

**INSTITUTE OF ADVANCED STUDIES IN
EDUCATION (DEEMED UNIVERSITY)
GANDHI VIDYA MANDIR
SARDARSHAHR**

DETAILED SYLLABUS

FOR DISTANCE EDUCATION

**Diploma
(One Year Semester Scheme)**

Diploma in Computer Application
(DCA)

COURSE TITLE : DIPLOMA IN COMPUTER APPLICATION
DURATION : 1 YEAR (SEMESTER SYSTEM)
TOTAL MARKS : 1000

FIRST SEMESTER

COURSE TITLE	PAPER CODE	MARKS		
		THEORY	PRACTICAL	TOTAL
INTRODUCTION TO INFORMATION TECHNOLOGY	DCA-110	50	50	100
COMPUTER PROGRAMMING USING "C"	DCA-120	50	50	100
PC SOFTWARE	DCA-130	50	50	100
LAB (PROGRAMMING IN C)	DCA-140P	00	100	100
LAB (PC SOFTWARE)	DCA-150 P	00	100	100

SECOND SEMESTER

COURSE TITLE	PAPER CODE	MARKS		
		THEORY	PRACTICAL	TOTAL
MICROSOFT ACCESS	DCA-210	50	50	100
OPERATING SYSTEM	DCA-220	50	50	100
INTERNET AND E-OMMERCE	DCA-230	50	50	100
LAB(MICROSOFT ACCESS)	DCA- 240 P	00	100	100
LAB (OPERATING SYSTEM AND HTML)	DCA- 250 P	00	100	100

Note:

Theory Paper : 30% Continuous Internal Assessment and
70% University examination.

Practical Paper : 30% Continuous Internal Assessment and
70% University examination

Continuous Internal Assessment:

- 1) Two or three tests out of which minimum two will be considered for Assessment
60% of Continuous Internal Assessment
- 2) Seminars/Assignments/Quizzes
30% of Continuous Internal Assessment
- 3) Attendance, class participation and behavior
10% of Continuous Internal Assessment

DCA-110 INTRODUCTION TO INFORMATION TECHNOLOGY

Maximum Time : 3 Hrs. University Examination : 70 Marks
Total Marks : 100 Continuous Internal Assessment : 30 Marks
Minimum Pass Marks : 40%

A) Instructions for paper-setter

The question paper will consist of five sections A, B, C and D. Sections A, B and C will have two questions from the respective sections of the syllabus and will carry 15% marks each. Section D will have 10-20 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt one question each from sections A, B and C of the question paper and the entire section D.
2. Use of non-programmable scientific calculator is allowed.

SECTION A

Definition of Information Technology, Use of IT, Definition of information system, need of information system, definition of knowledge, Range of application : Scientific, business, educational, weather forecasting, and remote sensing, planning, e-commerce, web publishing, Management Information System, Decision Support System, inventory control, medical, industrial control, banks, railways, etc.

SECTION B

Computer Fundamentals: Block structure of computer, Characteristics of computers, Problem solving with computers, Generation of computers, Classification of computers.
Number System: Bit, Byte, Binary, Decimal, Hexadecimal, and Octal system, Conversion from one system to the other, Error detecting codes, Representation of characters, Integers and fractions.
Binary Arithmetic: Addition, Subtraction and Multiplication.

SECTION C

Input and Output units: Their functional characteristics, main memory , cache memory read only memory, overview of storage devices – floppy disk, hard disk, compact disk, tape.

Computer Networks and Communication: Network types, Network topologies, Network communication devices, Physical communication media, TCP/IP.

Internet and its Applications: E-mail, Telnet, FTP, WWW, Internet chatting.

Reference:-

1. D.H.Sanders, “Computers Today”, McGraw Hill, 1988.
2. T.N. Trainer, “Computers” (4th Edition) McGraw Hill, 1994.
3. Kenneth C.Laudon, Jane P. Laudon “Management Information System”(7th Edition),

4. V. Rajaraman, "Fundamentals of Computers" (2nd Edition), Prentice Hall of India, New Delhi, 1996.
5. B. Ram, "Computer Fundamentals", Wiley, 1997.

DCA-120

COMPUTER PROGRAMMING USING "C"

Maximum Time : 3 Hrs.

University Examination : 70 Marks

Total Marks : 100

Continuous Internal Assessment : 30 Marks

Minimum Pass Marks : 40%

A) Instructions for paper-setter

The question paper will consist of five sections A, B, C and D. Sections A, B and C will have two questions from the respective sections of the syllabus and will carry 15% marks each. Section D will have 10-20 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt one question each from sections A, B and C of the question paper and the entire section D.
2. Use of non-programmable scientific calculator is allowed.

SECTION A

Data types, constants, Variables, Arithmetic and logical expressions, Data input and output, Assignment statements, Conditional statements.

SECTION B

Iteration, Arrays, String processing, User-defined data types, functions, recursion, Parameter passing by reference & by value.

SECTION C

Structures, Multiple Structure, Array of Structure, Unions, Pointers, Character pointers, Pointers to arrays, Array of pointers, Pointers to structures.

