# FACULTY OF ENGINEERING & TECHNOLOGY

## SYLLABUS

### FOR

## Post Graduate Diploma in Web Designing (P.G.D.W.D.)
### (Semester: I – II)

### SESSION: 2019-20



# GURU NANAK DEV UNIVERSITY AMRITSAR

*PG DIPLOMA IN WEB DESIGNING*

## *Scheme*

| | Semester I | | |
|---|---|---|---|
| *Paper* | *Paper Name* | *Theory* | *Practical* |
| Paper-I | Fundamentals of Computer & Operating Systems | 50 | 50 |
| Paper-II | Web Designing Tools | 50 | 50 |
| Paper-III | Introduction to Scripting Languages, Web Designing | 50 | 50 |
| Paper-IV | Programming in VB.NET | 50 | 50 |
| | | **Total** | **400** |

**Eligibility: Passed 10+2+3 system with atleast 45% marks in aggregate**

*PG DIPLOMA IN WEB DESIGNING (SEMESTER – I)*

**PAPER- I: Fundamentals of Computer & Operating Systems**

**Time: 3 Hrs.**                                                                                 **M.M: 100**
                                                                                                         **Theory: 50**
                                                                                                         **Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
**The student can use only Non-programmable & Non-storage type calculator.**

## Section–A

**Instructions for Examiners:**

Eight questions are to be set. Candidates must be asked to attempt any five. Each question carries equal marks. The Students can use only Non Programmable & Non Storage type calculator in the subject/Papers.

**Fundamentals of Computer:**

Introduction to computer, Applications of computer, Components of computers Input-output devices (key boards, mouse, track ball, light pen, cards, printers, plotters, scanners), Secondary storage devices (floppy disk, magnetic disk, Winches er disk, optical disk) Types of software, Translators (compiler, interpreter, assembler), Introduction to data communication and network.

## Section–B

**Introduction to Windows Vista:**

Parts of window screen (Desktop, window, icons), start menu, Taskbar settings, application & document window, anatomy of a window (Title bar, minimize, maximize button, control box, scroll bars, scroll buttons, scroll boxes), Window explorer (expansion, collapsing of directory tree, copying, moving, deleting files, folder, creating folders), About desktop icons (recycle bin, my computer, network neighborhood, briefcase), folder, shortcut creation, setting of screen saver, color settings, wallpaper, changing window appearance.

**Section–C**

**Operating System:**

Meaning of operating system, its functions, batch systems, real systems, multi programming, multitasking, single, multi user systems. Define dos ,Structure  of Ms- Dos (description ' of booting files, steps to boot the system), hot &cold booting internal command ( cls, dir, date, time, vol, ver, copy con, type, ren, del, md, rd, d, path, prompt), external commands edit, attrib, backup, restore, chkdsk, diskcopy, dskcomp, deltree, edit, format, fdisk, find, label, more, xcopy, move, print, scandisk, sort, sys, doskey, tree) .

**Section–D**

**Introduction to Unix:**

Explain the features of Unix system. Structure of Unix (Kernel,shell), Unix file system (data blocks, list, superblock, bootblock), Types of files (ordinary files, directory, special files), types of users (0-2), simple commands (cat, Is, In, chmod, mail, who, who am I, cal pwd, date, ps, mkdir, cd, rmdir, rm, tput, clear). Piping, filters, batch processing, shell programming (Echo, read, case constructs). VI editor(opening it , inserting, modifying, deleting, saving files). Types of shells (bourne, c, r shell. Login & logout of unix session.

**References:**

Windows Based Computer Courses by Rachpal Singh & Gurvinder Singh.

Computer Fundamental: By Peter Norton.

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## Paper – II: Web Designing Tools

**Time: 3 Hrs.**                                                                **M.M: 100**
                                                                                **Theory: 50**
                                                                                **Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
**The student can use only Non-programmable & Non-storage type calculator.**

### Section–A

**Front Page 2000:**
**Introduction to Front page 2000:**
Frontpage window, various toolbar of frontpage.
Creating a web page using wizard, creating a web page, using template.

### Section–B

**Themes:**
Creating your own theme, Selecting a color scheme, selecting graphics, selecting text.

### Section–C

**Forms:**
Creating form using wizard, adding text boxes, adding radio buttons, adding check box, adding drop-down menus, adding pushbutton & pictures.

### Section–D

**Web page designing:**

Adding shared borders to the page, Giving title to a page, selecting a background for page, adding text to page, Hyperlink, turing text to heading, adding picture to the page, adding a clipart, adding navigation bars, Publishing your web page, making your web page searcheable.

**References:**

Learning Front Page 2000 by Ramesh Bangra

Khanna Book Publishing Co.Pvt.Ltd.

Learning to use Internet by Ernest Ackerman.

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**PAPER-III: Introduction to Scripting Languages, Web Designing**

Time 3: Hrs.                                                                        **M.M: 100**
                                                                                    **Theory: 50**
                                                                                    **Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
**The student can use only Non-programmable & Non-storage type calculator.**

### Section–A
Introduction to HTML, DHTML
Introduction to the concept of Hypertext and Hypermedia.
HTML Tools.
HTML Tags, Hypertext and Anchors.

### Section–B
Different Image Formats and their creation.
Tables – Table based tags, Adding image within tables.

### Section–C
Forms and Form Controls, Processing of Forms.
Frames – Formatting of Frames, Nested Frames, In-line Frames.

