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A National Literacy Programme of Information Technology & Skill Development



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# ADCTT

Advance Diploma in Computer Teacher Training

COURSE CODE : CA-020

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

visit us : [www.navodayaindia.in](http://www.navodayaindia.in) | [www.ncsm.in](http://www.ncsm.in) | E-mail : [contact@ncsm.in](mailto:contact@ncsm.in), [info@ncsm.in](mailto:info@ncsm.in)



# ADCTT

## Advance Diploma in Computer Teacher Training

### COURSE CONTENTS

**COURSE CODE – CA-020**

**ELIGIBILITY : 12<sup>TH</sup> CLASS & 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

ENGLISH & HINDI TYPING

**MODULE SUBJECT**

**SUBJECT CODE – NFC**

**FUNDAMENTAL OF COMPUTER**

##### **MODULE – 2**

##### **FINANCIAL ACCOUNTING WITH 7.2, 9.0, ERP**

MANUAL ACCOUNTING

ACCOUNTING IN TALLY 7.2, 9.0, ERP

CUSTOMIZATION OF COMPANY

ACTIVATION OF ACCOUNTING FEATURES IN COMPANY

ACTIVATION OF INVENTORY FEATURES IN COMPANY

ACTIVATION OF TAXATION FEATURES IN COMPANY

USES OF VALUE ADDED TAX (VAT)

USES OF CENTRAL SALE TAX (CST)

USES OF SERVICE TAX

USES OF EXCISE DUTY

USES OF TAX COLLECT AT SOURCE (TCS)

USES OF TAX DEDUCTED AT SOURCE (TDS)