Reference:-

1. Rajarman V., "Fundamentals of Computers" (PHI, 1992)
2. D.Dromey "How to solve it by Computer", Prentice-Hall, 1985
3. E. Balaguruswami "Programming in C" Tata McGraw Hill.
4. Kanetkar, "Let Us C" BPB Publications.

Maximum Time : 3 Hrs. University Examination : 70 Marks
Total Marks : 100 Continuous Internal Assessment : 30 Marks
Minimum Pass Marks : 40%

A) Instructions for paper-setter

The question paper will consist of five sections A, B, C and D. Sections A, B and C will have two questions from the respective sections of the syllabus and will carry 15% marks each. Section D will have 10-20 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt one question each from sections A, B and C of the question paper and the entire section D.
2. Use of non-programmable scientific calculator is allowed.

SECTION A

MS Word Basics: Introduction to MS Office; Introduction to MSWord; 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, Printing & various print options, Spell Check, Thesaurus, Find & Replace; Headers & Footers ; Inserting – Page Numbers, Pictures, Files, Auto texts, 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.

SECTION B

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.; Use of 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.

SECTION C

MS PowerPoint: Introduction & area of use: Working with MS Power Point; 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.

Reference:

1. "Windows XP Complete Reference", BPB Publications.
2. "MS Office XP Complete Reference", BPB Publications.
3. "MS Windows XP Home Edition Complete Reference", BPB Publications.
4. Mansoor, "I.T. Tools and Applications", Pragya Publications.

DCA-140 P SOFTWARE LAB (COMPUTER PROGRAMMING USING "C")

Maximum Time	: 3 Hrs.	University Examination	: 70 Marks
Total Marks	: 100	Continuous Internal Assessment	: 30 Marks
Minimum Pass Marks	: 40%		

This Laboratory Course will mainly comprise of exercises on what is learnt under paper DCA -120 (COMPUTER PROGRAMMING USING "C").

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DCA-150 P SOFTWARE LAB (PC SOFTWARE)

Maximum Time	: 3 Hrs.	University Examination	: 70 Marks
Total Marks	: 100	Continuous Internal Assessment	: 30 Marks
Minimum Pass Marks	: 40%		

This Laboratory Course will mainly comprise of exercises on what is learnt under paper DCA -130 (PC SOFTWARE).

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SECOND SEMESTER

DCA-210

MICROSOFT ACCESS

Maximum Time : 3 Hrs.

University Examination : 70 Marks

Total Marks : 100

Continuous Internal Assessment : 30 Marks

Minimum Pass Marks : 40%

A) Instructions for paper-setter

The question paper will consist of five sections A, B, C and D. Sections A, B and C will have two questions from the respective sections of the syllabus and will carry 15% marks each. Section D will have 10-20 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt one question each from sections A, B and C of the question paper and the entire section D.
2. Use of non-programmable scientific calculator is allowed.

SECTION A

Introduction to Databases, DBMS and RDBMS : Introduction, Information, Quality of Information, Information Processing, Characteristics of Data in a Database, What is a Database Management System (DBMS)?, Need for DBMS, Types of DBMS, Relational Database Management Systems (RDBMS), RDBMS Terminology, Relational Data Structure, Relational Data Integrity, Conclusion, Review Questions.

SECTION B

Access 2000 Basics : Introduction, Starting Access 2000, Access Startup Dialog Box, Menus and Toolbars, Using Toolbar Buttons, Arranging Buttons on the Toolbar, Viewing Data, Creating an Access 2000 Database and Tables, Database Properties, Modifying Tables, Creating Forms, Entering and Updating Data Using Forms, Navigating between Records in a Form, Finding, Editing and Deleting Data in a Form, Using Access 2000 Help, Using Answer Wizard, Using the Contents Tab to Get Help, Using the Index Tab to get Help, Exercises.

SECTION C

Report and Queries : Introduction, Sorting and Filtering Records, Creating and Printing Reports, Creating and Using Queries.

Introduction to Structured Query Language (SQL) : Introduction, Characteristics of SQL, Advantages of SQL, Types of SQL Tables, Create Table, NULLS, Data Manipulation, Update Operations, SQL in Access.

References:

1. Bipin C. Desai, "An Introduction to Data Base Systems", Galgotia Publication.
2. Robert Sheldon, "Microsoft Office Access 2003" McGraw Hil.

DCA-220**OPERATING SYSTEM****Maximum Time : 3 Hrs.****University Examination : 70 Marks****Total Marks : 100****Continuous Internal Assessment : 30 Marks****Minimum Pass Marks : 40%****A) Instructions for paper-setter**

The question paper will consist of five sections A, B, C and D. Sections A, B and C will have two questions from the respective sections of the syllabus and will carry 15% marks each. Section D will have 10-20 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt one question each from sections A, B and C of the question paper and the entire section D.
2. Use of non-programmable scientific calculator is allowed.

SECTION A**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, CLS, 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.

SECTION B**WINDOWS XP**

Introduction to Windows XP and its features, Hardware requirements of Windows. Windows concepts, Windows Structure, Desktop, Taskbar, Start Menu.

