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COURSE CODE: CPD-024

COURSE CONTENT & SYLLABUS

H.O.: 3-KHA-4, Sector 3, Vigyan Nagar, Kota-324005, (Rajasthan) India Tel.: 0744-2412009 Fax: 0744-2411150 Mob. +91 94629 67201

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Post Graduate Diploma in Computer Application **COURSE CONTENTS**

COURSE CODE - CPD - 024

ELIGIBILITY : GRADUATE & ABOVE

DURATION: 1 YEAR

SEMESTER - I

MODULE - 1

INFORMATION TECHNOLOGY

COMPUTER FUNDAMENTALS

OPERATING SYSTEM (WINDOWS XP/W7)

MICROSOFT OFFICE (WORD/ EXCEL/POWER POINT)

MS ACCESS WITH DATA BASE DESIGNING

INTERNET & E-MAIL

HARDWARE & SOFTWARE INSTALLATION

INTRODUCTION OF NETWORKING

TYPES OF NETWORKING

USES OF NETWORKING

Post Graduate Diploma in Computer Application

MODULE SUBJECT

MODULE SUBJECT

CORELDRAW

SUBJECT CODE - NAC

ADOBE: PHOTOSHOP, PAGMAKER

SUBJECT CODE - NFC

FUNDAMENTAL OF COMPUTER

MODULE - 2

DESK TOP PUBLICATION

INTRODUCTION OF DTP

ADVERTISEMENT & VISITING CARDS

INTRODUCTION OF PAGEMAKER

IMPLEMENTATION OF TEXT EDITING, TEXT FORMATTING IN PAGEMAKER

CREATION OF MASTER PAGES IN PAGEMAKER

INTRODUCTION OF NEWSLETTERS, LETTERHEADS,

IMPLEMENTATION OF GRAPHICS & OBJECTS IN PAGEMAKER

MANAGING & PRINTING PUBLICATION IN PAGEMAKER

INTRODUCTION OF PHOTOSHOP

MANAGEMENT OF FILE IN PHOTOSHOP

PROCESSING ON IMAGE IN PHOTOSHOP

TOOLS OF PHOTOSHOP

LAYERS SELECTION & VIEW

IMPLEMENTATION OF FILTERS IN PHOTOSHOP

INTRODUCTION OF COREL DRAW

CREATION & SELECTION OF DRAWING

WORKING WITH TEXT

WORKING WITH IMAGE

WORKING WITH PAGE LAYOUT & BACKGROUND

CREATION OF GREETINGS, WEDDING CARDS, POSTER, VISITING CARD & PAM PLATE

MODULE - 3

MODULE SUBJECT

SUBJECT CODE - NHD

HTML & DHTML

MODULE SUBJECT

C LANGUAGE

SUBJECT CODE - NCL

WEB DESIGNING WITH HTML & FRONTPAGE

DESIGNING OF WEBPAGE & WEBSITE

DESIGNING LIST IN WEBPAGE

INTRODUCTION OF HTML

INTRODUCTION OF IMAGE, LINK & FRAME TAG

INTRODUCTION OF TABLE & FORM TAG

INTRODUCTION OF DHTML

INTRODUCTION OF MICROSOFT FRONTPAGE

CREATION OF WEBPAGE & WEBSITE

SEMESTER - II

MODULE - 4

C LANGUAGE

FUNDAMENTAL OF C LANGUAGE

OPERATORS

DECISION MAKING STATEMENT

LoBand Strendwate Diploma in Computer Application

THE STATEMENT

AN ARRAY

FUNCTION

CHARACTER STRING

POINTER

STRUCTURES

MODULE - 5

C++ LANGUAGE

MODULE SUBJECT

FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING

SUBJECT CODE - NCL2

C++ LANGUAGE

PROGRAMMING IN C++

DATA TYPES, VARIABLE, CONSTANT

ARRAY

USER DEFINED FUNCTIONS

MATHEMATICAL & OTHER FUNCTIONS

CLASSES & OBJECTS

CONSTRUCTOR & DESTRUCTOR

POLYMORPHISM

OPERATOR OVERLOADING

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION INHERITANCE

FILE HANDLING

MODULE - 6

VISUAL BASIC

MODULE SUBJECT

SUBJECT CODE - NVB

VISUAL BASIC

FUNDAMENTAL OF VISUAL BASIC

ELEMENT OF VISUAL BASIC

PROGRAMMING STATEMENTS

ARRAY N PROCEDURES

CREATION OF PROJECT

ACTIVE X CONTROLS

WORKING WITH FORM

WORKING WITH GRAPHICS

DATABASE PROGRAMMING WITH VISUAL BASIC

MODULE - 7

SYSTEM ANALYSIS & DESIGN

SYSTEM CONCEPT AND SYSTEM ENVIRONMENTS

SYSTEM DEVELOPMENT LIFE CYCLE

ROLE OF SYSTEM ANALYST

SYSTEM PLANNING

INFORMATION GATHERING

STRUCTURED ANALYSIS

FEASIBILITESTURY uate Diploma in Computer Application

COST- BENEFIT ANALYSIS

THE PROCESS & STAGES OF SYSTEM DESIGN

FORM DESIGN

FILE ORGANIZATION & DATABASE DESIGN

SYSTEM TESTING AND QUALITY ASSURANCE

SYSTEM SECURITY & DISASTER RECOVERY PLANNING

SUBJECT CODE - NSD

MODULE SUBJECT

SYSTEM ANALYSIS & DESIGN

Post Graduate Diploma in Computer Application

COURSE SYLLABUS

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Module -1

INTRODUCTION OF COMPUTER

A. FUNDAMENTAL OF COMPUTER

- A-1 HISTORY OF COMPUTER
- A-2 DEVELOPMENT OF COMPUTER
- A-3 Types of computer
- A-4 INPUT & DUTPUT DEVICE
- A-5 MEMORY
- A-6 PERSONAL COMPUTER

B. OPERATING SYSTEM

- B-1 INTRODUCTION OF WINDOWS XP, 2007, 2008
- B-2 FUNCTION OF OPERATING SYSTEM
- Post Typeschrater Application
 - B-4 USER INTERFACE (E.G.:-TASKBAR, ICON, START MENU)

C. DESIGN TOOLS & PROGRAMMING LANGUAGE

- C-1 Introduction of design tools
- C-2 INTRODUCTION OF FLOW CHART
- C-3 INTRODUCTION OF PROGRAMMING LANGUAGE

D. MS WORD 2007

D-1 INTRODUCTION OF WORD PROCESSING

- D-1.1 STEPS OF WORD PROCESSING
- D-1.2 OPENING WORD PROCESSING PACKAGES
- D-1.3 MENU BAR
- D-1.4 USING SHORTCUT
- D-1.5 USING BUTTONS/TOOLS

D-2 OPENING, CLOSING & PRINTING DOCUMENTS

- D-2.1 OPENING DOCUMENTS
- D-2.2 SAVE & SAVE AS
- D-2.3 PAGE SET-UP
- D-2.4 PRINTING & PREVIEW

D-3 DOCUMENT CREATION & MANIPULATION

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION D-3.1 DOCUMENT CREATION D-3.2 EDITING TEXT

- D-3.3 TEXT SELECTION
- D-3.4 CUT, COPY, PASTE
- D-3.5 TEXT AND PARAGRAPH DELETION

D-4 TEXTS FORMATTING

- D-4.1 TEXT FONT & SIZE CHANGE
- D-4.2 ALIGNMENT OF TEXT
- D-4.3 CASES CHANGING
- D-4.4 ALIGNMENT OF PARAGRAPH
- D-4.5 SPACING & COLORING OF PARAGRAPH
- D-4.6 BULLETS & INDENTATION

D-5 UPADATION OF PAGE LAYOUT

- D-5.1 CHANGE OF ORIENTATION OF PAGE
- D-5.2 CHANGE OF SIZE OF PAGE
- D-5.3 CREATIONS OF COLUMNS
- D-5.4 IMPLEMENT WATERMARKS, PAGE COLOR AND BORDERS

D-6 VIEW & REVIEW DOCUMENT

- D-6.1 CHANGE IN LAYOUT
- D-6.2 SHOW/HIDE RULERS & GRIDS
- D-6.3 IMPLEMENT ZOOM VIEW
- D-6.4 REVIEW OF DOCUMENT SUCH AS CHECKING SPELLING & GRAMMAR
- D-6.5 IMPLEMENT THE ASURUES, COMMENT

