

Pt. Sundarlal Sharma (Open) University, Chhattisgarh, Bilaspur

PROGRAMME GUIDE

for

Computer Science and Application Course

Diploma in Computer Application

(DCA)



DEPARTMENT OF COMPUTER SCIENCE AND APPLICATION (DCSA)

PT. SUNDARLAL SHARMA (OPEN) UNIVERSITY, CHHATTISGARH, BILASPUR

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Programme Co-Ordinator (Computer Science) - 07752-261051

MESSAGE FROM PROGRAMME COORDINATOR

Dear Student,

I welcome you to the Computer Applications Programme. In integrated mode, you will receive support from PSSOU through network of our Regional and Study Centers. You will be attached to a Study Centre which will offer counseling sessions as per university schedule (Both Theory and Practical). You will receive printed course material in accordance with our dispatch schedule.

You need to have a minimum of 75% attendance for practical counseling sessions to appear for Term End Practical Examinations. You need to submit requisite assignments before the due dates to become eligible to appear for Term End Theory Examinations.

Also, students are requested to take note of the following:

“The University sends study materials and assignments, wherever prescribed, to the students through Regional/Study Centre and if a student does not receive the same for any reason whatsoever, the University shall not be held responsible for that u can regularly contact with Study Centre.” “In case a student wants to have assignments, s/he can obtain a copy of the same from the Study Centre/Regional Centre/Programme Co-ordinator.

“The students are specifically instructed to send Examination Forms to Controller of Examination or as per university instruction. and to no other place and they are also advised to submit the Registration/Re-registration Forms only at the respective Regional Centers/Study Centre or as per instruction given by the university time to time and nowhere else. If any student sends the Registration/Re-registration Forms, Examination Forms to wrong places and thereby misses the scheduled date and consequently year, s/he will have no claim on the University for regularization.”

Programme Guide is a very important document for you. Preserve it until you successfully complete the programme.

I wish you success in pursuing computer applications programme.

Wishing you all the best,

Smt. Pushpa Mahant

Contact us:

info@pssou.ac.in

Phone No. 07752-261051

DCA Examination Scheme

Course Code	Course Title	Continuous Evaluation		Term-end Examination						Total	
				Theory			Practical				
		Max.	Min.	Duration	Max.	Min.	Duration	Max.	Min.	Max.	Min.
DCA-01	Fundamentals of Computers and Information Technology	30	10	3 Hours	70	30	-	-	-	100	40
DCA-02	Application Programming in Foxpro	30	10	3 Hours	70	30	-	-	-	100	40
DCA-03	PC Packages (Windows, Word, Excel,)	30	10	3 Hours	70	30	-	-	-	100	40
DCA-04	GUI Programming in visual Basic	30	10	3 Hours	70	30	-	-	-	100	40
DCA-05	Desk Top Publishing (Page Maker, PowerPoint)	30	10	3 Hours	70	30	-	-	-	100	40
DCA-06	Internet and Web Page Designing	30	10	3 Hours	70	30				100	40
DCA-07	Computer Lab – I	----	----	----	----	----	3 Hours	100	40	100	40
DCA-08	Computer Lab – II	----	----	----	----	----	3 Hours	100	40	100	40
DCA-09	Practical Work	Report – 50			Viva -50			100	40	100	40
										900	360

Note:

1. For passing the examination minimum 40% marks must be scored in each Paper head individually.
2. For passing the DCA examination, the aggregate marks must be at least 40% in theory & Continuous Evaluation and practical papers. On successful completion of the DCA course, as per "examination scheme" shall be made as follows.
3. The examinees who have obtained 60% or more marks in the total marks shall be placed in "First Division".
4. The examinees who have obtained less than 60% marks and more than 45% marks shall be placed in "Second Division"

Detailed Syllabus of DCA

DCA01 FUNDAMENTALS OF COMPUTER AND INFORMATION TECHNOLOGY

UNIT - I Introduction to Computer and Information Technology

- History of development of computer
- Computer system concept
- Characteristics
- Capabilities and limitation
- 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 PC/Es-Desktop, Laptop, Notebook, Palmtop, workstations etc their characteristics.
- Computer Organization and Working
- Basic components of, computer - control unit, ALU Input/Output function and characteristics, memory - RAM, ROM, EPROM and other types of memory.

