

MATS UNIVERSITY
DIPLOMA OF COMPUTER APPLICATION (DCA)
REGULATIONS

Introduction

INFORMATION Technology today is recognized as a frontier area of knowledge and also a critical enabling tool for assimilating, processing and productivising all other spheres of knowledge. It is also recognized the world over that information technology is going to change every facet of human existence and will usher in knowledge based society. It is estimated that in India in the current plan period there will be demand of over 45 lakh computer professionals and with the availability of present educational facilities, the short fall can be in the range of over 25 lakhs. Therefore there is a need to take up IT education programmes in a big way.

There are three basic skill levels for an IT Professional. The first level is that of an operator, the second is a programming assistant or a programmer and the third is of a system analyst or a manager. There are new skills required in the changing IT scenario in the world which include web designing, handling of internet based information and programming for the networked environment. The additional skills also include hardware maintenance, networking and marketing.

This course will provide basic and in depth knowledge to the students desirous of taking computer as their professional. Such students are in good demand in the field, both in the original and unrecognized sector, industry and educational institutions.

1. Scope and Content

- 1.1 The regulations documented here are applicable to the .D.C.A. programme offered by the university.
- 1.2 The applicability of the Regulations must be understood in the context of the given Scheme of study and the Syllabus of the programme.
- 1.3 The Regulations given here are in addition to the rules and regulations notified at the time of the admission.
- 1.4 The authorities of University may modify, add, delete, expand or substantiate any part of the Regulations and syllabi, at any time.

2. Course Content

The programme shall be for a duration of two semesters, spread out in one years. Each semester of the programme shall consist of either all or some of the following components:

- 2.1 Core Subjects
- 2.2 **AECC** (Ability Enhancement Compulsory Course)
- 2.3 **SEC**(Skill Enhancement Course)
- 2.4 **DSE**(Discipline Specific Electives) /Choice Based
- 2.5 **GE**(Generic Electives)
- 2.6 Lab Course
- 2.7 Project Work/

2.1 Core Subjects

Core subjects comprises of subjects that form an integral part of the programme. These subjects provide a strong ground in basic disciplines of study.

2.2 AECC (Ability Enhancement Compulsory Course)

The students who have not done English up to class XII are to opt for Hindi Communication. They can opt Environment studies and other languages also .

2.3 SEC(Skill Enhancement Course)

This will facilitate student mobility across institutions within and across countries and also enable potential employers to assess the performance of students.

2.4 DSE (Discipline Specific Electives) /Choice Based

Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study)

2.5 GE(Generic Electives)

An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective. P.S.: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and vice versa and such electives may also be referred to as Generic Elective.

2.6 Lab Courses

These subjects are totally practical-based subjects. The learning of these subjects will be performed in laboratories/practical sites with equipments/resources. These subjects shall support the practical implementation of the core/core-bracket subjects. The processes of evaluation of their subjects will depend on the nature of that individual subject.

2.7 Project Work

The project work shall be done for a duration as specified by the Coordinator, in the area, related to the main subject of study or the specialization. The project work shall give the student an insight to the situations existing in the field/marketed/industries, etc.

3. Eligibility for admission and mode of selection

- 3.1 The minimum qualification required to be eligible for admission is a pass in the HSC or 10+2 examination of a Board of a State Government, or a course recognized as equivalent there to buy the University, desirably with the relevant or related subjects as one of the subjects of study.
- 3.2 The method of selection for the course shall normally be by means of a Personal interview. However, the admission might also by means of an entrance test.

4. Attendance and Examination

A student is eligible to appear for the term-end examinations, only if he/she has put in a minimum of 75% attendance in each subject individually.

5. Assessment and Examination

5.1 Credits

Credit Points will be awarded for all the subjects. One credit is equivalent to ten classroom contact hours.

Each core subjects will carry either 4 or 2 credits, each core bracket subject will carry 2 credits and practical courses will carry either 4 or 2 credits depending on the number of hours of teaching and training.

5.2 Pattern of Assessment

Assessment of student's performance will be based on tow components i.e. Internal Assessment and Term-end Examination conducted at the end of each semester.