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- D-7.1 MAIL MERGE PROCESS
- D-7.2 PRINTING & SENDING OF MAILS
- D-7.3 CREATION OF ENVELOPS, LETTERS & LABELS

D-8 TABLE MANIPULATION

- D-8.1 DRAW TABLE
- D-8.2 CHANGING CELL WIDTH & HEIGHT
- D-8.3 ALIGNMENT OF TEXT IN CELL
- D-8.4 DELETION/INSERTION OF ROW & COLUMN
- D-8.5 BORDER & SHADING

E. MS POWERPOINT 2007

E-1 INTRODUCTION OF PRESENTATION

- E-1.1 OPENING PRESENTATION
- E-1.2 SAVING PRESENTATION
- E-1.3 PRINTING PRESENTATION

E-2 CREATION OF PRESENTATION

- E-2.1 CREATING A PRESENTATION USING A TEMPLATE
- E-2.2 CREATING A BLANK PRESENTATION
- E-2.3 ENTERING & EDITING TEXT
- E-2.4 INSERTING & DELETING SLIDES IN A PRESENTATION

E-3 PREPARATIONS OF SLIDES

- E-3.1 ADDING PICTURE, CLIPART, SHAPES
- E-3.2 INSERT TABLE, CHART, SMART ART, WORD ART
- E-3.3 INSERTING OTHER OBJECTS

E-4 FORMATION OF PRESENTATION

- E-4.1 WORKING WITH COLOR & TEXTURES
- E-4.2 CHANGE FONT & SIZE OF TEXT
- E-4.3 CHANGE ALIGNMENT
- E-4.4 IMPLEMENT BULLETS, NUMBERING & INDENTATION
- E-4.5 SPACING & CASE CHANGE

E-5 VIEW & REVIEW OF PRESENTATION

- E-5.1 IMPLEMENTATION OF LAYOUT
- E-5.2 SHOW & HIDE RULERS & GRIDLINES
- E-5.3 REVIEW OF PRESENTATION SUCH AS SPELLING CHECK & GRAMMAR
- E-5.4 IMPLEMENT THESAURUSES AND COMMENT

E-6 DESIGNING & ANIMATION OF PRESENTATION

- E-6.1 IMPLEMENTATION OF ORIENTATION
- E-6.2 IMPLEMENTATION OF THEMES & BACKGROUND
- E-6.3 IMPLEMENTATION OF ANIMATION & SLIDE TRANSITION
- E-6.4 IMPLEMENTATION OF MOVIE & SOUND

E-7 SLIDE SHOWS

- E-7.1 RUNNING A SLIDE SHOW
- E-7.2 TRANSITION & SLIDE TIMING
- Post G-7-3 AUTEMATING A SLIDE IS TO COMPUTE Application

F. MS EXCEL 2007

F-1 INTRODUCTION OF MS EXCEL

- F-1.1 CREATION OF WORKBOOK
- F-1.2 OPENING OF SPREADSHEET
- F-1.3 SAVING OF SPREADSHEET
- F-1.4 PRINTING OF SPREADSHEET

F-2 MANIPULATIONS OF CELLS

- F-2.1 ENTERING TEXTS & DATES
- F-2.2 EDITING WORKSHEET DATA
- F-2.3 INSERTING & DELETING ROW, COLUMN & SHEETS
- F-2.4 CHANGING CELL HEIGHT & WIDTH
- F-2.5 FORMATTING OF ROW, COLUMN & SHEETS
- F-2.6 IMPLEMENTING SORTING & FILTERING

F-3 FUNCTION & CHARTS

- F-3.1 USING FORMULAE'S
- F-3.2 USING FUNCTION
- F-3.3 USING CHART

F-4 VIEW & REVIEW OF WORKSHEET

- F-4.1 APPLYING DIFFERENT LAYOUTS OF WORKSHEET
- F-4.2 SHOW/HIDE RULER, GRIDLINES, HEADING

- F-4.3 VERIFY SPELLING & GRAMMAR
- F-4.4 IMPLEMENT THESAURUS & COMMENTS

G. MS ACCESS 2007

G-1 INTRODUCTION OF MS ACCESS

- G-1.1INTRODUCTION OF DATABASE
- G-1.2 INTRODUCTION PRIMARY KEY
- G-1.3 INTRODUCTION OF RELATIONSHIP
- G-1.4 CREATION OF DATABASE
- G-1.5 OPENING & SAVING OF DATABASE
- G-1.6 SAVING & PRINTING OF DATABASE

G-2 INTRODUCTION OF TABLE

- G-2.1 INTRODUCTION OF TABLE
- G-2.2 INTRODUCTIONS OF DATA TYPES
- G-2.3 INTRODUCTION OF TYPES OF DATA TYPES
- G-2.4 CREATION OF TABLE
- G-2.5 OPENING & SAVING OF TABLE
- G-2.6 SAVING & PRINTING OF TABLE

G-3 INTRODUCTION OF QUERY

- G-3.1 INTRODUCTION OF QUERY
- G-3.2 CREATION OF QUERY
- G-3.3 OPENING & SAVING OF QUERY
- G-3.4 SAVING & PRINTING OF QUERY
- G-3.5 FORMATTING OF QUERY

G-4 INTRODUCTION OF FORM Computer Application

- G-4.1 INTRODUCTION OF FORM
- G-4.2 CREATION OF FORM
- G-4.3 OPENING & SAVING OF FORM
- G-4.4 SAVING & PRINTING OF FORM
- G-4.5 FORMATTING OF FORM

G-5 INTRODUCTION OF REPORT

- G-5.1 INTRODUCTION OF REPORT
- G-5.2 CREATION OF REPORT
- G-5.3 OPENING & SAVING OF REPORT
- G-5.4 SAVING & PRINTING OF REPORT
- G-5.5 FORMATTING OF REPORT

H. COMMUNICATION & E-MAIL

H-1 INTRODUCTION OF COMMUNICATION

- H-1.1 TYPES OF COMMUNICATION
- H-1.2 PROCESS OF COMMUNICATION
- H-1.3 ONLINE & OFFLINE OF COMMUNICATION

H-2 INTRODUCTION OF E-MAIL

- H-2.1 USING OF E-MAIL
- H-2.2 PROCESS OF SENDING & RECEIVING OF E-MAIL

- H-2.3 PROCESS OF ATTACHMENT OF DOCUMENT WITH E-MAIL
- H-2.4 CREATION & LOGIN PROCESS OF E-MAIL ACCOUNT
- H-2.5 DIFFERENT TRANSMISSION MEDIUM

I. NETWORK & INTERNET

I-1 INTRODUCTION OF NETWORK

- I-1.1 TYPES OF NETWORK
- I-1.2 TYPES OF NETWORK TOPOLOGY

I-2 INTRODUCTION OF INTERNET

- I-2.1 BASIC STRUCTURE OF INTERNET ARCHITECTURE
- I-2.2 INTRODUCTION OF INTERNET SERVICE PROVIDER
- I-2.3 INTRODUCTIONS OF INTERNET PROTOCOLS

I-3 SERVICE ON INTERNET

- I-3.1 WORLD WIDE WEB & WEBSITES
- I-3.2 INTERNET SERVICES
- I-3.3 COMMUNICATIONS ON INTERNET

I-4 PREPARING COMPUTER FOR INTERNET ACCESS

- I-4.1 ISP'S SUCH AS DIAL-UP/BROADBAND/WI-FI
- I-4.2 Access Techniques

I-5 WEB BROWSERS

- I-5.1 INTRODUCTION OF WEB BROWSER
- I-5.2 INTRODUCTION OF POPULAR WEB BROWSING SOFTWARE
- I-5.3 CONFIGURING WEB BROWSER

I-6 SEARCH ENGINE

- Post Gadurroduction of Search Engine ter Application
 - I-6.2 SURFING/ SEARCHING OF CONTENTS
 - I-6.3 DOWNLOADING/UPLOADING
 - I-6.4 PRINTING THE WEBPAGE

MODULE - 2

DESKTOP PUBLICATION

1. DTP

- A-1 INTRODUCTION OF DTP
- A-2 Introduction of Newsletter & Letter Heads
- A-3 INTRODUCTION OF ADVERTISEMENT & VISITING CARD

