

PGDCA-1st Sem Syllabus

Detailed Syllabus

Computer Fundamental & Information Technology

UNIT – I

Brief history of development of computers, Computer system concepts, Computer system characteristics, Capabilities and limitations, Types of computers Generations of computers, Personal Computer (PCs) – evolution of PCs, configurations of PCs- Pentium and Newer, PCs specifications and main characteristics. Basic components of a computer system - Control unit, ALU, Input/Output functions and characteristics, memory - RAM, ROM, EPROM, PROM and other types of memory.

UNIT – II

Input/Output & Storage Units:-Keyboard, Mouse, Trackball, Joystick, Digitizing tablet, Scanners, Digital Camera, MICR, OCR, OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen, Monitors - characteristics and types of monitor -Digital, Analog, Size, Resolution, Refresh Rate, Interlaced / Non Interlaced, Dot Pitch, Video Standard - VGA, SVGA, XGA etc, Printers & types – Daisy wheel, Dot Matrix, Inkjet, Laser, Line Printer, Plotter, Sound Card and Speakers, Storage fundamentals - Primary Vs Secondary Data Storage and Retrieval methods - Sequential, Direct and Index Sequential, SIMM, Various Storage Devices - Magnetic Tape, Magnetic Disks, Cartridge Tape, Hard Disk Drives, Floppy Disks (Winchester Disk), Optical Disks, CD, VCD, CD-R, CD-RW, Zip Drive, flash drives Video Disk, Blue Ray Disc, SD/MMC Memory cards, Physical structure of floppy & hard disk, drive naming conventions in PC, DVD, DVD-RW.

UNIT – III

Software and its Need, Types of Software - System software, Application software, System Software - Operating System, Utility Program, Programming languages, Assemblers, Compilers and Interpreter, Introduction to operating system for PCs-DOS Windows, Linux, File Allocation Table (FAT & FAT 32), files & directory structure and its naming rules, booting process details of DOS and Windows, DOS system files Programming languages- Machine, Assembly, High Level, 4GL, their merits and demerits, Application Software and its types - Word-processing, Spreadsheet, Presentation Graphics, Data Base Management Software, characteristics, Uses and examples and area of applications of each of them, Virus working principles, Types of viruses, virus detection and prevention, viruses on network.

UNIT – IV

Use of communication and IT, Communication Process, Communication types- Simplex, Half Duplex, Full Duplex, Communication Protocols, Communication Channels - Twisted, Coaxial, Fiber Optic, Serial and Parallel Communication, Modem -Working and characteristics, Types of network Connections - Dialup, Leased Lines, ISDN, DSL, RF, Broad band, Types of Network - LAN, WAN, MAN, Internet, VPN etc., Topologies of LAN - Ring, Bus, Star, Mesh and Tree topologies, Components of LAN -Media, NIC, NOS, Bridges, HUB, Routers, Repeater and Gateways.

UNIT-V

Computer Applications in Business-Need and Scope, Computer Applications in Project Management, Computer in Personnel Administration, Information System for Accounting-Cost and Budgetary Control, Marketing and Manufacturing, Computer Applications in Materials Management, Insurance and Stock-tracking, Production planning and Control, Purchasing, Banking, Credit and Collection, Warehousing, Use

Operating System

UNIT-I

DISK OPERATING SYSTEMS (DOS) Introduction, History & versions of DOS ,DOS basics- Physical structure of disk, drive name, FAT, file & directory structure and naming rules, booting process, DOS system files. DOS commands : Internal - DIR, MD, CD, RD, COPY, DEL, REN, VOL, DATE, TIME, CLS, PATH, TYPE etc.External - CHKDSK, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, TREE, MOVE, LABEL, APPEND, FORMAT, SORT,FDISK, BACKUP, EDIT, MODE, ATTRIB, HELP, SYS etc Executable V/s Non executable files in DOS.