UNIT - II INPUT DEVICES

- Keyboard, Mouse, Trackball, Joystick, Digitizing table, 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, Laser, Line Printer.
- Plotter
- Sound Card and Speakers.
- 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, Need, Types of Softwares-System Software. Application Software.
- System Software-Operating System, Utility Programming languages, Assemblers, Compilers and Interpreter.
- Operating Systems- Function, Types-Batch, Single, Multi programming, Multiprocessing.
- Programming language-Machine, Assembly, High Level, 4 GL 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-Binary, Octal, Hexa-Representation & their conversion. Coding system = ASCII, BDC, EBCDIC etc.

UNIT - IV

- Computer Virus
- Virus working principals.
- Types of viruses.
- Virus detection and prevention
- Viruses on network
- Data Communication and Networks
- Analog and Digital Signals
- Modulations - Amplitude Modulation (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- Dial-up, 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, NOs, Bridges, HUB, Routers, Repeater and Gateways.
- Use of Communication in daily life.

UNIT-V

- Computer Virus, 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.
- DISKCOMP, DOSKEY, TREE, MOVE, LABEL, FORMAT, SORT DISK, BACKUP, EDIT, MODE, ATTRIB, HELP, SYS ETC.
- Executable V/s Non executable files in DOS.

Text & Reference Books :

Introduction to Computer and Information Technology by Anurag Seetha, Ram Prasad & Sons, Bhopal.

- Computer Today by S.K.B. Basandra, Galgotia Publication.
- Fundamentals of Information Technology by Alexis Leon & Mathews Leon, Vikas Publishinh House, Delhi DOS Quick reference by Rajeev Mathur, Galgotia publications.

DCA - 02 APPLICATION PROGRAMMING IN FOXPRO (2.5/2.6)

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 Operating 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 & disadvantage of Sort.
- Indexing Vs Sorting. Single & Multiple Key
- Indexing, FIND, SEEK, Rushmore Technology.

UNIT - III

Printing Reports and Labels

- Saving and Restoring Memory Variables.
- ?/??/??? Commands
- Time & Date Function and Commands, Date Arithmetic.
- Converting Defining Function , Keys
- Keyboard Macros - Creating and Using
- Mathematical Commands and Function
- Arithmetic Operations, Mathematical Function, Mathematical Commands, Statistical Function.

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, Dohow - Endhow, Text - Endtext,
- Executing Commands from other commands files, macro, substitution.
- Error conditions and program Debugging Aids
- Commands Error Messages
- Debugging Techniques and commands

UNIT - V

MULTIPLE DATA FILES

- Concepts Of Multiple Database Files - Using Multiple Database File
- 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 Function, Custom Screen designing and their Use, FoxDoc For documentation.

Text & Reference Books:

- Foxpro Made Simple by r.k. taxali, BPB Publication
- Mastering Foxpro 2.5 BPB Publication
- Foxpro 2.6 For Dummies - Pustak Mahal

DCA - 03 PC PACKAGES (WINDOWS 95/ 98 WORD EXCEL)

UNIT - I

WINDOWS 95/98

- Windows concept, features, windows structure, desktop taskbar, start menu, my computer, recycle Bin.
- Windows Accessories - calculator, Notepad, Paint, wordpad, character map.
- Windows Explorer - CD Player. DVA player, media player, sound Recorder, Volume Control
- Entertainment - CD Player. DVA Player , media Player, Sound Recorder, Volume, Using Scanner.
- Communication - Dail Networking, Hyper terminal , Phone Dialer.
- Sharing Information between programs
 - Understanding OLE
 - Embed / Link Using Cut and paste
 - Embed/ Link Using Insert Object
 - Manager Embedded/ Linked Object