2. PAGEMAKER

- A-1 INTRODUCTION OF PAGEMAKER
- A-2 IMPLEMENTATION OF PAGEMAKER
- A-3 USES OF PAGEMAKER
- A-4 WORKING ITH PAGEMAKER
- A-5 INTRODUCTION OF PAGEMAKER WINDOWS
- A-6 INTRODUCTION OF TOOLS OF PAGEMAKER
- A-7 INTRODUCTION OF MASTERPAGES

- A-8 WORKING WITH PUBLICATION
- A-9 WORKING WITH TEXT
- A-10 CHANGING THE VIEW OF PAGES
- A-11 IMPORTING TEXT & GRAPHICS
- A-12 SAVING & CLOSING OF PUBLICATION

B. TEXT EDITING

- **B-1** Introduction of editing publication
- B-2 OPENING AN EXISTING PUBLICATION
- B-3 EDITING IN A PUBLICATION
- B-4 IV INTRODUCTION OF STORY EDITOR
- B-5 OPENING STORY EDITOR
- B-6 FINDING & REPLACING OF A WORD IN STORY
- B-7 VII CHECKING SPELLING IN THE PUBLICATION
- B-8 CLOSING THE STORY EDITOR
- **B-9** CORRECTING MISTAKES
- B-10 USE OF REVERT OPTION

C. TEXT FORMATTING

- C-1 INTRODUCTION OF TEXT FORMATTING
- C-2 CHANGING FONT
- C-3 ADJUSTING THE GRAPHIC ALONG THE TEXT
- C-4 CHANGING FONT SIZE & STYLE
- C-5 TRACKING & KERNING STYLES
- Pcsé ներոժանեն Diptyleshiet Computer Application
 - C-7 CREATING STYLE SHEET
 - C-8 SPECIFYING CHARACTER & PARAGRAPH ATTRIBUTES OF STYLE
 - C-9 APPLYING A STYLE FROM STYLE SHEET
 - C-10 IMPORTING STYLES
 - C-11 APPLYING BULLETS & NUMBERING

D. MASTER PAGES

- D-1 INTRODUCTION OF MASTER PAGES
- D-2 ADDING TEXT TO THE PUBLICATION
- D-3 INTRODUCTION OF AUTOFLOW
- D-4 CREATION OF MASTER PAGES
- D-5 PLACING ELEMENTS ON MASTER PAGES
- D-6 PLACING HEADER & PAGE NUMBER
- D-7 ADDING COLUMNS TO THE PUBLICATION
- D-8 APPLYING A MASTER PAGES
- D-9 EDITING A MASTER PAGES
- D-10 APPLYING ALIGNMENTS & LEADING

E. GRAPHICS & OBJECTS

- E-1 INTRODUCTION OF GRAPHICS & OBJECTS
- E-2 GETTING FAMILIAR WITH THE TOOLS
- E-3 CREATION OF GRAPHICS
- E-4 DISPLAY COLOR PALETTE
- E-5ADDING TEXT TO THE GRAPHICS
- E-6 WRAPPING TEXT AROUND A GRAPHICS
- E-7 IMPORTING GRAPHICS
- E-8 RESIZING A GRAPHICS
- E-9 MOVING A GRAPHIC
- E-10 ADDING CAPTION FOR THE GRAPHICS
- E-11CROPPING A GRAPHICS
- E-12 GROUPING & UNGROUPING ELEMENTS
- E-13 LINKS & SETTING DEFAULT LINK OPTION
- E-14 LINKS MANAGER
- E-15 CHANGING THE LINK OPTION

F. MANAGING & PRINTING PUBLICATION

- F-1 INTRODUCTION OF MANAGING & PRINTING OF PUBLICATION
- F-2 INTRODUCTION OF PAGE SETTING OF PAGEMAKER
- F-3 INTRODUCTION OF TABLE CONTENTS
- F-4 SETTING HEADING LEVELS FOR TOC
- F-5 CREATING A TOC
- F-6 CREATION OF BOOK
- P சூர் நாள்கு அச்சு பிப்பிலாக in Computer Application
 - F-8 USING PRINT DIALOG BOX

3. PHOTOSHOP

A.INTRODUCTION OF PHOTOSHOP

- A-1 LOADING PROCESS OF PHOTOSHOP
- A-2 INTRODUCTION OF PHOTOSHOP PROGRAM WINDOWS
- A-3 INTRODUCTION OF TOOLBOX
- A -4 USES OF TOOLS OF PHOTOSHOP

B. MANAGEMENT OF FILE

- **B-1** INTRODUCTION OF MANAGEMENT
- B-2 OPENING FILE IN PHOTOSHOP
- B-3 FILLING COLOR
- B-4 SAVING A FILE
- B-5 ADDING INFORMATION TO FILE
- B-6 SETTING PAGE SETUP
- B-7 ADDITION OF EXTRA FILES IN PHOTOSHOP
- **B-8** FILE BROWSING
- B-9 CREATION OF WEB PHOTO GALLERY

B-10 CREATION OF PHOTO ALBUM

C. PROCESSING ON IMAGE

- C-1 INTRODUCTION OF PROCESSING ON IMAGE
- C-2 CHANGING MODE OF PHOTO
- C-3 APPLYING ADJUSTMENT
- C-4 MAINTAIN COLOR BALANCE
- C-5 APPLY STROKE
- C-6 APPLYING FREE TRANSFORMATION
- C-7 APPLYING ROTATION, SKEW & SCROLLING

D. EDITING FILE

- D-1 INTRODUCTION OF EDITING
- D-2 APPLYING CUT, COPY & PASTE
- D-3 FINDING & CHECKING OF WORD
- D-4 CREATION OF BRUSHES
- D-5 APPLYING PRESET MANAGER
- D-6 SETTING OF IMAGE & CANVAS SIZE
- D-7 APPLYING CROP ON PHOTOSHOP

E. TOOLS OF PHOTOSHOP

- E-1 INTRODUCTION OF TOOLS
- E-2 USE OF DIFFERENT TOOLS
- Post Graduate Diploma in Computer Application

F. LAYER SELECTION & VIEW

- F-1 INTRODUCTION OF LAYER
- F-2 USE OF LAYER IN PHOTOSHOP
- F-3 ADJUSTMENT OF LAYERS
- F-4 DUPLICATION & DELETION OF LAYERS
- F-5 STYLES OF LAYERS
- F-6 TYPES OF LAYERS
- F-7 COLOR BALANCE OF LAYERS
- F-8 FEATHER & MODIFIED OF LAYERS
- F-9 CUSTOMIZE OF VIEWS
- F-10 SHOW/HIDE OF TOOLS OF PHOTOSHOP

G. FILTERS

- G-1 INTRODUCTION OF FILTERS
- G-2 TYPES OF FILTERS
- G-3 USES OF FILTERS
- G-4 IMPLEMENTATION OF FILTERS ON PHOTO

4. COREL DRAW

A. INTRODUCTION OF CORELDRAW

- A-1 LOADING OF CORELDRAW
- A-2 CREATING A NEW FILE
- A-3 INTRODUCTION OF DIFFERENT TOOL BARS
- A-4 INTRODUCTION OF TOOLS OF CORELDRAW
- A-5 DRAW GEOMETRIC FIGURES
- A-6 SAVING A FILE
- A-7 CLOSING A FILE
- A-8 OPENING AN EXISTING FILE
- A-9 INTRODUCTION OF VIEWS
- A-10 IMPLEMENTATION OF DIFFERENT VIEWS OF CORELDRAW
- A-11 IMPLEMENTATION OF ZOOM
- A-12 IMPLEMENTATION OF VIEW MANAGER

B. CREATION & SELECTION OF DRAWING

- **B-1** GETTING FAMILIAR WITH TOOLBOX
- B-2 GETTING STARTED WITH PROJECT
- B-3 SELECTING AN OBJECT
- **B-4** RESIZING AN OBJECT
- B-5 MOVING AN OBJECT
- B-6 CHANGING THE SHAPE OF AN OBJECT
- B-7 COMBINING TWO OBJECTS
- B-8 SKEWING AN OBJECT
- B-9 DRAWING A POLYGON OMA IN Computer Application
- B-10 WELDING THE OBJECT
- B-11 BLENDING TWO OBJECT
- B-12 USE OF ARTISTIC MEDIA TOOL
- B-13 ROTATING AN OBJECT
- B-14 FILLING AN OBJECT WITH COLOR
- B-15 POSTSCRIPT FILL DIALOG TOOL