UNIT-II

WINDOWS XP Introduction to Windows XP and its features . Hardware requirements of Windows. Windows concepts, Windows Structure, Desktop, Taskbar, Start Menu, My Pictures ,My Music.,working with recycle bin-restoring a deleted file, emptying the recycle bin. Managing files ,folders and disk-navigating betweenfolders ,manipulating files and folders ,creating new folder ,searching files and folders .My computer-exploring hard disk ,copying and moving files and folder from one drive to another, formatting floppy drive. Windows Accessories - Calculator, Notepad, Paint, WordPad, Character map,paint,command prompt Windows Explorer - -exploring hard disk ,copying and moving files and folder from one drive to another, formatting floppy drive.and other Explorer facilities. burning CD Entertainment-CD player, DVD Player, Media Player, Sound Recorder, Volume Control, movie maker

UNIT-III

ADVANCED FEATURES OF WINDOWS XP: Managing Hardware & Software - Installation of Hardware &Software, Using Scanner web camera, printers sharing of printers, System Tools - Backup, Character map, Clipboard Viewer, DiskDefragmenter, Drive Space, Scandisk, System Information, System Monitor, Drive converter (FAT 32) ,disk cleanup ,using windows update. Communication - Dial up Networking, Direct Cable Connection,Hyper Terminal, Phone Dial ,Browsing the Web with internet explorer ,communication through outlook express , Multiple Users Features of Windows. Creating and deleting user, changing user password,etc Accessibility Features of Windows.-Sharing Information between Programs ,sharing folders and drives browsing the entire network, mapping windows shared drives, Using shared printers- Understanding OLE - Embed/Link Using Cut and Paste aEmbed/Link Using Insert Object - Manage Embedded/Linked Object

UNIT - IV

LINUX: History & Features of LinuxLinux StructureFile system of Linux ,Hardware requirements of Linux Various flavours of Linux, Program & Process.Process creation and process identifiers ,Functions of profile and login files in Linux Linux kernel

UNIT-V

Multi-user features of Linux ,Login and logout from Linux system,Linux commands - bc, cal, cat, cd, chgrp, chmod, chown, clear, cmp,copy, date, find, ps, kill, ls, mail, mkdir, more, mv, rm, rmdir, tty,wc, who, whois, grep, write, telnet. Pipeline conceptsUsing floppy and cdrom in linux., vi editor

TEXT & REFERENCE BOOKS :

- DOS Quick reference by Rajeev Mathur, Galgotia Publications
- Linux Complete by BPB Publications
- Peter Norton Complete Guide to Linux by Peter Norton,

PC Package

UNIT-I

Office Packages-Office activities and their software requirement.,word Processing, spreadsheet, presentation graphics, database, introduction and comparison of various office suites like MS office, Lotus Office, Star Office, Open Office etc. **MS Word Basics:** Introduction to MS Office; Introduction to MSWord; Features & area of use, Working with MS Word.; Menus &Commands; Toolbars & Buttons; Shortcut Menus, Wizards &Templates; Creating a New Document; Different Page Views andlayouts; Applying various Text Enhancements; Working with – Styles,Text Attributes; Paragraph and Page Formatting; Text Editing usingvarious features ; Bullets, Numbering, Autoformatting, Printing &various print options

UNIT-II

Advanced Features of MS-Word: Spell Check, Thesaurus, Find &Replace; Headers & Footers ; Inserting – Page Numbers, Pictures, Files, Autotexts, Symbols etc.; Working with Columns, Tabs & Indents; Creation & Working with Tables including conversion to and from text; Margins & Space management in Document; Adding References and Graphics; Mail Merge, Envelops & Mailing Labels.

UNIT – III

MS Excel: Introduction and area of use; Working with MS Excel.;concepts of Workbook & Worksheets; Using Wizards; Various Data Types; Using different features with Data, Cell and Texts; Inserting, Removing & Resizing of Columns & Rows; Working with Data & Ranges; Different Views of Worksheets; Column Freezing, Labels, Hiding, Splitting etc.; Using different features with Data and Text;Use of Formulas, Calculations & Functions; Cell Formatting including Borders & Shading; Working with Different Chart Types;Printing of Workbook & Worksheets with various options.