A four-credit subject will comprises of an Internal Assessment component of 30 marks and a Term-end Examination components of 70 marks.

A two-credit subject will comprise of an Internal Assessment component of 15 marks and a Term-end Examination components of 35 marks.

Purpose of Internal assessment

The Term-end Examination will be conducted as per the University regulations Sessional tests, assignment, mid-term examination, etc. will be conducted in each subject during the course of each semester, for the assessment.

5.3 Assessment for Core Bracket subjects

Depending on the participation and performance of students, the faculty of the Core Bracket subject will grade the student in term of a five-point scale as given below:

Marks Secured	Grade Point	Letter Grade
85 and above	10	Outstanding(O)
75 and above but below 85	9	Excellent (A+)
65 and above but below 75	8	Very Good (A)
55 and above but below 65	7	Good (B+)
45 and above but below 55	6	Above Average (B)
35 and above but below 45	5	Average (C)
25 and above but below 35	4	Pass(P)
Below 25	0	Fail (F)
	0	Absent (AB)

This assessment is purely based on internal assessment of the subject faculty/coordinator.

5.4 Assessment of Project work

The project work will carry a total of 100 marks. Of this, 70% marks are for the external examination and 30% marks will be awarded for internal evaluation.

5.5 Eligibility to appear for the Term-end Exam.

Students, who have put in a minimum of 75% attendance in each subject, shall be eligible to appear for the Term-end examination.

6. Eligibility for Pass

- 6.1 A student shall be declared to have passed in a subject, if he/she secures at least 23% marks in the term-end examination and an aggregate of 23% including internal assessment.
- 6.2 When a student reappears for the failed subject(s), the internal assessment marks originally secured by him/her in the first appearance in the subject(s), if any, will be carried forward.
- 6.3 A student shall be declared to have passed in Core Bracket subject, if he/she secures at least a pass grade.
- 6.4 Promotion of the student to the next semester, is not automatic, but is dependent on certain other conditions.

7. Classification of successful students

- 7.1 on successful completion of the programme, the students will be classified as below: -

Distinction	: Those securing an aggregate mark of 75% and above in all the subjects;
First Class	: Those securing an aggregate mark of less than 75%, but above 60% in all the subjects;
Second Class	: Those securing an aggregate mark of less than 60%, but above 50% in all the subjects;
Pass	: Those securing an aggregate mark of above than 23% in all the subjects;

7.2 Ranks

Only students, who have passed each of the semester examination at the first appearance, shall be eligible for award of Ranks. The first three ranks shall be notified.

8. Award of Qualification

Students will be awarded the Bachelor Degree of D.C.A., upon fulfillment of the following criteria-

- a. Must have passed all the subjects of the two semesters with a minimum of 23% on each subject including Internal assessment and secured 23% in aggregate;
- b. Must have secured at least a pass grade in all the Core Bracket subjects.
- c. Must have secured a minimum of 35% marks in the project work (wherever applicable).
- d. Must have complied with all other assessment guidelines and criteria notified during the conduct of the programme.

9. Maximum period for the completion of the Programme

The maximum period for the completion of the programme shall be 1 years from the date of joining the programme.

10. General Guidelines

10.1 Academic Integrity and Ethics

- a. A student who has committed an act of academic dishonesty will be deemed to have failed to meet a basic requirement of satisfactory academic performance. Thus, academic dishonesty is not only a

basic for disciplinary action but also is relevant to the evaluation of student's level of performance and progress.

- b. Where there has been violation of the basic ethos and principles of academic integrity and ethics, the Director/Board of Examiners/Course coordinator may use their discretion in terms of disciplinary action to be taken.
- c. Academic dishonesty includes, but is not necessarily limited, to the following:
 - i. Cheating or knowingly assisting another student in committing a act of cheating;
 - ii. Unauthorized possession of examination materials, destruction or hiding of relevant materials;
 - iii. Act of plagiarism;
 - iv. Unauthorized changing of marks or marking on examination records.

