

## **DETAILED SYLLABUS**

### **DIPLOMA IN COMPUTER APPLICATIONS (DCA)**



**Department of Computer Applications & Science**

**Makhanlal Chaturvedi National University of  
Journalism and Communication, Bhopal**

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### Diploma in Computer Applications (DCA) SEMESTER – I

S. No.	Paper Numerical Unique	Class & Papers	Paper Name/Subject	Theory paper		Practical Exams		Internal Evaluation		Total
				Max.	Min.	Max.	Min.	Max.	Min.	
1.	7805	1DCA1	Computers Fundamentals	80	32	-	-	20	08	100
2.	7806	1DCA2	PC Packages (Word, Excel, Powerpoint)	80	32	25	10	20	08	125
<b>Elective-I (Any one)</b>										
3.	7807	1DCA3 (A)	Database Using Foxpro	80	32	25	10	20	08	125
4.	7808	1DCA3 (B)	Database Using MS-Access	80	32	25	10	20	08	125

### Diploma in Computer Applications (DCA) SEMESTER – II

S. No.	Paper Numerical Unique	Class & Papers	Paper Name/Subject	Theory paper		Practical Exams		Internal Evaluation		Total
				Max.	Min.	Max.	Min.	Max.	Min.	
1.	7905	2DCA1	IT Trends	80	32	-	-	20	08	100
2.	7906	2DCA2	Internet and E-Commerce	80	32	25	10	20	08	125
<b>Elective-I (Any one)</b>										
3.	7907	2DCA3 (A)	Multimedia with Corel Draw	80	32	25	10	20	08	125
4.	7908	2DCA3 (B)	DTP with PageMaker & Photoshop	80	32	25	10	20	08	125

## SEMESTER-I

# 1DCA1 - COMPUTERS FUNDAMENTALS

## UNIT-I

Brief history of development of computers, Computer system concepts, Computer system characteristics, Basic components of a computer system - Control unit, ALU, Input/Output, semiconductor Memory functions and characteristics, memory - RAM, ROM, EPROM, PROM and other types of memory, Capabilities and limitations, Generations of computers, Analog & Digital & Hybrid Computers, General & Special Purpose computers, Types of computers- Micro, Mini, Mainframe and Supercomputers, Characteristics and area of Uses.

Personal Computer (PCs-evolution of PCs, configurations of PCs, Pentium and Newer, PCs specifications and main characteristics, Types of PCs- Desktop, Laptop, Notebook, Palmtop, PDA etc.

## UNIT-II

Input Devices: Keyboard, Mouse, Trackball, Joystick, Scanners, Digitizing tablet, Digital Camera, MICR, OCR, OMR, Light pen, Barcode & Barcode Reader, Quick Response Code (QR Code), Voice Recognition, Touch Screen.

**Output Devices: Monitors-** Characteristics and types of monitor, Size, Digital, Analog, Resolution, Refresh Rate, Interlaced / Non-Interlaced, Dot Pitch, Video Standard - VGA, SVGA, XGA etc. **Printers and its Types** Impact and Non-Impact printer, Dot Matrix, Inkjet, Laser, Plotter, 3D Printers, Sound Card and Speakers.

### UNIT-III

Storage Fundamentals - Primary Vs Secondary Data Storage and Retrieval Methods - Sequential, Direct And Index Sequential, Various Storage Devices - Magnetic Disks, Hard Disk Drives, Floppy, Disks, Zip Drive, Optical Disks, CD, VCD, CD-R, CD-RW, DVD, DVD-RW, Video Disk, Blue Ray Disc, flash drives SD/MMC Memory cards, Solid-State Drive (SSD), Physical structure of floppy & hard disk, drive naming conventions in PC.

## UNIT-IV

Software and Its Need, Types of Software- System Software, Application Software, System Software- Operating System- definition & function, Device Drivers & Utility Programs, Introduction & Features of DOS, Windows, Programming Languages- Machine, Assembly, High Level, 4GL, their Merits and Demerits, Uses of Assemblers, Compilers and Interpreter.

Application Software and its Types- Word Processing, Spreadsheet, Presentation Graphics, Data Base Management, Desktop Publishing, communication, Educational, Graphics & Multimedia, Business Accounting, MIS, Gaming and ERP Software etc.