**MODULE SUBJECT**

**SUBJECT CODE - NT**

**TALLY**

**ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**MODULE - 3**

**WEB DESIGNING WITH HTML & FRONTPAGE**

INTRODUCTION OF HTML

DESIGNING OF WEBPAGE & WEBSITE

DESIGNING LIST IN WEBPAGE

INTRODUCTION OF IMAGE, LINK & FRAME TAG

INTRODUCTION OF TABLE & FORM TAG

INTRODUCTION OF DHTML

INTRODUCTION OF MICROSOFT FRONTPAGE

CREATION OF WEBPAGE & WEBSITE

**MODULE - 4**

**DESK TOP PUBLICATION**

INTRODUCTION OF DTP

INTRODUCTION OF NEWSLETTERS, LETTERHEADS,

ADVERTISEMENT & VISITING CARDS

INTRODUCTION OF PAGEMAKER

IMPLEMENTATION OF TEXT EDITING, TEXT FORMATTING IN PAGEMAKER

CREATION OF MASTER PAGES IN PAGEMAKER

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

**SEMESTER - II**

**MODULE - 5**

**C LANGUAGE**

FUNDAMENTAL OF C LANGUAGE

OPERATORS

DECISION MAKING STATEMENT

LOOPING STATEMENT

THE STATEMENT

AN ARRAY

FUNCTION

CHARACTER STRING

**MODULE SUBJECT**

**SUBJECT CODE - NHD**

**HTML & DHTML**

**MODULE SUBJECT**

**SUBJECT CODE - NAC**

**ADOBE : PHOTOSHOP, PAGMAKER**

**CORELDRAW**

**MODULE SUBJECT**

**SUBJECT CODE - NCL**

**C LANGUAGE**

**ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**POINTER**

**STRUCTURES**

**MODULE - 6**

**C++ LANGUAGE**

**FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING**

**PROGRAMMING IN C++**

**DATA TYPES, VARIABLE, CONSTANT**

**ARRAY**

**USER DEFINED FUNCTIONS**

**MATHEMATICAL & OTHER FUNCTIONS**

**CLASSES & OBJECTS**

**CONSTRUCTOR & DESTRUCTOR**

**POLYMORPHISM**

**OPERATOR OVERLOADING**

**INHERITANCE**

**FILE HANDLING**

**MODULE - 7**

**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 - 8**

**JAVA**

**FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING**

**JAVA EVOLUTION**

**OVERVIEW OF JAVA LANGUAGE**

**CONSTANTS, VARIABLE AND DATA TYPES**

**OPERATORS & EXPRESSION**

**DECISION MAKING N LOOPING**

**CLASSES, OBJECT & METHODS**

**ARRAYS, STRINGS & VECTORS**

**INTERFACES MULTIPLE INHERITANCE**

**PACKAGES**

**MANAGING ERRORS & EXCEPTION**

**BASIC I/O AND SERIALIZATION**

**APPLETS**

**MODULE SUBJECT**

**SUBJECT CODE - NCL2**

**C++ LANGUAGE**

**MODULE SUBJECT**

**SUBJECT CODE - NVB**

**VISUAL BASIC**

**MODULE SUBJECT**

**SUBJECT CODE - NJL**

**JAVA**

# ADCTT

## Advance Diploma in Computer Teacher Training

### COURSE SYLLABUS

#### SEMESTER - I

#### 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 & OUTPUT 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
- B-3 TYPES OF OPERATING SYSTEM
- 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
  - D-3.1 DOCUMENT CREATION

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**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**

### **D-7 MAILING DOCUMENT**

**D-7.1 MAIL MERGE PROCESS**

**D-7.2 PRINTING & SENDING OF MAI**

**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**

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**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**

**E-7.3 AUTOMATING A SLIDE SHOW**

## **Advance Diploma in Computer Teacher Training**

### **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**

## **G. MS ACCESS 2007**

### **G-1 INTRODUCTION OF MS ACCESS**

- G-1.1 INTRODUCTION 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**

- 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**

### **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



**ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**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**

**I-6.1 INTRODUCTION OF SEARCH ENGINE**

**I-6.2 SURFING/ SEARCHING OF CONTENTS**

**I-6.3 DOWNLOADING/UPLOADING**

**I-6.4 PRINTING THE WEBPAGE**

**MODULE - 2**

**FINANCIAL ACCOUNTING WITH TALLY 7.2, 9.0 ERP**

**A. MANUAL ACCOUNTING**

**A-1 INTRODUCTION OF ACCOUNTING**

**A-2 BASIC CONCEPT OF ACCOUNTING**

**A-3 RULES OF ACCOUNTS**

**A-4 TYPES OF RULES**

**A-5 SIMPLE & COMPOUND ENTRIES OF ACCOUNTS**

**A-6 INTRODUCTION OF JOURNALS**

**A-7 INTRODUCTION OF FINAL ACCOUNTS**

**A-8 PREPARATION OF TRIAL BALANCE, TRADING ACCOUNTS, PROFIT & LOSS ACCOUNT & BALANCE SHEET**

**A-9 PREPARATION OF CLOSING ENTRIES**

**A-10 RECTIFICATION OF ERRORS**

**B. ACCOUNTING IN TALLY 7.2, 9.0ERP**

- B-1 CREATION OF COMPANY
- B-2 CREATION OF LEDGER IN COMPANY
- B-3 POSTING ENTRIES IN DIFFERENT VOUCHERS
- B-4 SELECTION, SHUTTING, ALTERATION & DELETION OF COMPANY
- B-5 ALTERATION & DELETION OF LEDGER & VOUCHER IN TALLY

**C. CUSTOMIZATION OF COMPANY**

- C-1 ACTIVATION OF GENERAL FEATURES OF ACCOUNTS
- C-2 ACTIVATION OF INVOICING FEATURES SUCH AS PURCHASE & SALES ORDERS, DEBIT & CREDIT FEATURES
- C-3 ACTIVATION OF COST CATEGORY & CENTERS
- C-4 ACTIVATION OF INTEREST CALCULATION OF COMPANY
- C-5 ACTIVATION OF BUDGET & CONTROL
- C-6 ACTIVATION OF STOCK CATEGORIES CREATION
- C-7 ACTIVATION OF DISCOUNT COLUMN ON INVOICE
- C-8 ACTIVATION OF GODOWN
- C-9 ACTIVATION OF PRICELIST