10.2 Attendance

- a. Student are required to attend and participate in all scheduled class sessions, guest lecturer, workshops, outbound learning programs and club/ forum activities of both academic and non-academic nature.
- b. Students may be dropped from the programs due to excessive and non-intimated absences.
- c. Students must notify the program coordinator in writing, the reasons for absence, if any, from class sessions, activities and assessment components.
- d. On notification of absences (including anticipated absences) , the Director/ Programmer coordinator would determine whether the absences could be rectified or whether it is possible to satisfactorily complete the subject with the number of identified absences.

10.3 General

- a. The students are expected to spend a considerable amount of time in research, reading and practice.
- b. All students are expected to develop and maintain a positive profession attitude and approach throughout the Programme and in conduct of all other activities.
- c. Attendance alone is not sufficient. Students are expected to participate, to help the class learn and understand the topics under consideration.
- d. Food and drinks are not permitted in the classroom/ conference hall.
- e. All students are expected to dress as per stipulated dress code.

Diploma of Computer Application						
SEMESTER -I						
Subject Code	Subject	Credit	L+T+P	Univ.	Int. Marks	Total Marks
		1 Cr= 1 hrs		Exam Marks		
CORE COURSES						
DCA 101	Computer Fundamentals	4	3+1+0	70	30	100
DCA 102	Introduction to computer Networks and Web design	4	3+1+0	70	30	100
DCA 103	Programming in C	4	3+1+0	70	30	100
LAB COURSES						
DCA 104	Practical Based Computer undamentalsand Web design LAB	2	0+0+2	35	15	50
DCA 105	Practical Based Programming in C LAB	2	0+0+2	35	15	50
		16		280	120	400

Diploma of Computer Application						
SEMESTER -II						
Subject Code	Subject	Credit	L+T+P	Univ.	Int. Marks	Total Marks
		1 Cr= 1 hrs		Exam Marks		
CORE COURSES						
DCA201	DBMS Concepts	4	3+1+0	70	30	100
DCA202	Desktop Publishing	4	3+1+0	70	30	100
DCA203	Mini Project	4	3+1+0	70	30	100
LAB COURSES						
DCA204	Practical Based on DBMS Concepts	2	0+0+2	35	15	50
DCA205	Practical Based Desktop Publishing	2	0+0+2	35	15	50
		16		280	120	400

DCA101
Computer Fundamentals

Course Objective:

This course objective is to provides fundamental knowledge of computer

Course Outcome:

Student will be able to understand the fundamentals knowledge of computer

MODULE - I

Brief history of development of computers, Computer system concepts, Computer system characteristics, Capabilities and limitations, Types of computers Generations of computers, Personal Computer (PCs) – evolution of PCs, configurations of PCs- Pentium and Newer, PCs specifications and main characteristics. Basic Components of a computer system - Control unit, ALU, Input/Output functions and characteristics, memory - RAM, ROM, EPROM, PROM and other types of memory, Number System

MODULE - II

Input/Output& Storage Units--Keyboard, Mouse, Trackball, Joystick, Scanners, Digital Camera, MICR, OCR,OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen, Printers & types - Daisywheel, Dot Matrix, Inkjet, 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, Hard Disk Drives, Floppy Disks(Winchester Disk), Optical Disks, CD, CD-R, CD-RW, Zip Drive, flash Physical structure of floppy & hard disk Multimedia concepts, multimedia system configuration, types of multimedia, application of Multimedia.

MODULE - III

Software and its Need, Types of Software - System software, Application software, System Software - Operating System, Utility Program, Programming languages, Assemblers, Compilers and Interpreter, Introduction to operating system for PCs-DOS Windows, Linux, File Allocation Table, files & directory structure and its naming rules, booting process, Programming languages- Machine, Assembly, High Level, 4GL, their merits and demerits, Application Software and its types - Word-processing, Spreadsheet, Presentation Graphics, Data Base Management Software, characteristics, Uses and examples and area of applications of each of them, DOS commands

MODULE - IV

Database Management system: Definition, Characteristics, advantages over traditional file processing system, Implication of Database approach, User of database, DBA and its responsibilities, Database schema ,Database languages: DDL, DML, DCL, Database utilities, Data Models, Keys: Super, candidate, primary, unique, foreign, Entity relationship model: concepts, mapping cardinalities, entity relationship diagram, Queries and SQL