Computer coding system-ASCII, ISCII and Unicode, Number system of computers-Binary, Octal, Decimal, Hexadecimal their conversion

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## UNIT-V

Use of communication and IT, Communication Process, Component of communication- sender, receiver, transmission medium & protocol, Communication types-Simplex, Half Duplex, Full Duplex, Communication Channels-Twisted, Coaxial, Fiber Optic, Modem-Working and characteristics, Types of network-client/server and peer-to-peer networks, Types of connections-Dialup, Leased Lines, ISDN, DSL, RF, Broad band uses, advantages & disadvantages, Types of Network-LAN, WAN, MAN, Internet, VPN etc., Topologies of LAN-Ring, Bus, Star, Mesh and Tree topologies structure, uses, advantages & disadvantages, Components of LAN-Media, NIC, NOS, Network devices- Bridges, HUB, Routers, Repeater, Gateways uses, advantages & disadvantages.

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### Reference Books:

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- Fundamentals of Computers, Paperback by Reema Thareja, Oxford University Press.
- Computer Fundamentals - 6th Edition by Pradeep K. Sinha, Priti Sinha, BPB Publications.
- Computers Today, A. Ravichandran, Khanna Book Publishing.
- Handbook of Computer Fundamentals by Nasib Singh Gill, Khanna Publishers.

M. Maheshwari

विभागाध्यक्ष  
कम्प्यूटर अनुप्रयोग विभाग

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## SEMESTER-I

### 1DCA2 - PC PACKAGES (WORD, EXCEL, POWERPOINT)

#### UNIT-I

Operating System (Windows 8.1): Overview of Windows Operating System, Basic Operations-How to start a computer, login, logoff, hibernate, shutdown etc, Personalizing Desktop-Desktop Background, Icon, Screen Saver, Themes, Setting date & time, Task bar, Files & Folders, Create, Copy, Rename, Moving & Delete Files & Folders, Create & Using Shortcuts, Recycle Bin.

Accessories-MS Paint, Notepad, WordPad, Windows Media Player, Calculator, Games, Math Input Panel, Language Settings-How to set other languages on computer, Using Control Panel to add, remove or configuring new or existing devices and software programmes and fonts, Enhance the performance of computer, Using Disk Clean-up-Using Disk Defragmenter, Using Windows Update, Protecting your computer against viruses.

#### UNIT-II

MS Word Basics: Introduction to MS Office (2013), Introduction to MS Word, Features & area of use. Various versions of MS Office and their requirements, Working with MS Word, Menus & Commands, Ribbon, Toolbars & Buttons, Shortcut Menus, Wizards & Templates, Creating a New Document, Different Page Views and layouts, Applying various Text Enhancements- Fonts, Styles, Text Attributes, Formatting Your Text and Documents: Auto format, Paragraph and Page Formatting, Line spacing, Margins, Borders and Shading, Tabs and Indents, Text Editing using various features, Bullets, Numbering, Working with Styles, Printing & various print options, Working with Headers and Footers, Tables: Creating a simple table, Creating a table using the table menu, Entering and editing text in a table.

#### UNIT-III

Advanced Features of MSWord-Spell Check, Thesaurus, Find & Replace, Files, Auto texts, Symbols etc., Working with Columns, Tabs & Indents, Margins & Space management in Document, Page, Column & Section Breaks, Adding References, Using footnote and endnote in documents, creating automatic Table of Contents,

Graphics: Importing graphics, Clipart, Insert picture, Using Clip Art, Shapes and SmartArt in documents, using drawing features, drawing objects, text in drawing. Taking and inserting Screenshots in Documents, Using WordArt and Drop Cap features in documents.

Mail Merge in MS Word, Mail Merge concept, Envelops & Mailing Labels, Importing and exporting to and from various formats

#### UNIT-IV

MS Excel Spreadsheet Basics & features, concepts of Workbook & Worksheets, Getting started, Creating a new worksheet, Using Wizards, Various Data Types, Selecting cells, Entering and editing text, Entering and editing Numbers, Removing & Resizing of Columns & Rows, entering and editing Formulas, Referencing cells, moving cells, copying cells, sorting cell data, inserting rows, inserting columns, Inserting cells,

Deleting parts of a worksheet, clearing parts of a worksheet, Different Views of Worksheets.