C. WORKING WITH TEXT

- C-1 INTRODUCTION OF TEXT TOOL
- C-2 INTRODUCTION OF ARTISTIC & PARAGRAPH TEXT
- C-3 CREATION OF BOOK COVER
- C-4 FORMATTING THE TEXT
- C-5 ARRANGING OBJECTS
- C-6 ORDERING THE OBJECTS
- C-7 USES OF WEBDINGS

D. WORKING WITH IMAGE

- D-1 INTRODUCTION OF IMAGE
- D-2 TYPES OF IMAGES

- D-3 IMPORTING IMAGES
- D-4 RESIZING, ROTATING & SKEWING IMAGES
- D-5 MOVING & CROPPING OF IMAGE
- D-6 IMPORTING IMAGES FROM A CD
- D-7 ADDING SPECIAL EFFECTS TO BITMAPS
- D-8 INTRODUCTION OF 3D EFFECTS
- D-9 EXPORTING IMAGE TO OTHER APPLICATIONS

E. WORKING WITH PAGE LAYOUT & BACKGROUND

- E-1 INTRODUCTION OF PAGE LAYOUT & BACKGROUND
- E-2 CHANGING PAGE SIZE, TYPE, ORIENTATION
- E-3 CHANGING THE PAGE LAYOUT & USE OF DIFFERENT LAYOUT
- E-4 APPLYING LAYOUT STYLES
- E-5 CHANGING PAGE BACKGROUND
- E-6 APPLYING BITMAPS TO BACKGROUND
- E-7 ADDING PAGE FRAME
- E-8 ADDING PAGES

Module - 3

WEB DESIGNING WITH HTML & FRONTPAGE

A. INTRODUCTION OF HTML

- A-1 CONCEPT OF HTML
- A-2 CONCEPT OF WEB BROWSER
- PA-3 CONCEPT OF CLIENT & SERVER ARCHITURERE! Application
 - A-4 CONCEPT OF URL
 - A-5 STRUCTURE OF WEBPAGE
 - A-6 CONCEPT OF TAGS & ATTRIBUTES

B. DESIGNING OF WEBPAGE & WEBSITE

- B-1 INTRODUCTION OF WEBPAGE & WEBSITE
- B-2 TYPES OF TAGS & ATTRIBUTES
- B-3 CREATION OF WEBPAGE
- B-4 INTRODUCTION OF BASIC TAGS
- B-5 INTRODUCTION OF HEADING TAG
- B-6 INTRODUCTION OF FORMATTING TAG
- B-7 INTRODUCTION OF PARAGRAPH & FONT TAG

C. DESIGNING LIST IN WEBPAGE

- C-1 INTRODUCTION OF LISTS
- C-2 INTRODUCTION OF ORDERED LIST
- C-3 CREATION OF WEBPAGE BY ORDERED LIST
- C-4 INTRODUCTION OF UNORDERED LIST
- C-5 CREATION OF WEBPAGE BY UNORDERED LIST

- C-6 INTRODUCTION OF DEFINITION LIST
- C-7 CREATION OF WEBPAGE BY DEFINITION LIST
- C-8 INTRODUCTION OF HORIZONTAL ROW
- C-9 CREATION OF WEBPAGE BY HORIZONTAL ROW
- C-10 INTRODUCTION OF ADDRESS TAG
- C-11 CREATION OF WEBPAGE BY ADDRESS TAG

D. IMAGE TAG

- D-1 INTRODUCTION OF IMAGE TAG
- D-2 INTRODUCTION OF DIFFERENT ATTRIBUTES OF IMAGE TAG
- D-3 CREATION OF WEBPAGE USING IMAGE TAG
- D-4 INTRODUCTION OF IMAGE MAP
- D-5 INTRODUCTION OF DIFFERENT ATTRIBUTES OF IMAGE MAP
- D-6 CREATION OF WEBPAGE USING IMAGE MAP

E. LINK TAG

- E-1 INTRODUCTION OF LINK
- E-2 INTRODUCTION OF TYPES OF LINK
- E-3 INTRODUCTION OF INTERNAL & EXTERNAL LINK
- E-4 CREATION OF WEBPAGE THROUGH LINK
- E-5 CONCEPT OF HYPERLINK
- E-6 INTRODUCTION OF LINK OF DIFFERENT WEBPAGES
- E-7 INTRODUCTION OF IMAGE LINK
- Post Graduate Diploma in Computer Application

F. FRAME TAG

- F-1 INTRODUCTION OF FRAME TAG
- F-2 INTRODUCTION OF DIFFERENT ATTRIBUTES OF FRAME TAG
- F-3 CREATION OF WEBPAGE USING FRAME TAG AS ROW & COLUMN WISE
- F-4 INTRODUCTION OF DIFFERENT TYPES OF FRAME

G. TABLE TAG

- G-1 INTRODUCTION OF TABLE TAG
- G-2 INTRODUCTION OF ATTRIBUTES OF TABLE TAG
- G-3 Introduction of Alignment, Background of Table
- G-4 INTRODUCTION OF CELL PADDING, CELL SPACING OF TABLE
- G-5 INTRODUCTION OF HEADING & CAPTION OF TABLE
- G-6 INTRODUCTION OF EMPTY CELL OF TABLE
- G-7 INTRODUCTION OF NESTING OF TABLE
- G-8 INTRODUCTION OF FRAME OF TABLE
- G-9 CREATION OF WEBPAGE USING TABLE TAG

H. FORM TAG

- H-1 INTRODUCTION OF FORM TAG
- H-2 Introduction of different attribute of form TAG
- H-3 CREATION OF FORM USING FORM TAG

I. DHTML

- I-1 INTRODUCTION OF DHTML
- I-2 INTRODUCTION OF CASCADING STYLE SHEETS
- I-3 INTRODUCTION OF ATTRIBUTES OF STYLE
- 1-4 CREATION OF WEBPAGE USING DIFFERENT ATTRIBUTES OF STYLE

SEMESTER - II

Module -4

C LANGUAGE

A. FUNDAMENTAL OF C LANGUAGE

- A-1 HISTORY OF C LANGUAGE
- A-2 FEATURES OF C LANGUAGE
- A-3 BASIC STRUCTURE OF C LANGUAGE
- A-4 PROGRAM DEVELOPMENT OF C LANGUAGE
- A-5 COMPONENTS OF C LANGUAGE
- A-6 C TOKENS
- A-7 TYPES OF DATA TYPES
- A-8 INTRODUCTION OF ESCAPE SEQUENCES
- A-9 INTRODUCTION OF FORMAT SPECIFIERS
- A-10 INTRODUCTION OF STANDARD INPUT & OUTPUT FUNCTION
 - A-11EXAMPLES OF C PROGRAM

B. OPERATORS

- B-1 INTRODUCTION OF OPERATORS
- **B-2** TYPES OF OPERATORS
- B-3 WORKING WITH ASSIGNMENT OPERATOR
- B-4 WORKING WITH ARITHMATIC OPERATOR
- B-5 WORKING WITH ADDRESS OPERATOR
- B-6 WORKING WITH RELATIONAL OPERATOR
- B-7 WORKING WITH LOGICAL OPERATOR
- B-8 WORKING WITH SIZE OF OPERATOR
- B-9 WORKING WITH CONDITIONAL OPERATOR
- **B-10** WORKING WITH INCREMENT/DECREMENT OPERATOR
- B-11 WORKING WITH UNARY MINUS OPERATOR

C. DECISION MAKING STATEMENT

- C-1 INTRODUCTION OF STATEMENT
- C-2 TYPES OF STATEMENT
- C-3 DECISION STATEMENT
 - C-3.1 DECISION STATEMENT WITH IF STATEMENT
 - C-3.II STRUCTURE & SYNTAX OF IF STATEMENT
 - C-3.III CREATION OF PROGRAM WITH IF STATEMENT

