

# DIPLOMA IN COMPUTER APPLICATION (DCA)

## SCHEME FOR DIPLOMA IN COMPUTER APPLICATION

### SEMESTER -1

Subject Code	Nomenclature of Paper	Maxi. Marks
1 DCA-1 '	INCTL Intro	100
1 DCA- 2	Fundamental of Computer and Information Technology	100
1 DCA- 3	Application Programming in FoxPro	100
1 DCA- 4	PC- Package # (Windows, MS WORD, EXCEL)	100
1 DCA - 5	Computer Lab -1	100

### SEMESTER-II

Subject Code	Nomenclature of Paper	Maxi. Marks
2 DCA-1	INCTL	' 100
2 DCA- 2	Programing in Visual Basic	100
2 DCA- 3	Desk Top Publishing (PageMaker, Corel Draw, Photoshop)	100
2 DCA- 4	Internet and web page designing	100
2DCA - 5	Computer Lab-II	100
2DCA-6	Project Work	100

## Detailed Syllabus

1 DCA-1 :- INCTL Intro

### DCA2 FUNDAMENTALS OF COMPUTERS AND Information TECHNOLOGY

#### UNIT-I

- Introduction to Computer and Information Technology: History of development of computers, *Computer* system concepts, Characteristics, Capabilities and limitations, Types of computers - Analog, Digital, Hybrid, General, Special Purpose, Micro, Mini, Mainframe, Super, Generations of computers, Personal Computer (PCs) - IBM PCs, characteristics, PC/PCXT/PCAT - configurations. Pentium and Newer PCs specifications and main characteristics, Types of PCs - Desktop, Laptop, Notebook, Palmtop, workstations etc. their characteristics.

*Computer Organizations and Working: 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* Devices : Keyboard, Mouse, Trackball, Joystick, Digitizing tablet, Scanners, Digital **Camera**, MICR, OCR, OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen.

Output Devices : Monitors - characteristics and types of monitor - Digital, Analog, Size, Resolution, Refresh Rate, Interlaced/ Non Interlaced, Dot Pitch, Video *Standard* - VGA, SVGA, XGA etc, *Printers* - Daisy wheel, Dot Matrix, Inkjet, User, Line Printer, Plotter, Sound Card and Speakers.

- **Storage** Devices : Storage fundamentals - Primary Vs Secondary, Data **Storage** and **Retrieval methods** - Sequential, **Direct** and **index** Sequential, Various Storage **Devices** - Magnetic **Tape**, **Magnetic Disks**, Cartridge Tape, Data **Drives**, Hard **Disk** Drives, Floppy (Winchester **Disk**), **Disks**, **Optical Disks**, C,D, VCD, CD-R, CD-RW, **Zip** Drive.

#### UNIT-III

Computer Software's: Need, Types of software - System software, Application **software**, **System Software**.- Operating System, Utility **Program**, Programming languages, **Assemblers**, **Compilers** and Interpreter.

- Operating Systems : Functions, Types-Batch, Single, Multiprogramming, **Multiprocessing**, Programming languages - Machine, Assembly, High Level, 4GL, their merits and **demerits**.

Application Software : Word-processing, Spreadsheet, Presentation Graphics, Data **Base Management** Software, characteristics. Uses and examples and area of applications of **each** of them

Number System : Data representation **In** Computers, Number System of computers- **Binary**, Octal, Hex - Representation & their conversion. Coding System - ASCII, BCD, EBCDIC etc,

## UNIT-IV

Computer Virus : Virus working principles, Types of viruses, Virus detection and **prevention**, Viruses on network.

Data Communication and Networks **Analog** and Digital Signals, Modulations - **Amplitude Modular (AM)**, Frequency Modulation (FM), Phase Modulation (PM), Communication Process, **Direction of** Transmissions Flow - **Simplex**, Half **Duplex**, **Full Duplex**, Communication software, Communication Protocols, Communication Channels - Twisted, Coaxial, **Fiber; Optic, Serial and Parallel** Communication, Modem - Working and characteristics, Types of Connections - **Dialup, Leased Lines** ISDN, Types of Network - LAN, WAN, MAN etc., Topologies of LAN - Ring, Bus, Star, Mesh and Tree topologies, Components of LAN - Media, NIC, No, Bridges, HUB, Routers *Repeater* and Gateways, Use of Communication in daily life.

## UNIT-V

- 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, CIS, 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., Executable **V/s** Non executable files in DOS,

### Text & Reference Books:-

1. Learning Window 98 step by step by Rajeev Mathur, BPB Publication.
2. Learning Word 97 for Windows by Rajeev Mathur, BPB Publication.
3. Learning Excel 97 for Windows by Rajeev Mathur. BPB Publication.
4. A First Course in Computers by Sanjay Saxena, Vikas Publishing House New Delhi,
5. Microsoft office 97 by Gini Courier and Annette Marquis, BTB Publications.
6. Office 97 Interactive Course by Greg Perry, Techmedia.
7. Microsoft Office 2000 by A. Mansoor by Pragma Publications.

