DETAILED SYLLABUS

DIPLOMA IN COMPUTER APPLICATIONS (DCA)

Department of Computer Applications & Science

Makhanlal Chaturvedi National University of Journalism and Communication, Bhopal

B-38 Vikas Bhawan, Opp Dak Bhawan, Press Complex, Zone-1 M.P. Nagar, Bhopal – 462011
mcu.ac.in
### Diploma in Computer Applications (DCA) SEMESTER – I

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Paper Numerical Unique</th>
<th>Class &amp; Papers</th>
<th>Paper Name/Subject</th>
<th>Theory paper</th>
<th>Practical Exams</th>
<th>Internal Evaluation</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>7805</td>
<td>1DCA1</td>
<td>Computers Fundamentals</td>
<td>80</td>
<td>32</td>
<td>-</td>
<td>-</td>
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<tr>
<td>2.</td>
<td>7806</td>
<td>1DCA2</td>
<td>PC Packages (Word, Excel, Powerpoint)</td>
<td>80</td>
<td>32</td>
<td>25</td>
<td>10</td>
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</tbody>
</table>

**Elective-I (Any one)**

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<tbody>
<tr>
<td>3.</td>
<td>7807</td>
<td>1DCA3 (A)</td>
<td>Database Using Foxpro</td>
<td>80</td>
<td>32</td>
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<td>10</td>
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<tr>
<td>4.</td>
<td>7808</td>
<td>1DCA3 (B)</td>
<td>Database Using MS-Access</td>
<td>80</td>
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### Diploma in Computer Applications (DCA) SEMESTER – II

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<th>Theory paper</th>
<th>Practical Exams</th>
<th>Internal Evaluation</th>
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<tr>
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<td>2DCA2</td>
<td>Internet and E-Commerce</td>
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**Elective-I (Any one)**

<table>
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<tr>
<td>3.</td>
<td>7907</td>
<td>2DCA3 (A)</td>
<td>Multimedia with Corel Draw</td>
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<td>4.</td>
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### SCHEME FOR
DIPLOMA IN COMPUTER APPLICATION
(DCA)

#### SEMESTER -I

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Scheme</th>
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<th>Practical Exams</th>
<th>Internal Evaluation</th>
<th>Total Marks</th>
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<td>1DCA2</td>
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<td>3</td>
<td>1 80</td>
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<td>25</td>
<td>125</td>
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<tr>
<td>1DCA3(A) OR 1DCA3(B)</td>
<td>Elective - I</td>
<td>3</td>
<td>1 80</td>
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<td>125</td>
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<td></td>
<td>Database Using FoxPro</td>
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<tr>
<td></td>
<td>Database Using MS Access</td>
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<tr>
<td><strong>Total</strong></td>
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(L - Lecture, P-Practical)

#### SEMESTER -II

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Scheme</th>
<th>Theory Paper</th>
<th>Practical Exams</th>
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<tbody>
<tr>
<td>2DCA1</td>
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<td>80</td>
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<td></td>
<td>25</td>
<td>125</td>
</tr>
<tr>
<td>2DCA3(A) OR 2DCA3(B)</td>
<td>Elective - II</td>
<td>3</td>
<td>1 80</td>
<td></td>
<td>25</td>
<td>125</td>
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<td></td>
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<td></td>
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<td></td>
<td><strong>350</strong></td>
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</table>

General Instructions:

1. For passing the subject examination minimum 40% marks must be separately scored in Theory Paper, Practical Exams and Internal Evaluation in the subject.

2. For passing the semester, minimum aggregate marks must be 45% in the semester.
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.


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


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

Reference Books:

• Fundamentals of Computers, Paperback by Reema Thareja, Oxford University Press.


• Computers Today, A. Ravichandran, Khanna Book Publishing.

SEMESTER-I

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

UNIT-I


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


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,


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:

- 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, FaitheWempen, Michael Alexander, Dick Kusleika, Wiley India,
- 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
Practical Questions:

Q. Load Microsoft Word & type the following text and do the following tasks:

Television

How does television affect our lives? It can be very helpful to people who carefully choose the shows that they watch. Television can increase our knowledge of the outside world, there are high quality programmers that helps us to understand many fields of study, science, medicine, the arts and so on. Moreover, television benefits very old people, who can’t often leave the house as well as patients in hospitals. It also offers non native speakers the advantage of daily informal language practice. They can increase their vocabulary and practice listening.

