DETAILED SYLLABUS

DIPLOMA IN COMPUTER APPLICATION

(DCA)

Department of Computer Applications

SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

SCHEME FOR

DIPLOMA IN COMPUTER APPLICATION

(DCA)

(Effective From July 2011 Session) SEMESTER -I

Subject Code	Subject Name	Scheme			Theory Paper	Internal Evaluation	Practical Exams	Total Marks
		L	T	P				
1DCA1	Fundamentals of Computers	4			80	20		100
1DCA2	PC Packages (Windows, MS Word, MS Excel, MS Powerpoint)	4	1	3	80	20	25	125
1DCA3(A) 1DCA3(B)	Elective - 1 Foxpro MS Access	4		3	80	20	25	125
Semester Total								350

(*L-Lecture, T-Tutorial, P-Practical)*

SEMESTER –II

Subject Code	Subject Name	Scheme			Theory Paper	Internal Evaluation	Practical Exams	Total Marks
		L	T	P				
2DCA1	IT Trends and Technologies	4			80	20		100
2DCA2	Internet and Web Page Designing	4	1	3	80	20	25	125
2DCA3(A) 2DCA3(B)	Elective – 2 Corel Draw Desk Top Publishing (Page Maker, Photoshop)	4		3	80	20	25	125
Semester Total								350

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.

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Sub Code : 1DCA1 **Subject Name : Fundamentals of Computers**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I Brief History of Development of Computers ,Computer System Concept, Computer System Characteristics ,Capabilities and Limitations, Types of Computers-.,Personal Computer (PCs) - IBM PCs, Types of PCs- Desktop, Laptop, Notebook, Palmtop, etc. Basic Components of a Computer System - Control Unit, ALU, Input/Output semiconductor Memory. Storage fundamentals - Primary Vs Secondary memory.	8					8	
UNIT–II Input Devices :Keyboard, Mouse, Joystick, Scanners, Digital Camera, MICR,OCR, OMR, , Light pen, Touch Screen. Output Devices Monitors - Characteristics and types of monitor, Size, Resolution, Refresh Rate, Dot Pitch, Video Standard - VGA, SVGA, XGA etc. Printers - Daisy wheel, Dot Matrix, Inkjet, Laser. Plotter, Sound Card and Speakers.	8					8	
UNIT–III Various Storage Devices - Magnetic Disks, Hard Disk Drives, Floppy, Disks, Optical Disks, Computer Software ,Need, Types of Software's - System software, Application software System Software - Operating System, compiler .Assemblers. Interpreter .	8					8	
UNIT–IV Operating Systems –Functions ,Types- Batch, Single, Multiprogramming, Multiprocessing Programming languages- Machine, Assembly, High Level, 4GL, Application Software - Word-processing, Spreadsheet, Presentation Graphics, Data Base Management Software, **Number System**, Number System of computers- Binary, Octal, Hexadecimal, their conversion. Coding System – ASCII, EBCDIC.	8					8	
UNIT–V Direction of Transmissions Flow-Simplex, Half Duplex Full Duplex, Types of Network - LAN, WAN, MAN etc.Topologies of LAN - Ring, Bus, Star, Mesh and Tree topologies. **Computer Virus:** Virus working principals, Types of viruses, Virus detection and Prevention Viruses on network.	8					8	
TEXT & REFERENCE BOOKS : *COMPUTERS TODAY BY S.K. BASANDRA, GALGOTIA PUBLICATIONS. FUNDAMENTALS OF INFORMATION TECHNOLOGY BY ALEXIS LEON & MATHEWS LEON, VIKAS PUBLISHING HOUSE, NEW DELHI. DOS QUICK REFERENCE BY RAJEEV MA THUR, GALGOTIA PUBLICATIONS.*							

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Course : DCA **Semester : I**