**D. ACCOUNT WITH INVENTORY IN TALLY 7.2, 9.0ERP**

- D-1 INTRODUCTION OF INVENTORY
- D-2 ACTIVATION OF INVENTORY FEATURE IN COMPANY
- D-3 CREATION OF STOCK GROUP, STOCK ITEM & UNIT OF MEASURES
- D-4 POSTING ENTRIES IN INVOICE MODE
- D-5 CREATION OF INVOICE
- D-6 ALTERATION & DELETION OF INVOICE
- D-7 PRINTING OF INVOICE

**E. VALUE ADDED TAX (VAT)**

- E-1 INTRODUCTION OF VAT
- E-2 TYPES OF VAT
- E-3 TYPES OF RATES
- E-4 ACTIVATION OF VAT IN COMPANY
- E-5 ACTIVATION OF FEATURES RELATED TO VAT IN COMPANY
- E-6 ACTIVATION OF INPUT & OUTPUT VAT ON INVOICE
- E-7 ACCESSING OF VAT REFUNDABLE OR VAT PAYABLE
- E-8 ACCESSING OF VAT REPORT
- E-9 PRINTING OF VAT REPORT

**F. CENTRAL SALE TAX (CST)**

- F-1 INTRODUCTION OF CST
- F-2 INTRODUCTION OF TYPES OF CST
- F-3 INTRODUCTION OF RATES OF CST

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**F-4 INTRODUCTION OF DIFFERENT FORMS OF CST**

**F-5 POSTING OF CST ENTRIES IN TALLY**

**F-6 REVIEW OF CST REPORT IN TALLY**

**F-7 PRINTING CST REPORT**

## **G. SERVICE TAX**

**G-1 INTRODUCTION OF SERVICE TAX**

**G-2 ACTIVATION OF SERVICE TAX FEATURE IN TALLY**

**G-3 BASIC DETAILS OF SERVICE TAX**

**G-4 INTRODUCTION OF EDUCATION CESS & SECONDARY EDU CESS**

**G-5 POSTING OF ENTRIES OF SERVICE TAX IN TALLY**

**G-6 ACCESSING & REVIE OF SERVICE TAX REPORT IN TALLY**

**G-7 PRINTING REPORT OF SERVICE TAX**

## **H. EXCISE DUTY**

**H-1 INTRODUCTION OF EXCISE DUTY**

**H-2 INTRODUCTION OF TYPES OF EXCISE DUTY**

**H-3 ACTIVATION OF FEATURE RELATED TO EXCISE DUTY**

**H-4 CREATION OF LEDGER, STOCK RELATED TO EXCISEDUTY**

**H-5 POSTING ENTRIES IN VOUCHER & INVOICE**

**H-6 PREPARE & ACCESSING OF EXCISE REPORT IN TALLY**

**H-7 PRINTING OF EXCISE REPORT**

## **I. TAX COLLECT AT SOURCE (TCS)**

**I-1 INTRODUCTION OF TCS**

**I-2 ACTIVATION OF FEATURES RELATED TO TCS**

**I-3 CREATION OF LEDGER & STOCK RELATED TO TCS**

**I-4 POSTING ENTRIES IN VOUCHER & INVOICE**

**I-5 PREPARE & ACCESSING OF TCS REPORT IN TALLY**

**I-6 PRINTING OF EXCISE REPORT**

## **J. TAX DEDUCTED AT SOURCE (TDS)**

**J-1 INTRODUCTION OF TDS**

**J-2 ACTIVATION OF FEATURES RELATED TO TDS**

**J-3 CREATION OF LEDGER & STOCK RELATED TO TDS**

**J-4 POSTING ENTRIES IN VOUCHER & INVOICE**

**J-5 PREPARE & ACCESSING OF TDS REPORT IN TALLY**

**J-6 PRINTING OF TDS REPORT**

## **MODULE - 3**

### **WEB DESIGNING WITH HTML & FRONTPAGE**

#### **A. INTRODUCTION OF HTML**

**A-1 CONCEPT OF HTML**

**A-2 CONCEPT OF WEB BROWSER**

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**A-3 CONCEPT OF CLIENT & SERVER ARCHITURERE**