MODULE - V

System Planning and initial investigation: basis for planning in systems analysis, initial investigation, fact finding, fact analysis, determination of feasibility. Information Gathering: Kind of information, Information gathering tools, Structured Analysis, DFD, Data Dictionary, Decision Tree, Structured English, Decision Table. System Performance & Feasibility Study. Software Engineering Fundamentals: Software Design Life cycle The Role of System Analyst

TEXT & REFERENCE BOOKS:

- Anurag Seetha, “Introduction to Computers and Information Technology”, Ram Prasad & Sons, Bhopal.
- S.K.Basandra, “Computers Today“, Galgotia Publications.
- Chetan Shrivastav “Fundamental of IT”
- P.K. Sinha,” Fundamental of Computers”
- System Analysis and Design - Elias M. Awad.
- System Analysis and Design - Alan Dennis & Barbara Haley Wix
- Introduction to Data communication & Networking - Behrouz &Forouzan
- Computer Networking - Andres & Tanenbaum

DCA102
Introduction to computer Networks and Web design

Course Objective:

This course objective is to provides fundamental knowledge of Networks and Web design

Course Outcome:

Student will be able to understand the fundamentals knowledge of Networks and Web design.

MODULE - I

Use of communication and IT , Communication Process, Communication types - Simplex, Half Duplex, Full Duplex, Communication Protocols, Communication Channels - Twisted, Coaxial, Fiber Optic, Serial and Parallel Communication, Modem - Working and characteristics, Types of network Connections - Dialup, Leased Lines, ISDN, DSL, RF, Broad band ,Types of Network - LAN, WAN, MAN ,Internet, VPN etc., Topologies of LAN - Ring, Bus, Star, Mesh and Tree topologies, Components of LAN -Media, NIC, NOS, Bridges, HUB, Routers, Repeater and Gateways. Internet-Evolution, World Wide Web Internet Services and E - Commerce

MODULE - II

WebPages; Hyper Text Transfer Protocol (HTTP); File Transfer Protocol (FTP) Domain Names; URL, Website, Web browser, Web Servers; Basic Tags of HTML: HTML, HEAD, TITLE, BODY, Heading tag (H1 to H6) and attributes, FONT tag and Attributes, P, BR, Comment in HTML (<! >), Formatting Text (B, I, U, EM, BLOCKQUOTE, PREFORMATTED, SUB, SUP, STRIKE), Ordered List- OL Unordered List, ADDRESS Tag; Creating Links: Link to other HTML documents or data objects, Links to other places in the same HTML documents, Links to places in other HTML documents; Anchor Tag <A HREF> and <A NAME>, Inserting Images Image Link, Horizontal Rules <HR ALIGN, WIDTH, SIZE, NOSHADE>;

MODULE - III

Tables: Creating Tables, Border, TH, TR, TD, CELSPACING, CELLPADDING, WIDTH, COLSPAN, CAPTION, ALIGN, CENTER; Frames: Percentage dimensions, Relative dimensions, Frame - Src, Frameborder, height and width, Creating two or more rows Frames <FRAMESET ROWS >, Creating two or more Page 3 Columns Frames <FRAMESET COLS >, <FRAME NAME SRC MARGINHEIGHT MARGINWIDTH SCROLLING AUTO NORESIZE>, <NOFRAMES>, </NOFRAMES>; Forms: Definition, Form Tags: FORM, <SELECT NAME, SIZE, MULTIPLE / SINGLE><OPTION></SELECT>, <TEXTAREA NAME ROWS COLS > , </TEXTAREA>, METHOD, CHECKBOX, HIDDEN, IMAGE, RADIO, RESET, SUBMIT, INPUT <VALUE, SRC, CHECKED, SIZE, MAXLENGTH, ALIGN>;

MODULE - IV

CSS, the Benefits of CSS ,How CSS Works ,Rule Syntax ,Adding Styles to a Document ,Key Concepts ,Specifying Values, Browser Support , Type (Element) Selector ,Font Family ,Font Size ,Other Font Settings ,Text Transformation (Capitalization) Text Decoration, Line Height, Text Alignment Properties, Text Spacing, Text Direction, Margins, Borders, Padding, Foreground Color, Background Color, Background Images, working with tables