- **C-4**
- C-4.I DECISION STATEMENT WITH IF ELSE STATEMENT
- C-4.II STRUCTURE & SYNTAX OF IF ELSE STATEMENT
- C-4.III CREATION OF PROGRAM WITH IF ELSE STATEMENT
- **C-5**
- C-5.I DECISION STATEMENT WITH NESTED IF ELSE STATEMENT
- C-5.II STRUCTURE & SYNTAX OF NESTED IF ELSE STATEMENT
- C-5.III CREATION OF PROGRAM WITH NESTED IF ELSESTATEMENT
- C-6
- C-6. DECISION STATEMENT WITH ELSE IF LADDER STATEMENT
- C-6.II STRUCTURE & SYNTAX OF ELSE IF LADDER STATEMENT
- C-6.III CREATION OF PROGRAM WITH ELSE IF LADDERSTATEMENT
- **C-7**
- C-7.I DECISION STATEMENT WITH SWITCH STATEMENT
- C-7.11 STRUCTURE & SYNTAX OF SWITCH STATEMENT
- C-7.III CREATION OF PROGRAM WITH SWITCH STATEMENT

D. LOOPING STATEMENT

- D-1 INTRODUCTION OF LOOPING STATEMENT
- D-2 TYPES OF LOOPING STATEMENT
- D-3 WHILE LOOP
 - D-3.I INTRODUCTION OF WHILE LOOP STATEMENT
 - D-3.II STRUCTURE & SYNTAX OF WHILE LOOP STATEMENT
 - D-3.III CREATION OF PROGRAM WITH WHILE LOOP STATEMENT
- D-4 DO WHILE STATEMENT
 - D-4.I INTRODUCTION OF DO WHILE LOOP STATEMENT
 - D-4.II STRUCTURE & SYNTAX OF DO WHILE LOOP STATEMENT
- D-4.III CREATION OF PROGRAM WITH DO WHILE LOOPSTATEMENT
- D-5 FOR LOOP STATEMENT
 - D-5.I INTRODUCTION OF FOR LOOP STATEMENT
 - D-5.II STRUCTURE & SYNTAX OF FOR LOOP STATEMENT
 - D-5.III CREATION OF PROGRAM WITH FOR LOOP STATEMENT
- D-6 NESTED FOR LOOP STATEMENT
 - D-6.I INTRODUCTION OF NESTED FOR LOOP STATEMENT
 - D-6.II STRUCTURE & SYNTAX OF NESTED FOR LOOP STATEMENT
 - D-6.IIICREATION OF PROGRAM WITH NESTED FOR LOOP STATEMENT

E. THE STATEMENT

- E-1 INTRODUCTION OF STATEMENT
- E-2 INTRODUCTION OF JUMP STATEMENT
- E-3 INTRODUCTION OF BREAK STATEMENT
- E-4 STRUCTURE & SYNTAX OF BREAK STATEMENT
- E-5 PROGRAM CREATION USING BREAK STATEMENT
- E-6 INTRODUCTION OF CONTINUE STATEMENT
- E-7 STRUCTURE & SYNTAX OF CONTINUE STATEMENT
- E-8 PROGRAM CREATION USING CONTINUE STATEMENT

F. AN ARRAY

F-1 INTRODUCTION OF ARRAY

- F-2 TYPES OF ARRAY
- F-3 ONE DIMENSIONAL ARRAY
 - F-3.I INTRODUCTION OF ONE DIMENSIONAL ARRAY
 - F-3.II DECLARATION OF ONE DIMENSIONAL ARRAY
 - F-3.III INTIALISATION OF ONE DIMENSIONAL ARRAY
 - F-3.IV PROGRAM CREATION USING ONE DIMENSIONAL ARRAY
- F-4 TWO DIMENSIONAL ARRAY
 - F-4.I INTRODUCTION OF TWO DIMENSIONAL ARRAY
 - F-4.II DECLARATION OF TWO DIMENSIONAL ARRAY
 - F-4.III INTIALISATION OF TWO DIMENSIONAL ARRAY
 - F-4.IV PROGRAM CREATION USING TWO DIMENSIONAL ARRAY

G. FUNCTION

- G-1 INTRODUCTION OF FUNCTION
- G-2 TYPES OF FUNCTION
- G-3 ADVANTAGES OF FUNCTION
- G-4 IMPLEMENTATION OF FUNCTION
- G-5 DECLARATION OF FUNCTION
- G-6 CALLING A FUNCTION
- G-7 DEFINING OF USER DEFINED FUNCTION
- G-8 INTRODUCTION OF ACTUAL PARAMETER
- G-9 INTRODUCTION OF FORMAL PARAMETER
- G-10 INTRODUCTION OF CALLING FUNCTION
- G-11 INTRODUCTION OF CALLED FUNCTION
- G-12 PROGRAM CREATION USING FUNCTION
- G-13 CALLING A FUNCTION
 - G-13.I INTRODUCTION OF CALLING A FUNCTION
- G-13.II INTRODUCTION OF CALL BY VALUE
 G-13.III PROGRAM CREATION USING CALL BY VALUE
 - G-13.IV INTRODUCTION OF CALL BY REFERENCE
 - G-13.V PROGRAM CREATION USING CALL BY REFERENCE
 - G-13.VI FUNCTION WITH NO ARGUMENTS AND NO RETURN VALUE
 - G-13.VII FUNCTION WITH ARGUMENTS AND NO RETURN VALUE
 - G-13.VIII FUNCTION WITH NO ARGUMENTS AND RETURN VALUE
 - G-13.IX FUNCTION WITH ARGUMENTS AND RETURN VALUE
 - G-14 ARRAY & FUNCTION
 - G-14.I INTRODUCTION OF ARRAY & FUNCTION
 - G-14.II DECLARATION OF ARRAY & FUNCTION
 - G-14.III PROGRAM CREATION USING ARRAY & FUNCTION
 - G-15 RECURSIVE FUNCTION
 - G-15.I INTRODUCTION OF RECURSIVE FUNCTION
 - G-15.II DECLARATION OF RECURSIVE FUNCTION
 - G-15.III PROGRAM CREATION USING RECURSIVE FUNCTION
 - G-16 STORAGE CLASSES
 - G-16.I INTRODUCTION OF STORAGE CLASSES
 - G-16.II TYPES OF STORAGE CLASSES
 - G-16.III INTRODUCTION OF AUTOMATIC VARIABLE
 - G-16.IV INTRODUCTION OF EXTERNAL VARIABLE
 - G-16.V INTRODUCTION OF STATIC VARIABLE
 - G-16.VI INTRODUCTION OF REGISTER VARIABLE

H. CHARACTER STRING

- H-1 INTRODUCTION OF STRING
- H-2 DECLARATION & INITIALISATION OF STRING VARIABLE
- H-3 READING STRING FROM TERMINAL
- H-4 WRITING STRING TO SCREEN
- H-5 STRING HANDLING LIBRARY FUNCTION
- H-6 PROGRAM CREATION USING CHARACTER STRINGS
- H-7 2-D STRING ARRAY
 - H-7.I INTRODUCTION OF 2-D STRING ARRAY
 - H-7.II DECLARATION OF Z-D STRING ARRAY
 - H-7.III PROGRAM CREATION USING 2-D STRING ARRAY

I. POINTER

- I-1 INTRODUCTION OF POINTER
- I-2 ADVANTAGES OF POINTER
- I-3 ACCESSING THE ADDRESS OF VARIABLE
- I-4 DECLARATION & INITIALIZATION POINTER
- I-5 ACCESSING A VARIABLE VALUE THROUGH ITS POINTER
- I-6 PROGRAM CREATION USING POINTER
- I-7 POINTER & ARRAY
 - I-7.I INTRODUCTION OF POINTER & ARRAY
 - I-7.II DECLARATION ARRAY WITH POINTER
 - I-7.III PROGRAM CREATION USING POINTER & ARRAY
- I-8 POINTER & CHARACTER STRINGS
 - I-8.I INTRODUCTION OF POINTER & CHARACTER STRINGS
 - I-8.II PROGRAM CREATION USING POINTER & CHARACTER STRINGS
- Pd-9t-@yresterenceploma in Computer Application
 - I-9.I INTRODUCTION OF CALL BY REFERENCE
 - I-9.II PROGRAM CREATION USING CALL BY REFERENCE