On the other hand, there are several serious disadvantages of television. Of course, it provides us with a pleasant way to relax and spend our free time, but in some countries, people watch the ‘blood tube’ for an average of six hours or more a day. Many children stare at a television screen for more hours each day than they do anything else including studying & sleeping. It’s clear that the tube has a powerful influence on their lives and that its influence if often negative.

1. Save your work as “Television” on Desktop.
2. Set the heading : Font Times New Roman Size 18, align centre & Bold,
3. Set the remaining text with font Calibri & size 12
4. Underline the heading & change all letters to uppercase
5. Run the spell checker.
6. Apply indentation to the first line of the second paragraph
7. Change the line spacing of the paragraphs to 1.5.
8. Replace the word “screen” with monitor.
9. Apply a 6pt width page border to the document
10. Change the Page orientation to Landscape

Q. Type the given text in similar format using list in the word:

1. Select the first, then hold CTRL whilst selecting the rest
   ➢ Right click on them
   ➢ Double click on them
   ➢ Use the TAB button
2. How do you get capital letters using just one finger?
   • Use the SHIFT LOCK key
   • Use the TAB key
   • Use the ESCAPE key
   • Use the CTRL key
3. What is the short cut for copying data to the clipboard?
   • CTRL + C
   • CTRL + X
   • CTRL + Z
   • CTRL + V
Q. Create a table as shown below.

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Marks1</th>
<th>Marks2</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td></td>
</tr>
</tbody>
</table>

1. Enter the detail in the table
2. Insert one row after Marks 2 and name its heading as Total
3. Calculate total of Marks1 & Marks2 and enter in Total Column
4. Bold the Student Name, Marks1, Marks2, & Total

Q. Type the following text in Hindi using UNICODE

हृदी स्वास्थ्य के शुभ संवाद देने वाली है। वह एक साथ ही शरीर और मन का प्रसन्न करती है। पायरी स्वास्थ्य का शुभ संवाद देने वाली है। रक्तवि को चलती है और अधिक पशीना भाली है। हृदी एक शक्तिशाली दम है।
एक डॉक्टर कहते हैं कि वह जीवन की मौत मृत्यु है। डॉक्टर हमें कहते हैं कि आनंद से बढ़कर व्यस्त मनुष्य के पास और कोई नहीं। कार्रवाह एक राजकुमार था। संसार त्यागी हो गया था वह कहता है कि जो जी से हंसता है, वह कभी बुरा नहीं होता। जो से हंसते है, तुम्हें अच्छा लगेगा। अपने भिन्न को हंसाओ, अव अधिक प्रसन्न होगा। शांत को हंसाओ, तुम से कम घर्मी करेगा। एक अज्ञात को हंसाओ, तुम पर भयंकर करेगा। उदास को हंसाओ, उसका दुख घटेगा। एक निराश को हंसाओ, उसकी आशा बढेगी। एक बुद्ध को हंसाओ, वह अपने को जवाब समझने लगेगा। एक बालक को हंसाओ, उसके स्वास्थ्य में वृद्धि होगी। वह प्रसन्न और न्याय बालक बनेगा। पर हमारे जीवन का उद्रेक केवल हृदी ही नहीं है, हमकों बहुत काम करते हैं। तथापि उन कामों में, कष्टों में और चिंताओं में एक सुंदर आत्मरिक हृदी, बड़ी भीतरी वस्तु भगवान ने दी है।

Q. Send a letter to your classmates using mail merge.

Q. Write about introduction of computer and insert pictures related to it.

Q. Open Microsoft Excel and perform the following

- Input experimental data into Microsoft Excel worksheet.
- Properly format and organize data inserted.
- Perform calculations in Microsoft Excel using formulas and various built-in functions.
- Generate simple and effective tables and graphs to describe experimental data in Microsoft Excel.
- Integrate both graphs and tables created in Microsoft Excel into Microsoft Word document.