UNIT - II

Word Processing : MS Word

- Introduction to Word Processing, Introduction to MS word : feature, Creating, Saving and Opening documents in word, Interface, Tollbars Ruler, Menus Keyboard Shortcut.
- Editing a Document - Moving, Scrolling in a document, Operating Multi Document Windows,
Editing Text - Selecting, Inserting, Deleting, Moving Text Previewing Documents, Printing documents - Print a document from the standard toolbar, print a documents from the menu, shrinking a document to fit a page, reduce the number of pages by one.
- formatting documents : paragraph formats, 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, Mail merge, Mailing labels Wizards and Templates, Handling Graphics. Table Insert and Modification, Conversion of Tables, Converting a Word document into verious formats like Text Rich Text Format, word Perfect, 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, adding and deleting, coping entries and moving between workbooks.
- working with formulas & formulas & cell referencing
Auto Sum, Coping formulas, absolute & relative addressing
- working with ranges - creating, editing and selecting ranges.
- formatting or worksheet - auto format, changing - alignment, character styles, column width, data format, borders & colours, 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 Wizard, various charts type, formatting grid lines & legends, previewing & printing charts.
- Function - Database, Date and Time, Math's & Trigonometry, Statistical, Text and Logical function

Text & Reference books

- Learning Window 98 step by rajeev mathur, BPB Publication
- Learning Word 97 for Windows by rajeev mathur, BPB Publication
- Learning Excel 97 for Windows by rajeev mathur, BPB Publication
- A First Course in computers by sanjay saxena, vikas Publication House Pvt. Ltd. New Delhi
- Microsoft Office 97 by gini courter & annette Marquis, BPB Publication
- Office 97 Interactive Coures by Greg perry, Techmedia

DCA-04 GUI PROGRAMMING VISUAL BASIC

UNIT - I

Integrated to Development Environment of Visual basics

- Integrated Development Environment of VB, User Interface designing, Basics of Event driven Programming.
- From - Designing, Showing & Hiding

UNIT - II

VISUAL BASIC LANGUAGE

- Data Types, Variables & Constant, Arrays, Dynamic Array, array as Function, Collections, Procedures, arguments passing, Functions Return Values.
- Control Flow Statements : If - then, if - then - else, select case, looping statement : Do - Loop, For - next, While - Wend, Nested Control Structure, Exit Stmt.

UNIT - III

BUILDING BLOCKS OF VISUAL BASIC

- Basic Active X Control & Their use - Text box, combo box, Scroll bar, Slider & Fire Controls.
- Graphics control, image Handling in VB, Coordinate System, Graphics Methods - Text Drawing, Lines & Shape, Filling Shapes, Gridmethods.

UNIT - IV

COMPUTER OF VISUAL BASIC

- Menu editor : Pull - down and pop - up menus.
- Multiple Document interface - parent & child Forms & Methods.
- Error handling : Types of Errors, Error handling methods and functions

UNIT - V

DATABASE PROGRAMMING WITH VB

- Database Programming with VB - data- Control - Methods, Properties, connectivity with database.

Text & Reference Books:

- Beginner's Guide to Visual Basic 6 By Reeta Sahoo & G.B. Sahoo, Khanna Publishing House.
- Beginner's Visual Basic 6 By Peter Wright, Shroff Publishers.

DCA - 05 DESK TOP PUBLISHING (PageMaker 6.5 & POWER POINT)

UNIT - I

Introduction to DTP: Definition, Characteristics, use of DTP in publication & Newspaper Printing, Various DTP Software, Bits cream & Vector Graphics, Printers - Dot Matrix, Inkjet and laser, Introduction to offset printing Technology, Typography - History, Elements, Selection Of Fonts, Points, use of blank spaces and dashes, white Spaces, Various Breaks, Good Designing and Easy Readability. Different measurements used in DTP printing.