**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**

**E-8 CREATION OF WEBPAGE USING IMAGE LINK**

## **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
- I-4 CREATION OF WEBPAGE USING DIFFERENT ATTRIBUTES OF STYLE

## **MODULE - 4**

### **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 WITH PAGEMAKER
- A-5 INTRODUCTION OF PAGEMAKER WINDOWS
- A-6 INTRODUCTION OF TOOLS OF PAGEMAKER

## ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING

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

C-6 INTRODUCTION OF STYLE SHEET

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-5 ADDING 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-11 CROPPING 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
- F-7 PRINTING A PUBLICATION
- 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

**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
- E-3 CREATE PHOTO WITH DIFFERENT TOOLS

**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
- 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

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

- 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

## **SEMESTER - II**

### **MODULE - 5**

## **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-11 EXAMPLES 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 ARITHMETIC 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**

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**C-1 INTRODUCTION OF STATEMENT**

**C-2 TYPES OF STATEMENT**

**C-3 DECISION STATEMENT**

**C-3.I 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 ELSE STATEMENT**

**C-6**

**C-6.I 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 LADDER STATEMENT**

**C-7**

**C-7.I DECISION STATEMENT WITH SWITCH STATEMENT**

**C-7.II 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 LOOP STATEMENT**

**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.III CREATION 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 INITIALISATION 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 INITIALISATION 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 2-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**

**I-9 CALL BY REFERENCE**

**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 OUTPUT VALUE IN MEMBERS**

**J-7 STRUCTURE INITIALIZATION**

**J-8 STRUCTURE & SYNTAX OF STRUCTURES**

**J-9 PROGRAM CREATION USING STRUCTURE**

**J-10 STRUCTURE & ARRAY**

**J-10.I INTRODUCTION OF STRUCTURE & ARRAY**

**J-10.II STRUCTURE N SYNTAX OF STRUCTURE N ARRAY**

**J-10.III PROGRAM CREATION USING STRUCTURE & ARRAY**

**ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

**J-1 1 STRUCTURE WITHIN STRUCTURE**

J-1 1.I INTRODUCTION OF STRUCTURE WITHIN STRUCTURES

J-1 1.II STRUCTURE N SYNTAX OF STRUCTURE WITHIN STRUCTURES

J-1 1.III DEFINING OF STRUCTURE WITHIN STRUCTURE

J-1 1.IV PROGRAM CREATION USING STRUCTURE WITHIN STRUCTURE

**J-1 2 STRUCTURE & FUNCTION**

J-1 2.I INTRODUCTION OF STRUCTURE & FUNCTION

J-1 2.II STRUCTURE N SYNTAX OF STRUCTURE & FUNCTION

J-1 2.III DEFINING OF STRUCTURE & FUNCTION

J-1 2.IV PROGRAM CREATION USING STRUCTURE & FUNCTION

**MODULE - 6**

**C++ LANGUAGE**

**A. FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING**

A-1 INTRODUCTION OF OOP'S

A-2 FEATURES OF OOP'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++

B-8 USE OF MANIPULATORS

B-9 USE OF EDITOR

B-10 USE OF BASIC COMMANDS OF EDITORS

B-1 1 INTRODUCTION 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

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

- 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 FROM ARRAY
- 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 2-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
- E-3 INTRODUCTION OF FUNCTION PROTOTYPE
- 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-11 INTRODUCTION 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

## ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING

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**

J-1 INTRODUCTION OF OVERLOADING

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



## ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING

- 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 - 7**

### **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**

- C-1 INTRODUCTION OF OPERATORS
- 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

## ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING

- 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
- F-8 INTRODUCTION OF GROUPING CONTROLS
- 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 ORGANISING 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
- I-8 SELECTING A DATABASE & RECORDSET
- 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 DAO 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 ADO WITH PROJECT
- I-20 INTRODUCTION OF ADO DATA CONTROL

## JAVA

### A. FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING

- A-1 INTRODUCTION OF OOP'S & ITS PARADIGM
- A-2 INTRODUCTION OF BASIC CONCEPT OF OBJECTS & CLASSES, DATA ABSTRACTION & ENCAPSULATION ,INHERITANCE & POLYMORPHISM
- A-3 INTRODUCTION OF COMPILER & RUNTIME MECHANISMS
- A-4 INTRODUCTION OF MESSAGE COMMUNICATION
- A-5 BENEFITS OF OOP'S
- A-6 APPLICATION OF OOP'S