UNIT – IV

MS PowerPoint: Introduction & area of use; Working with MS PowerPoint; Creating a New Presentation; Working with Presentation; Using Wizards; Slides & its different views; Inserting, Deleting and Copying of Slides; Working with Notes, Handouts, Columns & Lists;Adding Graphics, Sounds and Movies to a Slide; Working with PowerPoint Objects; Designing & Presentation of a Slide Show;Printing Presentations, Notes, Handouts with print options.

UNIT-V

Outlook express: Setup email account with outlook, sending and receiving mail through outlook, concepts of CC and BCC, forwarding mail, Draft messages, formatting e-mail message, Concept of MIME Protocol, attaching files and items into messages, inserting hyperlink using outlook editor creating and using send and receive groupemails, opening received messages, opening messages with attachment, replying to mail forwarding messages flagging for further action, setting email options, managing contacts with outlook, Setting up multiple email accounts on single machine.

Text & Reference Books:

Windows XP Complete Reference, BPB Publications

MS Office XP complete BPB publication

MS Windows XP Home edition complete, BPB Publications

I.T. Tools and Applications, A. Mansoor, Pragya Publications

Fox Pro

UNIT-I

FOXPRO - THE RDBMS FOR PC FoxPro - Versions, features, requirement of Hardware and Software FoxPro - Menu System, Working with FoxPro Creating Database File Some common operations on data- CREATE, LIST, APPEND, CLOSE, QUIT, FoxPro - Data Types *VIEWING AND EDITING DATA* Data Displaying and Monitoring Commands - DISPLAY, LIST, LOCATE, EDIT, CHANGE, BROWSE, REPLACE, DELETE, RECALL, PACK (All Commands with various Options) *MODIFY STRUCTURE, MEMO FIELD AND FILE UTILITIES* -File utilities in FoxPro - DISPLAY DIRECTORY, COPY, DELETE, RENAME.

UNIT-II

SORTING AND INDEXING OF DATABASE FILES: Sorting & Indexing Concept Sort Commands - Single & Multiple Key Advantage & Disadvantages of Sort, Indexing Vs Sorting, Single & Multiple Key, Indexing, FIND, SEEK, Rushmore Technology, *PRINTING REPORTS AND LABELS*, FoxPro Report - its creation, features & Utilities, review, Printing Custom Report, grouping & Subgrouping, FoxPro Label - Designing & Printing

UNIT-III

MEMORY VARIABLES, DATE & TIME FUNCTIONS AND KEYBOARD MACROS:

Memory Variables - Creation and Uses, Simple Vs Array, Saving and Restoring Memory Variables, *??/??/???* Commands, Time & Date Functions and Commands, Date Arithmetic, Converting Defining Function Keys Keyboard Macros - Creating and Using, *MATHEMATICAL COMMANDS AND FUNCTIONS* :Arithmetic Operations, Mathematical Functions, Mathematical Commands, Statistical Functions.

UNIT - IV

PROGRAMMING WITH FOXPRO:

Concepts of FoxPro commands file, Modify Commands, Conditioning, Branching and Looping within Program files with Do-While Enddo, If - Endif, Scan-Endscan, For - Endfor, Docode-Endcode, Text - Endtext, Executing Commands from other command files, Macro Substitution

ERROR CONDITIONS AND PROGRAM DEBUGGING AIDS: Common Error Messages Debugging techniques and commands

UNIT-V

MULTIPLE DATA FILES: 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

CUSTOM SCREENS & USER DEFINE FUNCTIONS & OTHER TOOLS:

Create Custom Screen with @, @_GET, @_EDIT, _SAY_GET_READ, Creating Box & Lines, User Define Functions, Custom Screen, Designing and their Use, FoxDoc for documentation

TEXT & REFERENCE BOOKS :

Foxpro Made Simple by R.K. Taxali, BPB Publications

Mastering Foxpro 2.5 BPB Publications

Foxpro 2.6 for Dummies - Pustak Mahal

Foxpro, A. Mansoor, Gaurav Sharma, Pragma Publications.