

SCHEME OF EXAMINATION FOR B.Sc. COMPUTER APPLICATIONS  
(VOCATIONAL) SEMESTER SYSTEM  
**Scheme for B.Sc.-II (Vocational) w.e.f. 2014-2015**

Sr. No.	Paper	Internal Assessment	External Marks	Exam Duration
<b>SEMESTER - III</b>				
1	Paper-I: Web Designing Fundamentals	10	40	3 hrs.
2	Paper-II: Data base management Systems	10	40	3 hrs.
<b>Semester – IV</b>				
3	Paper-I: Web Designing using Advanced tools	10	40	3 hrs.
4	Paper-II: Programming in Visual Basic	10	40	3 hrs.
5	Practical: Morning Session: (Web Designing) Evening Session: (Visual Basic)	–	100	6 hrs. (Two Sessions) Morning and Evening
Total (Semester III and IV)		40	260	

Internal assessment will be based on the following criteria:

1. Two Handwritten Assignments : 5 marks  
(1st Assignment after one month & 2nd Assignment after two months)
2. One Class Test : 2.5 marks  
(One period duration)
3. Attendance : 2.5 marks

**NOTE : Practical exam will be conducted annually in two sessions. However the workload will be distributed in both the semesters according to the relevant papers.**

## Semester III : Paper - I

## Web DESIGNING Fundamentals

**Maximum Marks: 50**

**Minimum Pass Marks: 18**

**Time: 3 hours**

**External: 40**

**Internal: 10**

**Note:** Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

### **UNIT - I**

Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic features; Web Browsers; Web Servers; Hypertext Transfer Protocol; URLs; Searching and Web-Casting Techniques; Search Engines and Search Tools.

### **UNIT - II**

Web Publishing: Hosting your Site; Internet Service Provider; Planning and designing your Web Site; Steps for developing your Site; Choosing the contents; Home Page; Domain Names; Creating a Website and the Markup Languages (HTML, DHTML).

### **UNIT - III**

Web Development: Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML command Tags; Creating Links; Headers; Text styles; Text Structuring; Text colors and Background; Formatting text; Page layouts.

### **UNIT - IV**

Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts; Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes.

### **TEXT BOOKS:**

1. Raj Kamal, "Internet and Web Technologies", Tata McGraw-Hill.
2. Ramesh Bangia, "Multimedia and Web Technology", Firewall Media.

### **REFERENCE BOOKS:**

1. Thomas A. Powell, "Web Design: The Complete Reference" , 4/e, Tata McGraw-Hill
2. Wendy Willard, "HTML Beginners Guide", Tata McGraw-Hill.
3. Deitel and Goldberg, "Internet and World Wide Web, How to Program", PHI.

## **Paper-II DATABASE Management SYSTEM**

**Maximum Marks: 50**

**External: 40**

**Minimum Pass Marks: 18**

**Internal: 10**

**Time: 3 hours**

**Note:** Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

### **UNIT - I**

Basic Concepts - Data, Information, Records and files. Traditional file -based Systems-File Based Approach-Limitations of File Based Approach, Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment, DBMS Functions and Components, Advantages and Disadvantages of DBMS, Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users.

### **UNIT - II**

Database System Architecture - Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances, Data Independence - Logical and Physical Data Independence, Classification of Database Management System, Centralized and Client Server architecture to DBMS.

### **UNIT - III**

Data Models: Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling, Entity-Relationship Model - Entity Types, Entity Sets, Attributes Relationship Types, Relationship Instances and ER Diagrams.

### **UNIT - IV**

Relational Data Model:-Brief History, Terminology in Relational Data Structure, Relations, Properties of Relations, Keys, Domains, Integrity Constraints over Relations, Base Tables and Views, Basic Concepts of Hierarchical and Network Data Model.

### **TEXT BOOKS:**

1. Elmasri&Navathe, "Fundamentals of Database Systems", 5th edition, Pearson Education.

### **REFERENCE BOOKS:**

1. Thomas Connolly Carolyn Begg, "Database Systems", 3/e, Pearson Education
2. C. J. Date, "An Introduction to Database Systems", 8<sup>th</sup> edition, Addison Wesley N. Delhi.