Sub Code :1DCA2 **Subject Name- PC Packages (Windows, MS Word, MS Excel, MS Powerpoint)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I **MS Windows:** Introduction to MS Windows; Features of Windows; Various versions of Windows & itsuse; Working with Windows; My Computer & Recycle bin ; Desktop, Icons and Windows Explorer;Screen description & working styles of Windows; Dialog Boxes & Toolbars; Working with Files &Folders; simple operations like copy, delete, moving of files and folders from one drive to another,Shortcuts & Autostarts; Accessories and Windows Settings using Control Panel- setting common devicesusing control panel, modem, printers, audio, network, fonts, creating users, internet settings, Start button& Program lists; Installing and Uninstalling new Hardware & Software program on your computer.	8	6				14	
UNIT–II **Office Packages:** Office activates and their software requirements, 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 MS Word, Features & area of use. Working with MS Word, Menus & Commands, Toolbars & Buttons, Shortcut Menus, Wizards & Templates, Creating a New Document, Different Page Views and layouts, Applying various Text Enhancements, Working with -Styles, Text Attributes, Paragraph and Page Formatting, Text Editing using various features ; Bullets, Numbering, Auto formatting,	8	6				14	
UNIT–III **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. Importing and exporting to and from various	8	6				14	
UNIT–IV **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.	8	6				14	
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, Sounds and Movies to a Slide; Working with PowerPoint Objects, Designing & Presentation of a Slide Show, Printing Presentations, Notes, Handouts with print options. **Outlook Express:** Features and uses, Configuration and using Outlook Express for accessing e-mails in office.	8	6				14	

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TEXT & REFERENCE BOOKS: *WINDOWS XP COMPLETE REFERENCE. BPB PUBLICATIONS MS OFFICE XP COMPLETE BPB PUBLICATION MS WINDOWS XP HOME EDITION COMPLETE, BPB PUBLICATION. JOE HABRAKEN, MICROSOFT OFFICE 2000, 8 IN 1, BY, PRENTICE HALL OF INDIA I. T .TOOLS AND APPLICATIONS, BY A. MANSOOR, PRAGYA PUBLICATIONS, MATURA*							

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Sub Code :1DCA3(A)Subject Name : (A) Foxpro (Elective - 1)

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I **FoxPro** - 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 Viewingand Editing Data ,Data Displaying Commands - LIST, DISPLAY, LOCATE, EDIT, CHANGE, BROWSE, REPLACE, DELETE, RECALL, PACK (All Commands with various Options)	8	6				14	
UNIT–II File utilities in FoxPro MODIFY STRUCTURE, MEMO FIELD AND FILE UTILITIES - DISPLAYDIRECTORY, 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	8	6				14	
UNIT–III Memory Variables, Date & Time Functions and, Keyboard Macros ,Memory Variables - Creation andUses, Simple Vs Array Saving and Restoring Memory Variables, ?/??/??? Commands Time & DateFunctions and Commands, Date Arithmetic , Converting Defining Function Keys ,Keyboard Macros -Creating and Using Mathematical Commands ,Functions ,Arithmetic Operations, Mathematical	8	6				14	
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, MacroSubstitution ,Common Error Massages ,Debugging techniques and commands .	8	6				14	
UNIT–V 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, @LEDIT, @_SAY_GET_READ, Creating Box & Lines, User Define Functions, Custom Screen Designing and their Use, FoxDoc for documentation	8	6				14	
TEXT & REFERENCE BOOKS: *FOXPRO MADE SIMPLE BY R.K T AXALI, BPB PUBLICATIONS* *MASTERING FOXPRO 2.5 BPB PUBLICATIONS* *FOXPRO 2. 6 FOR DUMMIES - PUSTAK MAHAL*							