### B. JAVA EVOLUTION

- B-1 JAVA HISTORY
- B-2 FEATURES OF JAVA
- B-3 DIFFERENCE BETWEEN C & C++ & JAVA & C
- B-4 INTRODUCTION OF JAVA, INTERNET, WWW
- B-5 INTRODUCTION OF WEB BROWSER, HOTJAVA, NETSCAPE NAVIGATOR
- B-6 INTRODUCTION OF JAVA ENVIRONMENT, JDK
- B-7 INTRODUCTION OF APPLICATION PROGRAMMING INTERFACE

### C. OVERVIEW OF JAVA LANGUAGE

- C-1 INTRODUCTION OF JAVA LANGUAGE
- C-2 INTRODUCTION OF SIMPLE JAVA PROGRAM
- C-3 INTRODUCTION OF JAVA STRUCTURE
- C-4 DEFINING OF JAVA PROGRAM STRUCTURE
- C-5 INTRODUCTION & DEFINING OF JAVA TOKENS
- C-6 IMPLEMENTING A JAVA PROGRAM
- C-7 CREATING THE PROGRAM
- C-8 COMPILING & RUNNING THE PROGRAM
- C-9 INTRODUCTION OF MACHINE NEUTRAL
- C-10 INTRODUCTION OF JAVA VIRTUAL MACHINE (JVM)

### D. CONSTANTS, VARIABLE AND DATA TYPES

- D-1 INTRODUCTION OF CONSTANTS
- D-2 TYPES OF CONSTANT
- D-3 INTRODUCTION OF VARIABLES
- D-4 INTRODUCTION OF DATA TYPES
- D-5 DECLARATION OF VARIABLES
- D-6 INTRODUCTION OF ASSIGNMENT & READ STATEMENT
- D-7 INTRODUCTION OF TYPE CASTING & AUTOMATIC CONVERSION
- D-8 INTRODUCTION OF GETTING VALUES OF VARIABLES

### E. OPERATORS & EXPRESSION

- E-1 INTRODUCTION OF OPERATORS
- E-2 TYPES OF OPERATORS
- E-3 EXAMPLES OF OPERATORS
- E-4 INTRODUCTION OF FIELDS DECLARATION & METHOD DECLARATION

## ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING

- E-5 INTRODUCTION OF DECISION MAKING WITH IF STATEMENTS
- E-6 TYPES OF IF STATEMENT & ITS PROGRAM
- E-7 INTRODUCTION OF SWITCH STATEMENT
- E-8 PROGRAM RELATED TO SWITCH STATEMENT

## **F. DECISION MAKING N LOOPING**

- F-1 INTRODUCTION OF LOOPING
- F-2 TYPES OF LOOPING
- F-3 PROGRAM RELATED TO LOOP STATEMENT

## **G. CLASSES, OBJECT & METHODS**

- G-1 INTRODUCTION OF CLASSES
- G-2 DEFINING A CLASSES
- G-3 FIELDS & METHOD DECLARATION
- G-4 CREATING OBJECTS
- G-5 ACCESSING CLASS MEMBERS
- G-6 PROGRAM RELATED CLASSES & OBJECTS
- G-7 INTRODUCTION OF CONSTRUCTORS AND ITS PROGRAM
- G-8 INTRODUCTION OF METHODS OVERLOADING
- G-9 INTRODUCTION OF STATIC MEMBERS
- G-10 INTRODUCTION OF NESTING METHODS
- G-11 INTRODUCTION OF INHERITANCE:- EXTENDING A CLASS
- G-12 INTRODUCTION OF DEFINING A SUB CLASS, CONSTRUCTOR
- G-13 INTRODUCTION OF MULTILEVEL INHERITANCE, HIERARCHICAL
- G-14 INTRODUCTION OF OVERRIDING METHODS & PROGRAMS
- G-15 INTRODUCTION OF FINAL VARIABLE, METHODS & CLASSES
- G-16 INTRODUCTION OF VISIBILITY CONTROL