MODULE - V

Introduction, Adding VBScript code to HTML page, VBScript Data type, VBScript Variables, VBScript Constants, VBScript Operators, and Operator Precedence; MsgBox: functions of message box , Return values of MsgBox function, Conditional statements: If Then.. Else, Select case; Loops: Do loops, While... Wend, For.. Next, For..Each..Next; Sub procedures, Function procedures;

Reference Books:

- HTML & XHTML: The Complete Reference Guide, 5th Edition
- Web Design in a Nutshell, Second Edition by Jennifer Niederst Robbins, Second Edition September 2001
- Learning Web Design: HTML, Graphics, and Animation
- A Beginner's Guide to HTML, Graphics, and Beyond by Jennifer Niederst Robbins
- Introduction to HTML- Kamlesh N agrawal
- Data communication and networking - Ferozon
- Networking Concepts - Tanunbaum

DCA103
Programming in 'C'

Course Objective:

This course objective is to provide fundamental knowledge of programming language.

Course Outcome:

Student will be able to understand the fundamental knowledge of programming language.

MODULE - I

Overview of C: History of 'C', Structure of 'C' program (Data types int, float, char, double, void, Data structures. Constants and Variables: Variable declaration - integer, real, float, character, logical variables; string variables, Constants, Operators and Expressions: Arithmetic operators, Relational operators, Logical operators, Expressions, Arrays: Array declaration, One and Two dimensional arrays, Advanced features: Type modifiers and storage class specifiers for data types, Bit operators, ? Operators, & operators, * operators, Type casting, type conversion.

MODULE - II

Control Constructs: If-then, For, While. Do-while, Switch statements, Break & continue, Exit function, Go to and label. Scope rules: Local and Global variables, Functions - Fundamentals: General form, scope rules of functions, Function arguments, returns value, Parameter passing; call-by-value and call-by-reference, calling functions with arrays, Recursion: Basic concept

MODULE - III

Pointers: & and * operators, initializing pointers, Pointer expression, pointer assignments, Dynamic allocation functions pointers vs. Arrays, Arrays of pointer, pointers to pointer

MODULE - IV

Pointers to functions, Structures: Basic of structures, declaring a structure, arrays of structures, passing structure to functions, arrays and structure Unions: declaration, uses, enumerated data types, typedef

MODULE - V

File handling: file pointer, file accessing functions, fopen, fclose, putc, getc, fprintf, C pre-processor, C standard library and header files, standard Library functions, string functions, mathematical functions, date and time function

TEXT BOOK

- Programming in C - Yashwant Kenetkar
- Programming in 'C' - Venugopal
- Mastering in CPP - Venugopal

Reference Book

- The art of C Programming - Jones, Robin & Stewart, Narosa Publishing House
- C Problem solving and Programming - A. Kenneth, Prentice Hall International
- C made easy - H.Schildt, McGraw Hill Book Company
- The C Programming Language - Kernigham and Ritchie [Prentice Hall].
- Application Programming in C - Richard Johnson-baugh & Martin Kalin Macmillan International Editions
- The Spirit of C - Mullish Cooper, Jaico publishing House.
- How to solve it by Computers - R.G.Dromey, Prentice Hall of India.

DCA201
DBMS CONCEPTS

Course Objective:

Teaches student fundamentals of database, SQL commands and its application.

Course Outcome:

Student will be able to understand the fundamentals of database, SQL commands and its application.

MODULE – I: Traditional file processing system: Characteristics, limitations, Database: Definition, composition., Database Management system: Definition, Characteristics, advantages over traditional file processing system, Implication of Database approach, User of database, DBA and its responsibilities, Database schema, Database languages: DDL, DML, DCL, Database utilities, Data Models, Keys: Super, candidate, primary, unique, foreign.