## IDC A - 3 -Application Programming in FOXPRO

### 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 **Optims**)**Modify STRUCTURE. MEMOWELD 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 & Sub grouping. 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 MemoryVariables,,?/??/??? 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

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**PROGRAMMING WITH FOXPRO:** Concepts of FoxPro commands file. Modify Commands .Conditioning , Branching and Looping within Program files with Do-While Eriddo, If - Endif, Scan-Endscan, For - Endfor, Dcase-Endcase, Text - Endtext, Executing Commands from other command files. Macro Substitution ERROR CONDITIONS AND PROGRAM DEBUGGING AIDS.-Common Error Massages 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, @JEDIT, 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 RJC.Taxaii. BPB Publications  
Mastering FoxPro 2.5 BPB Publications  
FoxPro 2.6 for Dummies - Pustak Mahal  
FoxPro, A. Mansoor, Gaurav Sharma, Pragya Publications,

## IDCA 4 PC PACKAGES (WINDOWS 95/98, WORD, EXCEL)

### UNIT-I

Windows **95/98** : Windows concepts, Features, Windows Structure, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin., Windows **Accessories** : Calculator, Notepad, Paint, WordPad, Character map., Windows Explorer : Creating folders and other Explorer facilities., **Entertainment**: CD Player, DVD Player, Media Player, Sound Recorder, Volume Control., **Managing Hardware & Software** - Installation of Hardware & Software, Using Scanner., **Communication**: Dial-up Networking, Hyper Terminal, Phone Dialer, **Sharing** Information between **Programs**- Understanding OLE, Embed/Linked Using Cut and Paste, Embed/ Link Using Insert Object, Manage Embedded/Linked Object

### UNIT-II

Word **Processing : MS-Word** : introduction to Word Processing, Introduction to MS Word : features, Creating, Saving and Opening documents In Word, interface, Toolbars, Ruler, Menus, Keyboard Shortcut., **Editing a Document** - Moving, Scrolling in a document, Opening Multi document windows, Editing Text Selecting, Inserting, deleting, moving text., Previewing **documents**, **Printing documents** - Print a document from the standard toolbar, Print a document from the menu, Shrinking a document to fit a page, Reduce the number of pages by one, **Formatting Documents** : Paragraph format, Aligning Text and Paragraph, Borders and shading, headers and footers, multiple columns.

### UNIT-III

Word **Processing : Advanced** Features of **MS-Word** : Find and Replace, Checking the grammar and spelling, Formatting via find and replace, Using the Thesaurus, Using Auto Correct, Auto Complete and Auto Text, word count, Hyphenating, M<J merge, mailing labels Wizards and Templates, Handling Graphics, Table Insert and Modification, Converting of Tables, Converting a word document into various formats like ~ Text, Rich Text Format, WordPerfect, HTML etc.

### UNIT-IV

**Worksheet: MS-Excel**: Worksheet basics, Creating worksheet, entering data into worksheet, heading information, data, text, dates, alphanumeric, values, saving & quitting worksheet, Opening and moving around in an existing worksheet, Toolbars and Menus, keyboard shortcuts, Working with single and multiple workbook - coping, renaming, moving between workbooks., **Working with formulas & cell referencing**- Auto sum, Coping formulas, Absolute & Relative addressing, **Working with ranges** - creating, editing and selecting ranges, Formatting **of worksheet** - Auto format, changing-alignment, character styles, column width, date format, borders & colors, currency sign

### UNIT-V

Worksheet: **MS-Excel**: Previewing & **Printing worksheet** - Page setting, Print titles, Adjusting margins, Page break, headers and footers, **Graphs and charts** \* using wizards, various charts type, formatting grid lines & legends, previewing & printing charts, **Database** - creation, sorting, query & filtering a database, **Functions** - Database, Data and **Time**, Maths & Trigonometry, Statistical, Text and Logical functions, Creating and Using Macros, Multiple worksheets - concepts, Creating and Using.

**Text & Reference Books:-**

1. Learning Window 98 stp by step by Rajeev Mathur, BPB Publication.
2. Learning Word 97 for Windows by Rajeev Mathur, BPB Publication.
3. Learning Excel 97 for Windows by Rajeev Mathur, BPB Publication.
4. A First Course in Computers by Sanjay Saxena, Vikas Publishing House New Delhi.
5. Microsoft office 97 by Gini Courier and Annette Marquis, BTB Publications.
6. Office 97 Interactive Course by Greg Perry, Techmedia.
7. Microsoft Office 2000 by A. Mansoor by Pragya Publications.