Formatting: Page setup, Cell Formatting, changing column widths and Row heights, auto format, changing font sizes and Attributes, centering text across columns, using border buttons and Commands, changing colors and shading, hiding rows and columns, Working with Data & Ranges, Column Freezing, Labels, Hiding, Splitting, merging etc.

Charts: Chart parts and terminology, chart wizard, different types of charts, printing charts, deleting charts, Printing of Workbook & Worksheets with various options

## UNIT-V

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, shapes, screenshots, SmartArt and charts in presentation, Sounds and Movies to a Slide; Working with PowerPoint Objects, Designing & Presentation of a Slide Show, change Slide backgrounds, Change Slide Size, Using Animation and Transitions in presentation, Advanced Slide options- Manual & Automatic, Printing Presentations, Notes, Handouts with print options, Slide Master, Handout Master and Notes Master.

### Reference Books:

- Introducing Windows 8.1 for IT Professionals Technical Overview, ED BOTT, Microsoft Press e-book download from [https://blogs.msdn.microsoft.com/microsoft\\_press/2013/10/14/free-ebook-introducing-windows-8-1-for-it-professionals/](https://blogs.msdn.microsoft.com/microsoft_press/2013/10/14/free-ebook-introducing-windows-8-1-for-it-professionals/)
- Windows 8.1. by Pert Mason, Bookboon Download online at <http://bookboon.com/en/windows-8-1-english-ebook>
- Windows 8.1 In Depth, by Knittel, PEARSON
- Windows 8.1 Plain and Simple by Joli Ballew, Nancy Muir, PHI
- MCSA Microsoft Windows 8.1 Complete Study Guide: Exams 70-687, 70-688, Jeffrey R. Shapiro, Darril Gibson, Wiley India
- Windows 8.1 For Dummies By Andy Rathbone, Wiley India
- Office 2013 in Simple Steps, Kogent Learning Solutions Inc., Wiley India
- Microsoft Office 2013 Bible, Lisa A. Bucki, John Walkenbach, Faithe Wempen, Michael Alexander, Dick Kusleika, Wiley India,
- Microsoft Office: 2013 Edition Inside Out, Bott Ed, Siechert, Carl, Prentice Hall Of India (PHI)
- Microsoft Office Professional 2013 Step By Step, Melton, Beth, Dodge, Mark, Swinford, Echo, Couch, Andrew, Legault, Eric, Schorr, Ben M., Rusen, Ciprian Adrian, Prentice Hall of India (PHI)
- Learning Microsoft Office 2013, Paperback by Ramesh Bangia, Khanna Book Publishing
- Microsoft Office 2013 : Digital Classroom, Paperback by Walter Holland, ACI Creative Team, WILEY

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## SEMESTER-I

## 1DCA3(B) - DATABASE USING MS ACCESS

**(ELECTIVE-I)**

## UNIT-I

Introduction to database- What is a Database, Why use a Relational Database, concept of primary key relationship, Introduction to MS Access (Objects, Navigation)

## UNIT-II

Create a Table in MS Access- Data Types, Field Properties, Fields: names, types, properties--default values, format, caption, validation rules Data Entry, Add record, delete record and edit text, Sort, find/replace, filter/select, rearrange columns, freeze columns. Edit a Tables- copy, delete, import, modify table structure, find, replace

### UNIT-III

Add a relationship, set a rule for Referential Integrity, change the join type, delete a relationship, save relationship Queries & Filter - difference between queries and filter, filter using multiple fields, Create Query with one table, find record with select query, find duplicate record with query, find unmatched record with query, run query, save and change query

## UNIT-IV

Introduction to Forms Types of Basic Forms: Columnar, Tabular, Datasheet, Main/Subforms, add headers and footers, add fields to form, add text to form use label option button, check box, combo box, list box Forms Wizard, Create Template

## UNIT-V

Introduction to Reports, Types of Basic Reports: Single Column, Tabular Report Groups/Total, single table report, multi table report preview report print report, Creating Reports and Labels, Wizard

**Reference Books:**

- MS Office XP complete BPB publication ISBN 8 1-7656-564-4.
- MS Access fast & easy by Faithe Wempen, PHI

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