MODULE – II: Entity relationship model: concepts, mapping cardinalities, entity relationship diagram, weak entity sets, strong entity set, aggregation, generalization, converting ER diagrams to tables,

Overview of Network and Hierarchical model, Relational Data model: concepts, constraints. Relational algebra: Basic operations, additional operations

MODULE – III: Database design: Functional dependency, decomposition, problems arising out of bad database design, normalization, multi-valued dependency. Database design process, database protection, database integrity, database concurrency: Problems arising out of concurrency, methods of handling concurrency. Data recovery, database security: Authentication, authorization, methods of implementing security

MODULE – IV: Introduction to SQL ,Data Types ,Character, Char, Varchar/Varchar2,Long, Number - Column-name number, column-name number(p) - fixed point, column-name number (p,s) - floating point ,Date data type, Raw data type, Long raw data type ,LOB data type - CLOB, BLOB, BFILE, Table - Constraint definition, Domain, Entity, Referential ,Create table - Alter table, Drop table, Normalization (Applied) Commands and clause - Insert, update, delete, with where clause ,Queries and SQL functions ,Select with all options ,Operations and operators - Arithmetic, Comparison, Logical (in, out, between, like, all, %, any, exists, not exists, is null, is not null, and, or, not) Query Expression Operators - Union, intersect, minus SQL functions ,Date - Sys_date, new_time, next_day, add_month, last_day, months_between Numeric - round, trunc, abs, ceil, cos, exp, floor Character - initcap, lower, upper, trim, translate, length, char Conversion - to_char, to_date, to_number Miscellaneous - Uid, User, nvl, vsize

MODULE – V: Group function Avg, max, min, sum, count, Group by clause, having clause Expression (Set operations : join) Set Operations - union, union all, intersect, minus, Relating data through join concept - Join theory, Simple join, Equi join ,Non equi join - Self join, Outer join ,Table aliases Query and sub-queries ,Introduction to object oriented database - Concept ,Object binding in Oracle - Class, Attribute, Methods, Object type, Definition, Declaring and initializing, Methods , Alter and Drop type, Views and synonyms ,Synonym - Introduction ,Object type - User definition with example , Create, synonyms as alias for table and view, drop, Sequence - Introduction, creates with option, alter sequence, drop ,View - into, creates, update, drop ,Index - Introduction, create ,Primary introduction to DBA, User create, granting ,Privileges - Object, System, User (GRANT, REVOKE, COMMIT, ROLLBACK, SAVEPOINT) ,Report writer using SQL.

TEXT & REFERENCE BOOKS:

- Understanding ORACLE by Perry J. and Later J. SQL by Scott Urman ORACLE PL/SQL Programming by Scott Urman
- Expert One on One : Oracle by Wrox PL/SQL by Ivan Bayross
- Database system concept - H. Korth and A. Silberschatz, TMH
- Data Base Management System - Alexies & Mathews [Vikas publication]
- Data Base Management System - C. J. Date [Narosha Pub.]
- Data Base Management System - James Matin
- Principles of Database System - Ullman
- An Introduction to database systems - Bipin Desai, Galgotia Publication.
- Database Management System - A. K. Majumdar & P. Bhattacharya, TMH

DCA202
DESKTOP Publishing

Course Objective:

This course objective is to provides fundamental knowledge of desktop publishing.

Course Outcome:

Student will be able to understand the knowledge of desktop publishing

MODULE-I

DTP, 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 laser printer in publication.

MODULE -II

Introductions To Page Maker, Page Maker Icon and help, Tool Box, Styles, Menus etc., Different screen Views, Importing text/Pictures, Auto Flow, Columns, **Page Layout** Different page format / Layouts, News paper page format, Page orientations, Columns & Gutters, Printing in reduced sizes.

MODULE -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.

MODULE -IV

Introduction to Adobe Photoshop & Documents, Various Graphic Files and Extensions, Vector Image and Raster Images, Various Colour Modes and Models

MODULE -V

Introduction to Screen and Work Area, Photoshop Tools & Palettes ,Use of Layers & Filters, Working with Images.

TEXT & REFERENCE BOOKS:

1. PAGE MAKER 4.0 & 5.0 BY B.P.B. PUBLICATIONS.
2. PRAKHAR COMPLETE COURSE FOR DTP (CORELDRAW, PAGEMAKER, PHOTOSHOP)

Practical LAB:

1. Complete Page Maker S/W
2. Complete Adobe Photoshop
3. Hindi Typing on Page Maker and MS-Word.

DCA203
MINI PROJECT