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Sub Code :1DCA3(B) **Subject Name : (B) MS Access (Elective - 1)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
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).	8	6				14	
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, rearrangecolumns, freeze columns. Edit a Tables- copy, delete, import, modify table structure, find, replace.	8	6				14	
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, findrecord with select query, find duplicate record with query, find unmatched record with query, run query, save and change query.	8	6				14	
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	8	6				14	
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.	8	6				14	
TEXT & 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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Sub Code : 2DCA1 **Subject Name : IT Trends and Technologies**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I Introduction to Distributed system, Advantage and Disadvantage of Distributed System, Artificial Intelligence and Expert system- Concepts of AI & Expert Systems, Merits and Demerits of Expert system, Application of Expert system and AI.	8					8	
UNIT–II Introduction to Virtual Reality and multimedia: Introduction, Brief History of virtual reality, Present uses of virtual reality, various software of multimedia.	8					8	
UNIT–III E-Commerce: an Introductions, Concepts, Advantages and Disadvantages, Technology in E- Commerce, Benefits and impact of e-commerce, Electronic Payment Systems: Introduction, Types of Electronic Payment Systems.	8					8	
UNIT–IV CELLULAR TRANSMISSION: Radio Frequency Communications, Wireless Services Mobile Computing, Cellular System Cell, Mobile Switching office, Hands off, Base Station, Frequency	8					8	
UNIT–V E-governance, e-democracy, Government efforts to encourage citizen participation Privacy and Security Issues, Information security management Digital Divide, Introduction of Cyber Crime, various site for e - governance .	8					8	
TEXT & REFERENCE BOOKS: *FUNDAMENTALS OF INFORMATION TECHNOLOGY BY ALEX LEON & MLEON, VIKASPUBLICATIONS, FRONTIERS OF ELECTRONIC COMMERCE, BY-KALAKOTA, RA VI; STONE, TOM; WHINS TON, ANDREWB, ADDISON WESLEY PUBLISHING CO, ISBN 8178080575 E-COMMERCE AN INDIANPERSPECTIVE (SECOND EDITION) BY PT JOSEPH, S.J. PRENTICE-HALL OF INDIA RECENT MA GAZINES OF COMPUTERSAND COMMUNICATION*							

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Sub Code :2DCA2 **Subject Name : Internet and Web Page Designing**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I Applications of Internet, History of Internet, WWW, Various Services , World Wide Web(WWW) History, Working, Web Browsers, Its function Concept of Search Engines, client server architecture	8	6				14	
UNIT–II **Internet :** Evolution, Protocols, Interface Concepts, Internet Vs Internet, Growth of Internet, ISP, Connectivity - Dial-up, Leased line, VSAT etc., URLs, Domain names, Portals, Applications. **E-Mail** :Concepts , Basics of Sending & Receiving, E-mail, Free E-mail services.	8	6				14	
UNIT–III Transfer Protocols, Telnet & Chatting , Client/Server Architecture Characteristic, FTP & its usages. Telnet Concept, Remote Logging, Protocols, Internet chatting - Voice chat, text chat.	8	6				14	
UNIT–IV Searching the Web, HTTP, URLs, Web Servers, Web Protocols. Web Publishing Concepts, Domain Name Registration, . HTML, Design Tools, HTML Editors , Image Editors .	8	6				14	
UNIT–V HTML Concepts of Hypertext, Versions of HTML, Elements of HTML Syntax, Head & Body Sections, Building HTML Documents, Inserting Texts, Images, Hyperlinks, Backgrounds And Colour Controls, Different HTML Tags, Table Layout and Presentation, Use of Font Size & Attributes, List types and its Tags.	8	6				14	
Text & Reference Book : *LEVEL MODULE - M 1.2 - INTERNET & WEB PAGE DESIGNING BY V.K.JAIN BPB PUBLICATIONS.* *INTERNET FOR EVERYONE - ALEXIS LEON AND MATHEWS LEON, VIKAS PUBLICATIONS.* *INTERNET FOR DUMMIES - PUS TAK MAHAL, NEW DELHI* *A BEGINNER'S GUIDE TO HTML* *HTTP://WWW.NCSA.NINE.EDIT/GENERAL/INTERNET/WWW/HTML.PRMTER*							