UNIT - II

Introduction to Adobe page maker, why PageMaker Popular in Publication, Toolbox, styles, Menus, Templates, Different Page Layouts, Importing Text, Auto Flow, Text Frames & Text books, Story Editor & Layout View, Spell Check & Replace, Attribute Settings, Alignments, Grids and Guides etc., working with text and graphics, tab setting, columns & getters

UNIT - III

Import & Export of files, placing Texts & Graphics, Styles & Palettes, Picture Editing, Using Colours, Buttets, Masking, Fonts : Postscript Fonts, True Type Fonts, bit Stream & Vector Fonts., Column Balancing Breaks., Windows & Orphan Lines, Reverse Text Text Wrapping, Revert Command, Drop Caps, Printing, Options, Control Palette

UNIT - IV

Clips & Image Files, Key Board Controls, OLE & Embedding, linking Plugging, Mathematic Equation, table Editor, Printing Options, Filters, Layers, PDF Files, Frame Option, Headers & Footers.

UNIT - V

Presentation Graphics : MS Power Point, Features and Various Versions, Creating Presentation using Slide Master and template in various colour schemes., working with different views and menus of power point., working with slides - make new slide, move copy, delete, duplicate lay outing of slide, zoom in or out of Slide, Editing and Formating text : Alignment, Editing, inserting, deleting, selecting, formatting, of text find and replace text., Bullets, Footer, Paragraph Formatting, Spell Checking, Printing Presentation - Print Slides, notes handouts and outlines., inserting Object - Drawing and Inserting Object Using Cliparts, Pictures and Charts. Slide Sorter Transition effects and other animation effects. Presenting the show making sand alone presentation, pack and go wizards.

Text & Reference Books:

- PageMaker 6.5 complete by G.C. jain, Tec media
- Microsoft office 97 by Gini Courtier & Marquis, BPB Publications.
- office 97 Interactive Course by Greg. Perry, Tec media

DCA - 06 INTERNET AND WEB PAGE DESIGNING

UNIT - I

INTERNET

- Evolution, Protocols, Interface Concepts, Internet Growth of Internet, ISP, Connectivity -dail - up, leased line, VSAT etc., URLs, Domain

E - Mail

- concepts, POP and WEB Based E - mail, merits, address, Basics of sending & Receiving, E - mail Protocols, Mailing List, Free E - mail Services.

UNIT - II

FILE TRANSFER PROTOCOLS, & CHATTING

- Data Transmission Protocols, Client/ Server architecture & its Characteristic, FTC & its Usages, Telnet Concept, Remote Logging, Protocols, Terminal Emulation, Massage Board, Ingnetnet Chatting Voice Chat, Text etc.

UNIT - III

WORD WIDE WEB (WWW)

- History, Working, web brower's , Its Function, concepts of search engines, Searching the Web, HTTP, URLs, Web Servers, Web Protocols.

UNIT - IV

Web Publishing : Concepts Domain name Registration,

Space on Host Server for Web site, HTML, Desing tools, HTML editors, Image editors, Issues in web site creations & Maintenance, FTP software for upload web site.

UNIT - V

HTML

- Concepts of Hypertext, Versions of HTML, Elements of HTML syntax Head & Body Sections, Building HTML documents, Inserting texts, Image, Hyperlinks, Backgrounds and Colour controls, Different HTML tags.

Text of Reference Books :

- **O level Module - M 1.2 - Internet & Web page designing** by V.K. Jain - BPB Publications.
- **Internet for Everyone** - Alexis Leon and Mathews Leon, Vikas Publishing House Pvt. Ltd. New Delhi
- **A Beginner's Guide to HTML available at -** [http://www.ncsa.ncsa.uiuc.edu/General/Internet/www/HTML/Primar All.html](http://www.ncsa.ncsa.uiuc.edu/General/Internet/www/HTML/Primar>All.html).