J. STRUCTURES

- J-1 INTRODUCTION OF STRUCTURE
- J-2 DEFINING A STRUCTURE
- J-3 DECLARING STRUCTURE VARIABLE
- J-4 ACCESSING STRUCTURE MEMBERS
- J-5 INPUT VALUE IN MEMBERS
- J-6 DUTPUT VALUE IN MEMBERS
- J-7 STRUCTURE INITIZALATION
- J-8 STRUCTURE & SYNTAX OF STRUCTURES
- J-9 PROGRAM CREATION USING STRUCTURE
- J-10 STRUCTURE & ARRAY
 - J-10. INTRODUCTION OF STRUCTURE & ARRAY
 - J-10.II STRUCTURE N SYNTAX OF STRUCTURE N ARRAY
 - J-10.III PROGRAM CREATION USING STRUCTURE & ARRAY
- J-11 STRUCTURE WITHIN STRUCTURE
 - J-11. INTRODUCTION OF STRUCTURE WITHIN STRUCTURES
 - J-11.II STRUCTURE N SYNTAX OF STRUCTURE WITHIN STRUCTURES
 - J-11.III DEFINING OF STRUCTURE WITHIN STRUCTURE

- J-11.IV PROGRAM CREATION USING STRUCTURE WITHIN STRUCTURE
- J-12 STRUCTURE & FUNCTION
 - J-12. INTRODUCTION OF STRUCTURE & FUNCTION
 - J-12.II STRUCTURE N SYNTAX OF STRUCTURE & FUNCTION
 - J-12.III DEFINING OF STRUCTURE & FUNCTION
 - J-12.IV PROGRAM CREATION USING STRUCTURE & FUNCTION

MODULE -5

C++ LANGUAGE

A. FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING

- A-1 INTRODUCTION OF OOP'S
- A-2 FEATURES OF DOP'S
- A-3 INTRODUCTION OF OBJECTS
- A-4 INTRODUCTION OF CLASSES
- A-5 INTRODUCTION OF INHERITANCE
- A-6 INTRODUCTION OF REUSABILITY
- A-7 INTRODUCTION OF OVERLOADING
- A-8 CONCEPT OF OBJECTS & CLASSES

B. PROGRAMMING IN C++

- B-1 INTRODUCTION OF PROGRAMMING
- B-2 INTRODUCTION OF CHARACTER SET
- B-3 INTRODUCTION OF C++ TOKENS
- B-4 STRUCTURE OF C++ PROGRAM
- B-5 INTRODUCTION OF FUNCTION
- B-6 INTRODUCTION OF HEADER FILES
- B-7 INTRODUCTION OF INPUT/OUTPUT OF C++ Uter Application
- **B-8** USE OF MANIPULATORS
- B-9 USE OF EDITOR
- B-10 USE OF BASIC COMMANDS OF EDITORS
- B-11INTRODUCTION OF COMPILING & LINKING

C. DATA TYPES, VARIABLE, CONSTANT

- C-1 INTRODUCTION OF CONSTANTS
- C-2 TYPES OF CONSTANTS
- C-3 INTRODUCTION OF DATA TYPES
- C-4 TYPES OF DATA TYPES
- C-5 INTRODUCTION OF VARIABLE & INITIALIZATION OF VARIABLE
- C-6 INTRODUCTION OF OPERATORS & EXPRESSIONS
- C-7 TYPES OF OPERATORS & EXPRESSIONS
- C-8 PROGRAM CREATION USING OPERATORS & EXPRESSION
- C-9 INTRODUCTION OF AUTOMATIC TYPE CONVERSION IN EXPRESSION
- C-10 INTRODUCTION OF TYPE CASTING
- C-11 INTRODUCTION OF SHORTHANDS OF C++
- C-12 INTRODUCTION OF CONDITIONAL EXPRESSION
- C-13 INTRODUCTION OF NESTED IF
- C-14 INTRODUCTION OF SWITCH CASE DEFAULT
- C-15 PROGRAM CREATION USING CONDITIONAL EXPRESSION
- C-16 INTRODUCTION OF BREAK STATEMENT

- C-17 INTRODUCTION OF LOOP
- C-18 INTRODUCTION OF WHILE, DO WHILE & FOR LOOP
- C-19 PROGRAM CREATION USING LOOPS

D. ARRAY

- D-1 INTRODUCTION OF ARRAY
- D-2 NEED OF ARRAY
- D-3 TYPES OF ARRAY
- D-4 DECLARATION OF ARRAY
- D-5 INITIALISATION OF ONE DIMENSIONAL ARRAY
- D-6 INTRODUCTION N EXAMPLE OF AVERAGE OF ARRAY ELEMENTS
- D-7 INTRODUCTION N EXAMPLE OF LINEAR SEARCHING
- D-8 INTRODUCTION N EXAMPLE OF FINDING MAX/MIN VALUE FROMARRAY
- D-9 DECLARATION OF STRING
- D-10 INITIALISATION OF STRING
- D-11 COUNTING VOWELS/CONSTANTS/DIGITS/SPECIAL CHARACTERS
- D-12 INTRODUCTION OF ISALNUM, ISALPHA, ISDIGIT, ISLOWER, ISUPPER, TOLOWER, TOUPPER, STRCPY,STRCAT,STRLEN,STRCMP
- D-13 INTRODUCTION OF 2-D ARRAY
 - D-13.I DECLARATION OF 2-D ARRAY
 - D-13.II INITIALIZATION OF Z-D ARRAY
 - D-13.III INTRODUCTION OF DIAGONAL ELEMENTS

E. USER DEFINED FUNCTIONS

- E-1 INTRODUCTION OF USER DEFINED FUNCTION
- E-2 DEFINING OF USER DEFINED FUNCTION
- P 🚭 เการอย่นรมยน Driphagrieniprotetypsuter Application
 - E-4 INTRODUCTION OF CALLING A FUNCTION
 - E-5 INTRODUCTION OF DEFAULT ARGUMENT
 - E-6 INTRODUCTION OF CONSTANT ARGUMENT
 - E-7 INTRODUCTION OF CALL BY VALUE
 - E-8 INTRODUCTION OF CALL BY REFERENCE
 - E-9 INTRODUCTION OF RETURNING VALUE FROM A FUNCTION
 - E-10 INTRODUCTION OF CALLING A FUNCTION WITH ARRAY
 - E-11INTRODUCTION OF SCOPE RULE OF FUNCTION & VARIABLE

F. MATHEMATICAL & OTHER FUNCTIONS

- F-1 INTRODUCTION OF MATHEMATICAL FUNCTION
- F-2 INTRODUCTION OF STANDARD LIBRARY FILE

G. CLASSES & OBJECTS

- G-1 INTRODUCTION OF CLASSES
- G-2 INTRODUCTION OF SPECIFYING A CLASS
- G-3 DECLARATION OF CLASSES
- G-4 DEFINITION OF CLASSES INSIDE/ OUTSIDE
- G-5 DECLARATION OF OBJECTS
- G-6 ACCESSING CLASS MEMBER
- G-7 DEFINING MEMBER FUNCTION
- G-8 MAKING AN OUTSIDE INLINE FUNCTION

- G-9 NESTING OF MEMBER FUNCTION
- G-10 PRIVATE MEMBER FUNCTION
- G-11 ARRAY WITHIN A CLASS
- G-12 MEMORY ALLOCATION OF OBJECTS
- G-13 STATIC DATA MEMBERS & FUNCTION MEMBERS
- G-14 ARRAY OF OBJECTS
- G-15 OBJECTS AS FUNCTION
- G-16 RETURNING OBJECTS

H. CONSTRUCTOR & DESTRUCTOR

- H-1 INTRODUCTION OF CONSTRUCTOR
- H-2 SYNTAX N EXAMPLE OF CONSTRUCTOR
- H-3 INTRODUCTION OF DESTRUCTOR
- H-4 INTRODUCTION OF OBJECT & MEMORY
- H-5 INTRODUCTION OF STRUCTURE & CLASS
- H-6 INTRODUCTION OF FREE STORE IN C++
- H-7 INTRODUCTION OF FUNCTION OVERLOADING
- H-8 INTRODUCTION OF COPY CONSTRUCTOR