## **H. ARRAYS, STRINGS & VECTORS**

- H-1 INTRODUCTION OF ARRAY
- H-2 TYPES OF ARRAY
- H-3 CREATION N INITIALIZATION OF ARRAYS
- H-4 INTRODUCTION OF 2-D ARRAY
- H-5 INTRODUCTION OF STRINGS, STRING ARRAY & METHODS
- H-6 INTRODUCTION OF VECTORS
- H-7 INTRODUCTION OF ENUMERATED TYPES

## **I. INTERFACES MULTIPLE INHERITANCE**

- I-1 INTRODUCTION OF INTERFACES
- I-2 DEFINING OF INTERFACES
- I-3 EXTENDING INTERFACES
- I-4 IMPLEMENTING INTERFACES
- I-5 ACCESSING INTERFACE VARIABLES
- I-6 PROGRAM RELATED TO INTERFACES

## **J. PACKAGES**

- J-1 INTRODUCTION OF PACKAGES
- J-2 INTRODUCTION OF JAVA API PACKAGES
- J-3 INTRODUCTION OF NAMING CONVENTIONS
- J-4 CREATING PACKAGES

## **ADVANCE DIPLOMA IN COMPUTER TEACHER TRAINING**

- J-5 ACCESSING A PACKAGES
- J-6 USING A PACKAGE
- J-7 ADDING A CLASS TO A PACKAGE
- J-8 PROGRAM RELATED TO PACKAGE

## **K. MANAGING ERRORS & EXCEPTION**

- K-1 INTRODUCTION OF ERRORS
- K-2 TYPES OF ERROR
- K-3 COMPILE TIME ERROR
- K-4 RUN TIME ERROR
- K-5 EXCEPTIONS
- K-6 PROGRAM RELATED EXCEPTIONS
- K-7 MULTIPLE CATCH STATEMENTS
- K-8 THROWING OUR OWN EXCEPTIONS
- K-9 USING FINALLY STATEMENT
- K-10 USING EXCEPTIONS FOR DEBUGGING

## **L. BASIC I/O AND SERIALIZATION**

- L-1 INTRODUCTION OF I/O STREAMS
- L-2 INTRODUCTION OF BYTE STREAMS
- L-3 INTRODUCTION & USING OF CHARACTER STREAMS
- L-4 INTRODUCTION OF LINE ORIENTED I/O
- L-5 INTRODUCTION OF BUFFERED STREAMS
- L-6 INTRODUCTION OF FLUSHING BUFFERED STREAMS
- L-7 INTRODUCTION OF STANDARD STREAMS
- L-8 INTRODUCTION OF DATA STREAMS
- L-9 INTRODUCTION OF OBJECT STREAMS
- L-10 INTRODUCTION OF FILE I/O, FILE OBJECT, MANIPULATING FILES
- L-11 WORKING WITH DIRECTORIES
- L-12 INTRODUCTION OF STATIC METHODS, RANDOM ACCESS FILES

## **M. APPLETS**

- M-1 INTRODUCTION OF APPLETS
- M-2 LIFECYCLE OF APPLETS
- M-3 LOADING APPLETS IN A WEB PAGE
- M-4 GETTING STARTED APPLETS
- M-5 APPLICATION AND APPLETS
- M-6 IMPORTING CLASS AND PACKAGES FOR APPLETS
- M-7 RELOADING THE APPLETS
- M-8 INTRODUCTION OF INT, START, STOP, DESTROY METHOD
- M-9 USING THE PAINT METHOD
- M-10 WORKING WITH GRAPHICS
- M-11 WORKING WITH DRAWING LINES
- M-12 WORKING WITH DRAWING RECTANGLES
- M-13 WORKING WITH CIRCLES AND ELLIPSES
- M-14 WORKING WITH DRAWING ARTS
- M-15 WORKING WITH POLYGONS
- M-16 WORKING WITH COOLERS
- M-17 WORKING WITH STATUS WINDOW
- M-18 WORKING WITH AUDIO CLIP INTERFACE