## **Semester IV : Paper-I Web DESIGNING Using Advanced Tools**

**Maximum Marks: 50**

**Minimum Pass Marks: 18**

**Time: 3 hours**

**External: 40**

**Internal: 10**

**Note:** Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

### **UNIT - I**

Introduction to DHTML and its features; Events; Cascading Style Sheets: Creating Style Sheets; Common Tasks with CSS: Text, Fonts, Margins, Links, Tables, Colors; Marquee; Mouseovers; Filters and Transitions; Adding Links; Adding Tables; Adding Forms; Adding Image and Sound;

### **UNIT - II**

Extensible Mark-up Language(XML): Introduction; Features; XML Support and Usage; Structure of XML Documents; Structures in XML; Creating Document Type Declarations; Flow Objects; Working with Text and Font; Color and Background properties;

### **UNIT - III**

Java Script Introduction, Variables in Java Script, Control Statements, Operators in Java Script, Pop-ups, Functions in Java Script, Forms

### **UNIT - IV**

Events and Event Handling, Exception Handling, Introduction to Java Script Objects, Java Script Build-in objects, Java Server Pages

### **TEXT BOOKS:**

1. Internet and Web Technologies, Raj Kamal, Tata McGraw-Hill.
2. Multimedia and Web Technology, Ramesh Bangia, Firewall Media.
3. Internet and Web Design, ITLES Research and Development Wing, Macmillan India .

### **REFERENCE BOOKS:**

1. Web Design: The Complete Reference , 4/e, Thomas A. Powell, Tata McGraw-Hill
2. Internet and World Wide Web, How to Program, Deitel and Goldberg, PHI.
3. Robert Sebesta, "Web Programming", Pearson Education.

**Maximum Marks: 50****Minimum Pass Marks: 18****Time: 3 hours****External: 40****Internal: 10**

**Note:** Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

### **UNIT - I**

Introduction to VB: Visual & non-visual programming, Procedural, Object-oriented and event-driven programming languages, The VB environment: Menu bar, Toolbar, Project explorer, Toolbox, Properties window, Form designer, Form layout, Immediate window. Visual Development and Event Driven programming.

### **UNIT - II**

Basics of Programming: Variables: Declaring variables, Types of variables, Converting variables types, User-defined data types, Forcing variable declaration, Scope & lifetime of variables. Constants: Named & intrinsic. Operators: Arithmetic, Relational & Logical operators. I/O in VB: Various controls for I/O in VB, Message box, Input Box, Print statement.

### **UNIT - III**

Programming with VB: Decisions and conditions: If statement, If-then-else, Select-case. Looping statements: Do-loops, For-next, While-wend, Exit statement. Nested control structures. Arrays: Declaring and using arrays, one-dimensional and multi-dimensional arrays, Static & dynamic arrays, Arrays of array. Collections: Adding, Removing, Counting, Returning items in a collection, Processing a collection.

### **UNIT - IV**

Programming with VB: Procedures: General & event procedures, Subroutines, Functions, Calling procedures, Arguments- passing mechanisms, Optional arguments, Named arguments, Functions returning custom data types, Functions returning arrays, Simple programs in VB.

### **TEXT BOOKS:**

1. Steven Holzner, "Visual Basic 6 Programming: Black Book", Dreamtech Press.
2. Evangelos Petroutsos. "Mastering Visual Basic 6", BPB Publications.
3. Julia Case Bradley & Anita C. Millsbaugh, "Programming in Visual Basic 6.0", Tata McGraw-Hill Edition

**REFERENCE BOOKS:**

1. Michael Halvorson, "Step by Step Microsoft Visual Basic 6.0 Professional", PHI
2. "Visual basic 6 Complete", BPB Publications.
3. Scott Warner, "Teach Yourself Visual basic 6", Tata McGraw-Hill Edition
4. Brian Siler and Jeff Spotts, "Using Visual Basic 6", Special Edition, PHI.