I. POLYMORPHISM

- I-1 INTRODUCTION OF POLYMORPHISM
- I-2 ADVANTAGES OF POLYMORPHISM
- I-3 TYPES OF POLYMORPHISM
- I-4 INTRODUCTION OF VIRTUAL FUNCTION
- I-5 SYNTAX N EXAMPLE OF VIRTUAL FUNCTION

J. OPERATOR OVERLOADING

- Post Graduction BiblermadingComputer Application
 - J-2 TYPES OF OVERLOADING
 - J-3 INTRODUCTION OF FUNCTION OVERLOADING
 - J-4 SYNTAX N EXAMPLE OF FUNCTION OVERLOADING
 - J-5 INTRODUCTION OF OPERATOR OVERLOADING
 - J-6 SYNTAX N EXAMPLE OF OPERATOR OVERLOADING

K. INHERITANCE

- K-1 INTRODUCTION OF INHERITANCE
- K-2 SYNTAX N EXAMPLE OF INHERITANCE
- K-3 TYPES OF INHERITANCE
- K-4 INTRODUCTION N EXAMPLE OF SIMPLE INHERITANCE
- K-5 INTRODUCTION N EXAMPLE OF MULTIPLE INHERITANCE
- K-6 INTRODUCTION N EXAMPLE OF HIERARCHICAL INHERITANCE
- K-7 INTRODUCTION N EXAMPLE OF MULTILEVEL INHERITANCE

L. FILE HANDLING

- L-1 INTRODUCTION OF DATA FILE
- L-2 INTRODUCTION OF TEXT FILE
- L-3 INTRODUCTION OF BINARY FILE
- L-4 INTRODUCTION OF INPUT/OUTPUT STREAM
- L-5 INTRODUCTION OF OPENING & DECLARATION OF FILE
- L-6 INTRODUCTION OF CLOSING FILE

- L-7 INTRODUCTION OF TEXT FILE
- L-8 INTRODUCTION OF CHECKING STATE FLAGS
- L-9 READING N WRITING A TEXT FILE USING FSTREAM CLASS
- L-10 EXAMPLES OF FILE HANDLING

Module -6

VISUAL BASIC

A. FUNDAMENTAL OF VISUAL BASIC

- A-1 INTRODUCTION OF VISUAL BASIC
- A-2 GETTING START WITH VISUAL BASIC
- A-3 LOADING PROCESS OF VISUAL BASIC
- A-4 INTRODUCTION OF INTEGRATED DEVELOPMENT ENVIRONMENT
- A-5 FEATURES OF VISUAL BASIC
- A-6 ELEMENTS OF VISUAL BASIC
- A-7 INTRODUCTION OF TOOL BAR
- A-8 INTRODUCTION OF DIFFERENT WINDOWS OF VISUAL BASIC
- A-9 THE APPLICATION WIZARD

B. ELEMENT OF VISUAL BASIC

- B-1 INTRODUCTION OF DATA TYPES
- B-2 INTRODUCTION OF TYPE STATEMENTS
- B-3 INTRODUCTION N DECLARATION OF VARIABLE
- B-4 INTRODUCTION OF SCOPE N LIFE TIME OF A VARIABLE
- B-5 INTRODUCTION OF CONSTANTS

C. PROGRAMMING STATEMENTS

- Post Otraduction Dipherators Computer Application
 - C-2 TYPES OF OPERATORS
 - C-3 INTRODUCTION OF AN ARITHMETIC OPERATOR
 - C-4 FORM N CODING OF AN ARITHMETIC OPERATOR
 - C-5 INTRODUCTION FORM N CODING OF COMPARISON OPERATOR
 - C-6 INTRODUCTION FORM N CODING OF LOGICAL OPERATOR
 - C-7 INTRODUCTION OF CONTROL STRUCTURE
 - C-8 INTRODUCTION SYNTAX N CODING OF IF THEN END IF
 - C-9 INTRODUCTION SYNTAX N CODING OF IF THEN ELSE END IF
 - C-10 INTRODUCTION SYNTAX N CODING OF SELECT CASE
 - C-11 INTRODUCTION SYNTAX N CODING OF LOOPING STATEMENT
 - C-12 INTRODUCTION OF INPUT/OUTPUT BOX

D. ARRAY N PROCEDURES

- D-1 INTRODUCTION OF ARRAY
- D-2 DECLARATION OF ARRAY
- D-3 TYPES OF ARRAY
- D-4 INTRODUCTION N EXAMPLE OF SINGLE DIMENSIONAL ARRAY
- D-5 INTRODUCTION N EXAMPLE OF MULTI DIMENSIONAL ARRAY
- D-6 INTRODUCTION OF DYNAMIC ARRAY
- D-7 INTRODUCTION OF SORTING
- D-8 INTRODUCTION OF CONTROL ARRAY
- D-9 INTRODUCTION OF COLLECTION

- D-10 INTRODUCTION OF PROCEDURES
- D-11 ADVANTAGES OF PROCEDURES
- D-12 TYPES OF PROCEDURES
- D-13 INTRODUCTION OF SUB N FUNCTION PROCEDURES
- D-14 INTRODUCTION OF SUB ROUTINE
- D-15 CODING RELATED PROCEDURES

E. CREATION OF PROJECT

- E-1 INTRODUCTION OF PROJECT
- E-2 ELEMENTS OF PROJECT
- E-3 CREATION RENAMING & SAVING OF PROJECT
- E-4 CREATION OF USER INTERFACE
- E-5 ELEMENTS OF USER INTERFACE
- E-6 INTRODUCTION OF FILE SYSTEM CONTROLS
- E-7 DESIGNING THE USER INTERFACE
- E-8 CREATION AN APPLICATION
- E-9 INTRODUCTION OF EVENT DRIVEN PROGRAMMING & COMMON PROPERTIES, METHODS & EVENTS OF VISUAL BASIC

F. ACTIVE X CONTROLS

- F-1 INTRODUCTION OF BASIC ACTIVE X CONTROLS
- F-2 INTRODUCTION & PROPERTIES OF TEXT BOX
- F-3 INTRODUCTION, METHODS & PROPERTIES OF LIST BOX
- F-4 INTRODUCTION, METHODS & PROPERTIES OF COMBO BOX
- F-5 INTRODUCTION, METHODS & PROPERTIES OF SCROLL BAR
- F-6 INTRODUCTION, METHODS & PROPERTIES OF LABEL
- F-7 INTRODUCTION, METHODS & PROPERTIES OF COMMAND BUTTON
- Pres introduction of grouping controls uter Application
 - F-9 INTRODUCTION & PROPERTIES OF OPTION BUTTON
 - F-10 INTRODUCTION & PROPERTIES OF FRAME CONTROLS
 - F-11 INTRODUCTION & PROPERTIES OF CHECK CONTROLS
 - F-12 INTRODUCTION & PROPERTIES OF LINE TOOLS
 - F-13 INTRODUCTION & PROPERTIES OF SHAPE TOOLS
 - F-14 INTRODUCTION & PROPERTIES OF PICTURE BOX
 - F-15 INTRODUCTION & PROPERTIES OF IMAGE BOX
 - F-16 INTRODUCTION & PROPERTIES OF COMMON DIALOGS
 - F-17 INTRODUCTION & PROPERTIES OF COLOR DIALOG BOX
 - F-18 INTRODUCTION & PROPERTIES OF FONT DIALOG BOX
 - F-19 INTRODUCTION & PROPERTIES OF OPEN & SAVE DIALOG BOX
 - F-20 INTRODUCTION & PROPERTIES OF PRINT, HELP & IMAGE LIST CONTROL
 - F-21 INTRODUCTION & PROPERTIES OF TREE VIEW & LIST VIEW CONTROL

G. WORKING WITH FORM

- G-1 INTRODUCTION OF FORMS
- G-2 APPEARANCE OF FORMS
- G-3 INTRODUCTION OF FORM PROPERTIES, METHODS, EVENTS
- G-4 INTRODUCTION OF MENUS
- G-5 DESIGNING MENU USING MENU EDITOR

- G-6 ADDING SUB MENU & NESTED MENU
- G-7 INTRODUCTION OF ACCESS & SHORTCUT KEYS
- G-8 CONNECTING MENUS TO EVENT PROCEDURES

