

## **DIPLOMA IN COMPUTER APPLICATION (DCA)**

### **Subject of Study**

#### **(a) Theory**

- (i) Fundamentals of Computers**
- (ii) Windows based PC-Software  
(MS-Word, MS-Excel, and MS-Access)**
- (iii) Web design**
- (iv) Visual Programming-Visual Basic**

#### **(b) Practicals**

- (i) MS-Office and Web page Design**
- (ii) Visual Basic with MS-Access**

# I. FUNDAMENTALS OF COMPUTERS

## Unit-1

Characteristics of computers-Block diagram - Problem solving Using computers-Classification of computers-computing methods.

## Unit - 2

Representation of characters, integers, Fractions in computers-Number conversion-decimal, binary, Hexa Decimal, Octal-Programming Languages

## Unit - 3

Functional Components of computers-Input output units-Memory-central Processing Unit (CPU)

## Unit 5

Computer and Communications - Types - Needs - Communication Media - Network topologies - Protocols - Lan - Interconnection Networks - Top

## Text Book

Fundamentals of Computers-Second Edition - V.Rajaraman-PHI-1998.

## II. WINDOWS BASED P.C. SOFTWARE (MS-WORD, MS-EXCEL, MS-ACCESS)

### Unit - 1

Introduction to MS-Office-Office Assistant-  
Introduction Word-Menus and Bars-Creating, Saving,  
importing, exporting, Inserting files-formatting pages,  
paragraphs and sections-styles, fonts and font sizes-  
Editing text -positioning and viewing text.

### Unit-2

Tabs and Tables-Finding and replacing texts  
Inserting page Breaks, Page numbers, Book mark,  
symbols and Dates-Headers, Footers-Footnotes,  
endnotes and Annotations-Working with pictures, chart  
and Graphs-Working with Tools (spell and Grammer  
Check) - Printing Document.

### Unit-3

Introduction to Excel-Worksheet overview-Creating  
work sheets and work books-Opening and saving  
workbooks-Formatting numbers and Texts-charts-  
printing worksheets-Database Access.

### Unit-4

Introduction to Access - Understanding Databases  
- Creating Tables and queries - Forms.

## Unit - 5

Finding information in Database-Reports-Mailing Labels

### Text

Learn Microsoft Office-97 - Russel.A Shatz. BPB Publications - 1 Edition - 1997.

## III. WEB DESIGN

### Unit-1

Introduction to Internet-Applications -User-Dial-up Access-Direct/Dedicat Access-Shell and TCP/IP accounts-Domains and Addresses-Introduction to WWW-Concept of email-Internet mail protocol - FTP Terminology.

### Unit-2

Introduction to HTML-Web server-Web client/Browser-HTML Tags-HTML commands-Text formatting-Text styles -Lists

### Unit-3

Adding Graphics to HTML Documents-Tables-Linking Documents -Frames

## Unit-4

Introduction to Java script-Programming Techniques-Operators and Expressions-Conditional checking - function-Dialogue Boxes

## Unit-5

Forms used by a web site-Dynamic HTML

## Text

- i) Internet-An introduction-TMH - New Delhi-1999
- ii) Web enabled commercial Applications Development using HTML, DHTML, Java Script-Ivan Bayross

## IV. VISUAL PROGRAMMING-VISUAL BASIC

### Unit -1

History of Visual Basic- Integrated Development Environment (IDE) - Introduction to Visual Basic Programming

### Unit-2

Control structures-IF/THEN-IF/THEN/ELSE-WHILE-DO.. WHILE-DO.. UNIT-FOR-FOR-NEXT structure-select .. case structure-Do/Loop while - Do/Loop unit-Exit - Do and Exit- For statements.

### Unit -3

Sub Procedures and function Procedures-Form modules-sub procedure-Function Procedure-Exit Sub and Exit Function-Recursion-Math functions. Arrays-Multi Dimensional Arrays-strings, Dates and Times.

### Unit - 4

Basic Graphical User Interface-Controls Text Box-Mask edit-Combo Box-List Box - Menus-Pop-up Menus-Msg.Box-Mouse events-Mouse Buttons-Drag and Drop-Key events.

### Unit - 5

Error Handling and Debugging-Data base connectivity -Data control - Data Access Model- Data Access objects-Collection of Objects-ODBC.

### Text :

- i) Visual Basic 6.0 - How to program Deital and Deital, T.R. Nieto
- ii) Visual Basic 5.0 - Database How to - Waite Group - Kennady-Techmedia.

### Practicals for D.C.A.

- i) MS-Office and web design (A minimum of 15 to 20 experiments may be given)
- ii) Visual Basic with MS-Access (A Minimum of 15 to 20 experiments may be given)