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Sub Code :2DCA3(A) **Subject Name : (A) COREL DRAW(ELECTIVE - 2)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I Introduction to CorelDraw, Use and importance in Designing, Various Graphic Files and File Extensions	8	6				14	
UNIT–II Introduction to Tools of CorelDraw, Managing Palettes ,Working with Images, Patterns and Textures	8	6				14	
UNIT–III Coreldraw Files and supporting documents, Import and Export of Files and File formats Page Setup and Designing, Using Styles and Templates, Working with Text, Formatting Text, Text	8	6				14	
UNIT–IV Designing Different Page Layouts, Column Layout, Working with Layers., Special Effect to Objects and	8	6				14	
UNIT–V Preparation of Visiting Cards & Invitation Cards, Shaping Dockers & Logo Design Introduction Brochure & Books, Introduction to Magazine Designing	8	6				14	
TEXT AND REFERENCES : *CORELDRA W X4 FOR SIMPLE STEPS* *CORELDRA W X4 THE OFFICIAL GUIDE BY GARY DA VID BOUTON*							

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Course : DC **Semester: II (Elective - 2)**
Sub Code :2DCA3 (B) **Subject Name : (B) Desktop Publishing (Page Maker, Photoshop)**

Unit	Lectures	Practical's	Workshops	Demo	Field Visits	Total Hours	Remarks
UNIT–I **D.T.P For Publications** Introductions to Printing, Types of Printing, Offset Printing, Working of offset Printing, Transparent Printout, Negative & Positives for Plate were making, Use of Desk Top Publishing in Publications, Importance of D.T.P in Publication, Advantage of D.T.P in Publication, Mixing of graphics & Image in a single page production, Laser printers - Use, Types, Advantage of lager printer in publication	8					8	
UNIT–II **Page Layout** Different page format / Layouts, News paper page format, Page orientations, Columns & Gutters, Printing in reduced sizes. **Introductions To Page Maker** Page Maker Icon and help, Tool Box, Styles, Menus etc., Different screen Views, Importing text/Pictures, Auto Flow, Columns,	8					8	
UNIT–III Master Pages and Stories, Story Editor, Menu Commands and short-cut commands, Spell check, Find & Replace, Import Export etc., Fonts, Points Sizes, Spacing etc., Installing Printers, Scaling (Percentages), Printer setup Use of D.T.P. in Advertisements, Books & Magazines, News Paper, Table Editor	8					8	
UNIT–IV **Introduction to Adobe Photoshop** & Documents, Various Graphic Files and Extensions, Vector Image and Raster Images, Various Colour Modes and Models.	8					8	
UNIT–V Introduction to Screen and Work Area, Photoshop Tools & Palettes ,Use of Layers & Filters,Working with Images	8					8	
TEXT & REFERENCE HOOKS: *PA GE MAKER 4.0 & 5.0 BYB.P.O. PUBLICATIONS.* *PRAKHAR COMPLETE COURSE FOR DTP (CORELDRAW, PAGEMAKER, PHOTOSHOP)*							

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INTERNAL EVALUATION

For internal evaluation wherever required as per scheme, the concerned faculty members must keep a detailed record of activities performed. At least 2 tests must be conducted evenly distributed in the semester and syllabus, each having a weightage of 25% (in case more than 2 tests conducted, best 2 performance may be considered). Further the entire semester attendance be evaluated for 25% weightage and fully a comprehensive subject viva on the assignments (at least two) shall have a weightage of 25%.

The record for every students must be maintained at least for 6 months after the end of examination, foil/counter foil must be submitted to the Examination Section before the start of theory examination. The format (for 20 marks weightage) is attached herewith.

1. Subject code
2. Subject name
3. Year
4. Study Institute code
5. Name & address of Study Institute
6. Name of Class Coordinator

Roll No.	Enrollment No.	Test-1 Marks MM-5	Test-2 Marks MM-5	Attendance MM-5	Viva MM-5	Total MM-20

Signature of Class Coordinator Signature of Head of Institute

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