Q. Present Power Point Slides to explain various input devices

Q. Present Power Point Slides to explain various output devices

Q. Present Power Point Slides to show various tourist places of Madhya Pradesh.

Q. Apply text and slide transitions

Q. Insert image & sound file in Presentation
SEMESTER-I

1DCA3(A) - DATABASE USING FOXPRO

(ELECTIVE-I)

UNIT-I

The RDBMS for PC, Concept of database, 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 Commands- LIST, DISPLAY, LOCATE, EDIT, CHANGE, BROWSE, REPLACE, DELETE, RECALL, PACK (All Commands with various Options)

UNIT-II

File utilities in FoxPro Modify Structure, Memo Field and File Utilities- DISPLAY DIRECTORY, COPY, DELETE, RENAME. 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, FoxPro Report- its creation, features & Utilities, Preview, 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 Memory Variables, ?/??/??? Commands Time & Date Functions and Commands, Date Arithmetic, Converting Defining Function Keys, Keyboard Macros- Creating and Using Mathematical Commands, Functions, Arithmetic Operations, Mathematical Functions

UNIT-IV

Programme 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, Docase Endcase, Text- Endtext, Executing Commands from other command files, Macro Substitution, Common Error Messages, Debugging techniques and commands

UNIT-V

Concept of Multiple Database Files- Using multiple database files, Relationing the database- SET RELATION, UPDATE, APPEND, FROM, COPY TO, JOIN, Relation Quote 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

Reference Books:

- Foxpro made simple by R.K. Taxali, BPB publications.
- Mastering Foxpro 2.5 BPB Publications.
- Foxpro 2.6 for Dummies- Pustak Mahal.
Practical Questions:

Q. Create New Database name “student” (with relevant data type) and add following records:

<table>
<thead>
<tr>
<th>Roll_NO</th>
<th>FNAME</th>
<th>SNAME</th>
<th>CITY</th>
<th>COURSE</th>
<th>FEE_DEPOSITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>ANIL</td>
<td>VRCE</td>
<td>BHOPAL</td>
<td>DCA</td>
<td>1000.00</td>
</tr>
<tr>
<td>101</td>
<td>SUNIL</td>
<td>RANA</td>
<td>DELHI</td>
<td>DCA</td>
<td>500.00</td>
</tr>
<tr>
<td>102</td>
<td>MEHUL</td>
<td>KOSHIK</td>
<td>BOMBAY</td>
<td>PGDCA</td>
<td>1500.00</td>
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<tr>
<td>104</td>
<td>MADHURI</td>
<td>CHANDI</td>
<td>PATNA</td>
<td>BCA</td>
<td>1200.00</td>
</tr>
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<td>105</td>
<td>PRMOD</td>
<td>MEHRA</td>
<td>NAGPUR</td>
<td>DCA</td>
<td>2000.00</td>
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<tr>
<td>106</td>
<td>SANDIP</td>
<td>DHEER</td>
<td>NAGPUR</td>
<td>PGDCA</td>
<td>1200.00</td>
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<td>107</td>
<td>SHIVANI</td>
<td>VIRAR</td>
<td>SURAT</td>
<td>PGDCA</td>
<td>1000.00</td>
</tr>
<tr>
<td>108</td>
<td>KRANTI</td>
<td>NEHRU</td>
<td>DELHI</td>
<td>DCA</td>
<td>500.00</td>
</tr>
<tr>
<td>109</td>
<td>MINU</td>
<td>POWAI</td>
<td>BHOPAL</td>
<td>PGDCA</td>
<td>700.00</td>
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<tr>
<td>110</td>
<td>VINOD</td>
<td>SINHA</td>
<td>BHOPAL</td>
<td>BCA</td>
<td>800.00</td>
</tr>
</tbody>
</table>

Perform the following operation on above database:

- To display all records in the database
- To display records based on some conditions
- To display the structure of the database
- To display Fname and city whose course name is dca
- To delete current record
- To delete records based on some condition
- To delete all the records in current database
- To replace all BOMBAY with MUMBAI
- To give details of fname & sname having fees deposited between 1400 and 3000.
- Modify the table and add one more field “INSTITUTE_NAME” and fill the data
- Sort/Index with City
- Sort/Index with FNAME & SNAME
- To count the number of records in the database
- To calculate the total fees deposited
- To input records and add them in the database
- Find the name of the student who deposited minimum fees
- To Display the sum of fees deposited by all DCA students
- To Display the sum of fees deposited in each course
- Add one more column “FINE” in table and insert 50 Rs in each record.
- Add one more column “TOTAL” in table and update the table as TOTAL = FEE_DEPOSITED + FINE
- Delete the column “TOTAL”
- Create two tables with attribute of your choice and perform the join operation
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


Reference Books:

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

Q. Create New Database name “student” (with relevant data type) and add following records:

<table>
<thead>
<tr>
<th>Roll_NO</th>
<th>FNAME</th>
<th>SNAME</th>
<th>CITY</th>
<th>COURSE</th>
<th>FEE_DEPOSITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>ANIL</td>
<td>VRCE</td>
<td>BHOPAL</td>
<td>DCA</td>
<td>1000.00</td>
</tr>
<tr>
<td>101</td>
<td>SUNIL</td>
<td>RANA</td>
<td>DELHI</td>
<td>DCA</td>
<td>500.00</td>
</tr>
<tr>
<td>102</td>
<td>MEHUL</td>
<td>KOSHIK</td>
<td>BOMBAY</td>
<td>PGDCA</td>
<td>1500.00</td>
</tr>
<tr>
<td>104</td>
<td>MADHURI</td>
<td>CHANDI</td>
<td>PATNA</td>
<td>BCA</td>
<td>1200.00</td>
</tr>
<tr>
<td>105</td>
<td>PRMOD</td>
<td>MEHRA</td>
<td>NAGPUR</td>
<td>DCA</td>
<td>2000.00</td>
</tr>
<tr>
<td>106</td>
<td>SANDIP</td>
<td>DHEER</td>
<td>NAGPUR</td>
<td>PGDCA</td>
<td>1200.00</td>
</tr>
<tr>
<td>107</td>
<td>SHIVANI</td>
<td>VIRAR</td>
<td>SURAT</td>
<td>PGDCA</td>
<td>1000.00</td>
</tr>
<tr>
<td>108</td>
<td>KRANTI</td>
<td>NEHRU</td>
<td>DELHI</td>
<td>DCA</td>
<td>500.00</td>
</tr>
<tr>
<td>109</td>
<td>MINU</td>
<td>POWAI</td>
<td>BHOPAL</td>
<td>PGDCA</td>
<td>700.00</td>
</tr>
<tr>
<td>110</td>
<td>VINOD</td>
<td>SINHA</td>
<td>BHOPAL</td>
<td>BCA</td>
<td>800.00</td>
</tr>
</tbody>
</table>

Perform the following operation on above database:

- To display all records in the database
- To display records based on some conditions
- To display the structure of the database
- To display FNAME and city whose course name is DCA
- To delete current record
- To delete records based on some condition
- To delete all the records in current database
- To replace all BOMBAY with MUMBAI
- To give details of FNAME & SNAME having fees deposited between 1400 and 3000.
- Modify the table and add one more field "INSTITUTE_NAME" and fill the data
- Sort/Index with City
- Sort/Index with FNAME & SNAME
- To count the number of records in the database
- To calculate the total fees deposited
- To input records and add them in the database
- Find the name of the student who deposited minimum fees
- To Display the sum of fees deposited by all DCA students
- To Display the sum of fees deposited in each course
- Add one more column "FINE" in table and insert 50 Rs in each record.
- Add one more column "TOTAL" in table and update the table as TOTAL = FEE_DEPOSITED + FINE
- Delete the column "TOTAL"
- Create two tables with attribute of your choice and perform the Join operation
- Create form to Input data using various controls
SEMESTER-II
2DCA1 - IT TRENDS

UNIT-I

UNIT-II

UNIT-III
E-governance, e-democracy, Government efforts to encourage citizen participation, PPP model, E-governance websites & services- SAMADHAN online, CM Helpline, MPonline services, mygov.in of government of India UIDD & Adhar, E-governance mobile apps like umang, Digital Locker, Digital Library, Introduction to cyber crime, types of attacks & crime – email fraud, phishing, spoofing, hacking, spyware, malware, spam mail, logic bombs, denial of service, identity theft.

UNIT-IV
Introduction to wireless LAN, Blue tooth, WiFi, WiMax Mobile technology, 2G, 3G, 4G services, IMEI, SIM, IP Telephony, Soft phone, Voice mail, Ad-hoc & sensor networks, GIS, ISP Mobile Computing, Cellular System Cell, Mobile Switching office, Hands off, Base Station.