H. WORKING WITH GRAPHICS

- H-1 INTRODUCTION OF GRAPHICS
- H-2 TYPES OF GRAPHIC
- H-3 INTRODUCTION OF GRAPHIC CONTROLS
- H-4 INTRODUCTION OF LOOPING & SAVING IMAGES
- H-5 EXCHANGE IMAGE THROUGH CLIP BOARD
- H-6 INTRODUCTION OF CO-ORDINATE SYSTEM
- H-7 INTRODUCTION OF WIDTH & HEIGHT PROPERTY
- H-8 INTRODUCTION OF GRAPHICS METHODS
- H-9 INTRODUCTION OF ERROR HANDLING
- H-10 TYPES OF ERROR
- H-11 CREATION OF MDI FORMS
- H-12 INTRODUCTION OF ERROR HANDLER

I. DATABASE PROGRAMMING WITH VISUAL BASIC

- I-1 INTRODUCTION OF DATABASE PROGRAMMING
- I-2 DESIGNING A DATABASE
- I-3 OBJECTIVES OF DATABASE DESIGN
- I-4 DRGANISING THE DATA
- I-5 INTRODUCTION OF TABLES, VISUAL DATA MANAGER & CREATING A DATABASE FILE
- I-6 INTRODUCTION OF DATA CONTROL
- I-7 ADDING DATA CONTROL TO THE FORM
- Pd-81 SELECTING & DATABASE & RECORDSET puter Application
 - I-9 INTRODUCTION OF BOUND CONTROLS
 - I-10 ADDING BOUND CONTROLS TO A FORM
 - I-11 USING BOUND CONTROL TO DISPLAY DATA
 - I-12 INTRODUCTION OF DATA ACCESS OBJECT
 - I-13 ADDING DAG TO PROJECT
 - I-14 WORKING WITH ODBC
 - I-15 WORKING WITH ODBC DRIVERS, SETTING AN ODBC DATA SOURCE ACCESS ODBC DRIVERS
 - I-16 CREATING AN ODBC SOURCES
 - I-17 INTRODUCTION OF ACTIVE X OBJECTS
 - I-18 INTRODUCTION OF DATA CONNECTION METHODS
 - I-19 ADDING ADD WITH PROJECT
 - I-20 INTRODUCTION OF ADO DATA CONTROL

Module - 7

SYSTEM ANALYSIS & DESIGN

A. SYSTEM CONCEPT AND SYSTEM ENVIRONMENTS

- A-1 INTRODUCTION
- A-2 CHARACTERISTICS OF A SYSTEM
- A-3 ELEMENTS OF A SYSTEM

- A-4 TYPES OF SYSTEM
- A-5 CATEGORIES OF INFORMATION

B. SYSTEM DEVELOPMENT LIFE CYCLE

- **B-1** INTRODUCTION
- B-2 LIFE CYCLE OF SYSTEM
- B-3 SYSTEM CONSIDERATIONS
- **B-4 POLITICAL CONSIDERATION**
- B-5 PLANNING & CONTROL OF SYSTEM
- **B-6 PROTOTYPING**

C. ROLE OF SYSTEM ANALYST

- C-1 INTRODUCTION & HISTORY
- C-2 KEY POINTS OF SYSTEM ANALYSIS
- C-3 ROLE OF ANALYST
- C-4 BEHAVIORAL ISSUES
- C-5 ROLE OF ANALYST IN MIS ORGANIZATION

D. SYSTEM PLANNING

- D-1 FUNDAMENTAL OF PLANNING
- D-2 MIS PLANNING STRATEGY
- D-3 MANAGERIAL & OPERATIONAL MIS PLANNING
- D-4 DETERMINE THE USER'S INFORMATION REQUIREMENTS

E. PINFORMATION GATHERING IN Computer Application

- E-1 CATEGORIES OF INFORMATION
- E-2 INFORMATION RELATED TO WORK FLOW
- E-3 Sources of Information
- E-4 ARRANGE THE INTERVIEW
- E-5 QUESTIONNAIRES
- E-6 PROCEDURE FOR QUESTIONNAIRE

F. STRUCTURED ANALYSIS

- F-1 INTRODUCTION
- F-2 STRUCTURED ANALYSIS TOOLS
- F-3 PROCEDURE OF DFD
- F-4 INTRODUCTION OF DATA DICTIONARY
- F-5 INTRODUCTION OF DATA ELEMENTS
- F-6 INTRODUCTION OF DATA STRUCTURE
- F-7 INTRODUCTION OF DESCRIBING PROCESSES
- F-8 INTRODUCTION OF DECISION TREE AND STRUCTURED ENGLISH
- F-9 INTRODUCTION OF DECISION TABLE

G. FEASIBILITY STUDY

- G-1 INTRODUCTION OF F.S
- G-2 STANDARDS OF FEASIBILITY
- G-3 REPORT OF FEASIBILITY
- G-4 ORAL PRESENTATION

H. COST- BENEFIT ANALYSIS

- H-1 INTRODUCTION OF ANALYSIS OF DATA
- H-2 DIFFERENT CATEGORIES OF COST
- H-3 DETERMINING THE COST / BENEFIT
- H-4 Types of costs & Benefits
- H-5 ADVANTAGES OF COSTING
- H-6 THE SYSTEM PROPOSAL

I. THE PROCESS & STAGES OF SYSTEM DESIGN

- I-1 INTRODUCTION OF INPUT DESIGN PROCESS
- I-2 LOGICAL & PHYSICAL DESIGN
- I-3 METHODOLOGIES OF DESIGN
- I-4 STRUCTURED DESIGN
- I-5 FUNCTIONAL DECOMPOSITION
- I-6 HIPO & IPO CHARTS
- I-7 DEVELOPMENT ACTIVITIES
- I-8 PERSONNEL ALLOCATIONS
- 1-9 AUDIT CONSIDERATIONS
 - a in Computer Application I-10 AUDIT TRAIL & DOCUMENTATION CONTROL

J. FORM DESIGN

- J-1 INTRODUCTION OF INPUT DESIGN
- J-2 INPUT MEDIA & DEVICE
- J-3 ONLINE DATA ENTRY
- J-4 CRT SCREEN DESIGN
- J-5 DESIGN OF FORMS
- J-6 REQUIREMENTS OF FORM DESIGN
- J-7 TYPES OF FORM
- J-8 CONSIDERATION OF LAYOUTS
- J-9 RULES & CAPTION
- J-10 SPACING REQUIREMENTS
- J-11 BALLOT BOX & CHEEK OFF DESIGN
- J-12 CONTROLS OF FORM

K. FILE ORGANIZATION & DATABASE DESIGN

- K-1 FILE STRUCTURE
- K-2 FILE ORGANIZATION
- K-3 DESIGNING THE DATABASE

- K-4 DATABASE OBJECTIVE
- K-5 DBMS
- K-6 DATA STRUCTURE
- K-7 TYPES OF RELATIONSHIPS
- K-8 HIERARCHICAL STRUCTURE
- K-9 ENTITIES & ATTRIBUTES
- K-10 PROCESS OF NORMALIZATION
- K-11 ROLE OF DATA ADMINISTRATOR

L. SYSTEM TESTING AND QUALITY ASSURANCE

- L-1 INTRODUCTION OF SYSTEM TESTING
- L-2 OBJECTIVE OF SYSTEM TESTING
- L-3 NETWORK FOR SYSTEM TESTING
- L-4 Types of system tests
- L-5 INTRODUCTION OF QUALITY ASSURANCE
- L-6 LEVELS OF QUALITY ASSURANCE
- L-7 ROLE OF DATA PROCESSING AUDITOR
- L-8 Introduction of training
- L-9 TYPES OF TRAINING
- L-10 CHARACTERISTICS OF TRAINING PROGRAM
- L-11 CHANGE OVER TO THE NEW SYSTEM

M. SYSTEM SECURITY & DISASTER RECOVERY PLANNING

- M-1 Granuate Dr System Security puter Application
 - M-2 SYSTEM SECURITY
- M-3 THREATS OF SYSTEM SECURITY
- M-4 RISK ANALYSIS
- M-5 SECURITY CONTROL / MEASURES
- M-6 ENCRYPTION
- M-7 RECOVERY/ RESTART REQUIREMENTS
- M-8 DISASTER/RECOVERY PLANNING
- M-9 ETHICS IN SYSTEM DEVELOPMENTS
- M-10 ETHICS CODES & STANDARDS OF BEHAVIOR