working with Drawing Toolbar, Displaying and Hiding Drawing Toolbar, Creating a Shape.

Unit XVIII-Slides, Views, Notes, Handouts

Introduction, PowerPoint Views, Notes Pages, Using Handouts, Inserting Header and Footer in the Slide, Transition, Set timings for a Slide Show, Custom Show, Animation, Preview a Presentation as a Web page, Showing Slides, and Printing Slides.

Block IV

Unit XIX-Outlook Express

Introduction, What is e-mail? , E-Mail Clients, Microsoft Internet Explorer and Outlook Express, Starting Outlook Express, Setting up a Mail Account, Composing Message, Attaching Files, Applying Stationery, Creating Addresses, Sending & Receiving Mails, Making Outlook Express Default Client, Signature, Creating Signature in Outlook Express.

Unit XX- Introduction to Access XP

Introduction, New Features in Access, Creating New Databases Opening Existing Databases, Microsoft Access IDE (Integrated Development Environment).



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Unit XXI- Create A Table in Access

Introduction, Creating Tables, creating tables in design view, creating a table in Datasheet view, Editing Records, Deleting Records, Adding and Deleting Columns, Resizing Row & Column, Freezing Columns, Hiding Columns, Finding Data in a Table, Sorting and Filterin.

Unit XXII- Relationships

Introduction, Understanding Keys, Creating Relationship, Process of Establishing Relationships, Benefits of Relationships, Indexes & Relationships.

Unit XXIII- Filters and Queries

Introduction, Filter, Saving Filters as Query, Query, Classification of Queries, Creating Queries in Access 2002 (X), Implementation of Queries, Multiple Conditions, creating a Query Representing Unique Values, creating 'Top Value' Query, Sub Query, Formatting Field, Query for Sorting Column, Properties of Query Execution of Query, Printing Query, Save the query.

Unit XXIV- Forms

Introduction, Comparing Forms and Datasheets, Composition of a Form, Types of Forms, Sample of Forms, Form Creation, Form Design Tools, Adding Fields to the Form, Adding the Correct Control to the Form, Working with Sub Forms, Properties of Controls used in a Forms, 'format' properties of the control (), Data Properties of a Control, Other Properties of a Control, Adding Header and Footer to the form, Creating Template.

Unit XXV- Reports

Introduction, Types of Reports, Processing of Creating a Report, Creating a New Report, Creating a Report With Report-wizard, Creating a Report with design View, Control Properties, Working with Sorting and Grouping, Previewing & Printing a Report, Saving the Report.