UNIT-V
Artificial Intelligence and Expert system- Concepts of AI & Expert Systems, Merits and Demerits of Expert system, Application of Expert system and AI Cloud computing—Introduction, types, application, services, Google drive, Google Doc, Google form

Reference Books:

- Fundamentals of Information Technology By Alex Leon & Leon, Vikas Publications
- E-Commerce An Indian Perspective (Second Edition) By Pt Joseph, S.J., Prentice-Hall Of India
- Recent Magazines of Computers and Communication
- Multimedia in Action James E Shuman, Vikas Publishing House
SEMESTER-II
2DCA2 - INTERNET AND E-COMMERCE

UNIT-I
Introduction to Internet - Internet Evolution, Word Wide Web (WWW), Advantages and Disadvantages, Internet Vs Intranet, the purpose and function of an Internet Service Provider (ISP), Connectivity - Dialup, Leased line, VSAT, URLs, Portals, Internet Services, Application, E-MAIL- Basics of Sending & Receiving, Free Email services, Protocols, FTP, DNS, TCP, UDP, HTTP, IP Telnet Concept, Internet chatting- Voice chat, Text chat, Web Servers, Space on Host Server for Website, Web Portals & Web publishing concepts, Domain name registration.

UNIT-II
Applications of Internet, Basic Operations using Internet Browser-Working with browsers, View History in Browser, Search Engines, Searching information on Wikipedia, Subscribing and reading newspapers online, Typing text in the regional language- Google input tools, Using Google Maps, Working with Google Apps, Online Ticket Booking, Apply for PAN Card/Passport /Aadhar Card online, Pay electricity bill and service tax online, Booking gas refill online, Downloading eBooks, Create & Using Bookmarks, Using JustDial/quikr.com/getit.co.in/sulekha.com to find online services, social sites, Client server architecture & characteristics, Telnet (Remote login concepts) & FTP its uses.

UNIT-III
HTML- Concepts of Hypertext, Versions of HTML, Elements of HTML, HTML editors, Tags and attributes, Syntax, Head & Body Sections, Building, HTML Documents. Inserting Texts, Images, List & its type, Hyperlinks, Backgrounds And Color Controls, Table Layout and Presentation, Use of Font Size & Attributes, List Types and Its Tags, Use of Frames and Forms in, Web Pages HTML, Form and frame Design tools.

UNIT-IV
JavaScript Overview, syntax & conventions. Variables, Expressions, Branching & Looping statements, Functions, Arrays Objects, Events & Document Object Model-onClick, onMouseOver, on Submit, on Focus, on Change, onBlur, onLoad, onUnload, Alerts, Prompts & Confirms.

UNIT-V
Reference Books:

- Level Module - M 1.2 - Internet & Web Page Designing By V.K.Jain - Bpb Publications.
- E-Commerce An Indian Perspective (Second Edition) - By P. T. Joseph, S.J. Prentice-Hall Of India
- Internet For Everyone - Alexis Leon And Mathews Leon, Vikas Publishing House Pvt. Ltd., New Delhi
- Internet For Dummies - Pustak Mahal, New Delhi
- Introduction to Javascript Available at - Www.mcu.ac.in/JavaScriptguide.pdf

Practical Questions:

Q1. How to link an image to another page in HTML,
Q2. How to create a link that opens a new web page window or tab.
Q3. How to create links to sections on the same page in HTML.
Q4. Creating images as links with no borders.
Q5. Creating a link without an underline in HTML.
Q6. Changing link color when moving mouse over link in HTML.
Q7. Creating a link to play a sound file in HTML.
Q8. How to create a link that goes to top of a web page.
Q9. Creating HTML push button link and creating an HTML back button.
Q10. How to create a link to automatically run .exe file once downloaded.
Q11. Creating a mail link on a web page
SEMESTER-II
2DCA3(A) - MULTIMEDIA WITH COREL DRAW
(ELECTIVE-II)

UNIT-I

UNIT-II
Video and Animation in Multimedia, Impact of Video in Multimedia, Basics of Video Analog and Digital Video, How to use video on PC, Brief note on various video standards PAL, NTSC, Different file formats and their use in Multimedia, MPEG, AVI, MJPG, Name of video editing software, Basics of Animation, Types of Animation and use of Animation, Software for Creating Animations

UNIT-III
Introduction to Corel draw, Usage and Advantages, Introduction to User Interface, Introduction to tool panel and workspaces, Introduction to various size and formats of panels and layouts, File layouts and layout properties, Objects and using color profiles