My computer- exploring hard disk, copying and moving files and folder from one drive to another, formatting floppy drive. Windows Accessories - Calculator, Notepad, Paint, WordPad, Character map paint, command prompt.

Windows Explorer- exploring hard disk, copying and moving files and folders from one drive to another, formatting floppy drive and other Explorer facilities. burning CD.

Entertainment- CD player, DVD Player, Media Player, Sound Recorder, Volume Control, movie maker

Recycle bin- restoring a deleted file, emptying the cycle bin. Managing files, folders and disk-navigating between folders, manipulating files and folders, creating new folder, searching files and folders.

SECTION C

LINUX History & Features of Linux, Linux Structure, File system of Linux, Hardware requirements of Linux, Various flavours of Linux, Program & Process, Process creation

and process identifiers, Functions of profile and login files in Linux, Linux kernel, Login and logout from Linux system, Linux commands - bc, cal, cat, cd, chgrp, chmod, chown, clear, cmp, copy, date, find, ps, kill, ls, mail, mkdir, more, mv, rm, rmdir, tty, wc, who, whois, grep, write, telnet. Pipeline concepts, Using floppy and cdrom in linux, vi editor.

Reference :

1. Rajeev Mathur, "DOS Quick Reference", Galgotia Publications.
2. Peter Norton, "Peter Norton Complete Guide to Linux", Techmedia Publications.
3. "Level Module M 1.1 Information Technology", Khanna Book Publications, New Delhi.
4. Windows XP Complete Reference. BPB Publications

DCA-230

INTERNET & E-COMMERCE

Maximum Time : 3 Hrs.

University Examination : 70 Marks

Total Marks : 100

Continuous Internal Assessment : 30 Marks

Minimum Pass Marks : 40%

A) Instructions for paper-setter

The question paper will consist of five sections A, B, C and D. Sections A, B and C will have two questions from the respective sections of the syllabus and will carry 15% marks each. Section D will have 10-20 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt one question each from sections A, B and C of the question paper and the entire section D.
2. Use of non-programmable scientific calculator is allowed.

SECTION A

Internet - Evolution, Protocols, Interface Concepts, Internet Vs Intranet, Growth of Internet, ISP.

Connectivity- Dial-up, Leased line, VSAT etc., URLs, Domain names, Portals.

E-MAIL - Concepts, POP and WEB Based E-mail ,merits, address, Basics of Sending & Receiving, E-mail Protocols, Mailing List, Free Email services.

Internet Protocols- Data Transmission Protocols, Client/Server Architecture & its Characteristics, FTP & its usages. Telnet Concept, Remote Logging, Protocols, Terminal Emulation, Message Board.

SECTION B

World Wide Web (www) - History, Working, Web Browsers, Its functions, Concept of Search Engines, Searching the Web, HTTP, URLs, Web Servers, Web Protocols.

Web Publishing - Concepts, Domain name Registration, Space on Host Server for Web site, HTML, Design tools, HTML editors, Image editors, Issues in Web site creations & Maintenance.

E-Commerce- An introduction, Concepts, Advantages and disadvantages, Technology in E- Commerce, Internet & E-business, Applications, Feasibility & various constraints. E-transition, challenges for Indian corporate.

Electronic Payment Systems: Introduction, Types of Electronic Payment Systems, Digital Token-Based, Electronic Payment Systems, Smart Cards and Electronic Payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic Payment Systems.

SECTION C

Html - Concepts of Hypertext, Versions of HTML, Elements of HTML syntax, Head & Body Sections, Building HTML documents, Inserting texts, Images, Hyperlinks, Backgrounds and Color controls, Different HTML tags, Table layout and presentation, Use of font size & Attributes, List types and its tags, Use of Frames and Forms in web

pages. Overview of MS FrontPage, Macromedia Dream weaver, and other popular HTML editors, designing web sites using MS FrontPage (using at least FrontPage 2000)

Reference:

1. A. Mansoor, "Internet and Web Design Made Easier", Pragma Publications.
2. V.K.Jain, "level Module - M 1.2 - Internet & web page designing" BPB Publications.
3. P.T. Joseph, S.J., "E-Commerce An Indian Perspective (Second Edition)", Prentice Hall of India
4. Alexis Leon and Mathews Leon, "Internet for Everyone", Vikas Publishing House Pvt. Ltd., New Delhi.
5. "Internet for Dummies", Pustak Mahal, New Delhi.

DCA-240 P SOFTWARE LAB (MICROSOFT ACCESS)

Maximum Time	: 3 Hrs.	University Examination	: 70 Marks
Total Marks	: 100	Continuous Internal Assessment	: 30 Marks
Minimum Pass Marks	: 40%		

This Laboratory Course will mainly comprise of exercises on what is learnt under paper DCA -210 (MICROSOFT ACCESS).

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DCA-250 P SOFTWARE LAB (OPERATING SYSTEM & HTML)

Maximum Time	: 3 Hrs.	University Examination	: 70 Marks
Total Marks	: 100	Continuous Internal Assessment	: 30 Marks
Minimum Pass Marks	: 40%		

This Laboratory Course will mainly comprise of exercises on what is learnt under paper DCA -220 & DCA-230 (OPERATING SYSTEM & HTML).

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