UNIT-IV
Text tools and text properties, Creating Vector graphics by using editing tools, Importing Images and graphics in Corel draw layout, Creating shapes and editing shapes, Drawing curves and editing curves, Creating special text effects, Creating special object effects, Using color effects

UNIT-V
Using grid and rulers, Tracing images and graphics, Working with borders and page arrangements, Using Masking effects with Text, Using Masking effects with objects

Reference Books:
- Learn Corel Draw 11 by BPB PUBLISHING
- Corel Draw the official Guide by Gray David Bouton, Corel Press
- Corel Draw Course 11, 12, X To X5 BY VISHNU P. SINGH, BPB PUBLISHING

Practical Questions:
Q. Refer the following points and Design a Birthday Party invitation card. Invitation Card should contain following:
- Size of card - 4.5 x 6.25 or 5 x 7 inches
- Invitation Matter (Hindi or English)
- Name of Birthday Boy/Girl. (Hindi or English)
- Venue name & address (Hindi or English)
- Date of Birthday Party
- Host Name & address
- Card Template and colour should match with mood of occasion.

Q. Design a cover page for a book on “Human Behaviour”. Book Cover should include the following:

- Name of Book
- A picture or graphics related to theme.
- Name of author (Dr. XYZ Kumar)
- Name of Publisher and logo (Any publisher of your choice).
- Price of the book.
- Cover page of Book - 6 x 9 inches.
- Insert pictures and graphics according to theme.

Q. Design a Newspaper front page. The front page should include the following points:

- Masthead (newspaper name and logo)
- Price and Date
- Lead of story headline
- Inside stories
- Lead Story Write up
- Your front page Picture
- May include an advertisement.
- Front page of newspaper size - 16.5 x 23.4 inches.
- Insert pictures and graphics according to news.
SEMESTER-II
2DCA3(B) - DTP WITH PAGEMAKER & PHOTOSHOP
(ELECTIVE-II)

UNIT-I

UNIT-II

UNIT-III
Adobe Page Maker- Page and document setup, working with rulers, setting the unit measurement, Bullets, Column Balancing, Breaks, Text Wrapping, Widows & Orphan lines, Revert Command and its use, Using Drop Caps and various style formats, Editing of Graphics and Frames, OLE & Embedding, Plug-ins, Mathematic Equation, Table Editor and it use, Master Pages, Headers & Footers, Frame Options, Print Setup Options, Managing and Printing Publications - Tiles, multiple copies etc. Use of Page Maker in News paper and Magazines

UNIT-IV
UNIT-V

Photoshop - Introduction PSD files. Screen and Work Area Interfaces: Menu Bar, Option Bar, Palette, Active Image Area, Tool Box List etc., Opening a File, Saving a File, Closing a File, Tool: Icons, Name and usage of Each tool, Setting History Option, Photoshop Layers & Palettes: Use of Layers, Why Use Layers, Using layer palette, Creating Layers and Layer Sets, Background layer

Filters: Using Filter Gallery, Filter Gallery Dialogue box, Applying and Blending Filters, Choosing various Filter Effects

Reference Books:

- Adobe PageMaker 7.0 Classroom in a Book, Publisher Adobe
- Photoshop 6.0 by Sharma, Shusmit
- Photoshop CS6 All-in-One For Dummies by Barbara Obermeier, John Wiley & Sons

Practical Questions:

Q. Prepare passport size photographs to print on A4 Sheet.
- Passport photograph size – 35 x 45 mm
- Select a photograph and resize it to 35 x 45 mm in passport size photograph style.
- Change the background of photo to plain background.
- Insert name and date on photograph.
- Place 20 photographs in a 4 x 5 pattern to print them on a A4 Sheet.

Q. Colorize a black and white photograph to color.
- Select any black white (old) photograph of your parents or relatives.
- Scan this photograph.
- Colorize the photograph with your imagination.
- Try to match skin tone hair color.
- Try to colorize dress and environment as real as possible.
- Finally save the new image in jpeg format.
Q. Refer the following points and Design a Visiting Card based on following points:

- Design a visiting card for Somesh Kumar who is a managing director of BigTech Pvt. Ltd.
- Company works in the field of software development.
- Visiting card should contain mobile no. 789—9889-987.
- Visiting card should contain office address - Zone II, M.P. Nagar, Bhopal.
- Visiting card size should 3.5 x 2 inches.
- Cards theme and colour should match the company's work profile.
- Try to prepare at least 3 variations for visiting card.