### Section–D
Style Sheets – Combining with HTML documents, Properties of Style Sheet.
Multimedia – Adding GIF, Sound and Videos
Publishing a Web-site

**References:**
Web-designing & Scripting Languages by Manohar Singh, AP Publishers.
A Text Book of Scripting Languages by Rachhpal Singh & Mamta Verma, Kalyani Publishers.

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## PAPER-IV: Programming in VB.NET

**Time 3: Hrs.**                                                           **M.M: 100**
                                                                            **Theory: 50**
                                                                            **Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
**The student can use only Non-programmable & Non-storage type calculator.**

### Section–A

Introduction to .NET
What is .NET, Introduction to .NET Framework, Basic Functionality of CLR, MSIL, Platform Independence, language Interoperability
VB.NET Language
Features of VB.Net, Writing Programs in VB.Net, Compiling and Execution from Command Prompt
Data Types, Expressions and Operators
Option Statements, Type Casting, Built-in Functions in VB.Net, Sub Programs and Working with Arrays
Windows Applications
Basic Controls and Event Driven Programming, Programming with Advanced Controls

### Section–B

Error Handling
Error Handling, Error Categories, Debug and Trace Classes, Code Optimization, Testing Phases and Strategies
Data Access with ADO.NET

### Section–C

Introduction to Access Libraries DAO,RDO,ADO, Limitation of ADO, ADO.Net Objects and Usage, ADO.Net Managed Providers, Data Reader, Data Adapter and DataSet, Data Relation and DataSet, Data Binding, Connected and Disconnected Recordsets, Connection Pooling, ADO.Net Exceptions, Using Stored Procedures, N-Tier Database Application, ADO.Net and XML,

### Section–D

File Stream
Crystal Reports
Setup and Deployment

**Reference:**
      VB.NET Black Book

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## *Scheme*

| | Semester II | | |
|---|---|---|---|
| **Paper** | *Paper Name* | *Theory* | *Practical* |
| Paper-I | Network Concepts and Management (Hardware, Software, setting in LINUX/UNIX/NT Environment) | 50 | 50 |
| Paper-II | Programming in JAVA | 50 | 50 |
| Paper-III | Internet Applications | 50 | 50 |
| Paper-IV | PC Computing | 50 | 50 |
| | | **Total** | **= 400** |

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## PAPER-I: Network Concepts and Management
## (Hardware, Software, setting in LINUX/UNIX/NT environment)

**Time 3: Hrs.**                                                                                           **M.M: 100**
                                                                                                           **Theory: 50**
                                                                                                           **Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
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### Section–A
**Introduction:**
Network H/W and Software requirement – Network topologies, OSI reference model, TCP/IP model.
**Design Issues:** ISDN, ATM, Routers, hub, switches.

### Section–B
**Network Security:**
Data compression techniques, cryptography, IP addressing schemes.
**NT Administration:**
Account policies, creating a user account, group membership, administration of share through server manager Primary Domain controller, backup, domain controller.

### Section–C
**Unix:**
Unix features, unix system architecture, permission mode, pipes & filters, Commands: Cat, Is, In, chmod, mail, write, who, cal, pwd, date, Ps, mkdir, cd, mdir, rm, clear

### Section–D
**Introduction to Linux:**
Comparative study of NT server, Unix and Linux.

**References:**
1. Tannanbrum: Computer Network, Prentice Hall, 1992, 3rd
2. Robert Reinstein, et al: Windows NT Trouble Shooting and Configuration, Techmedia.

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# Paper-II: PROGRAMMING IN JAVA

**Time 3: Hrs.**                                                                    **M.M: 100**
                                                                                     **Theory: 50**
                                                                                     **Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
**The student can use only Non-programmable & Non-storage type calculator.**

## Section–A

Evolution of Java
Importance of JAVA to Internet, Features of JAVA, Bytecode, Object Oriented Approach.

Data Types, Variables and Arrays
Data types, Declaration of Variable, Type Conversion and Casting, One Dimensional and Multidimensional arrays

## Section–B

Operators and Control Structures
Arithmetic, Bitwise, Relational, Boolean, Assignment Operators, Operator precedence, Selection Statements, Iteration Statements, Jump statements.

Classes
Class Fundamentals, Declaring objects, introducing methods, constructors, this keyword, Overloading constructors, Recursion, Nested and Inner classes.

## Section–C

Inheritance
Basics, Creating Multilevel hierarchy, Method Overriding, Abstract Classes.
Exception Handling
Fundamentals, Exception Types, uncaught exceptions, try and catch.

## Section–D

Packages and Interface
Packages, Access Protection, Importing Packages, Interfaces, Defining, Implementing, Applying Interfaces, Extending Interfaces

**Reference:**
Patrick Naughton & Herbert Schildt: The Complete Reference Java 2, Tata McGraw Hill Edition
Balagurusamy: Programming in JAVA.

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# Paper – III: Internet Applications

**Time 3: Hrs.**  **M.M: 100**
**Theory: 50**
**Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
**The student can use only Non-programmable & Non-storage type calculator.**

## Section–A
**Introduction**: About internet and its working, business use of internet, services offered by internet, evaluation of internet, internet service provider (ISP), windows environment for dial up networking (connecting to internet), audio on internet, internet addressing (DNS) and IP addresses).
**E-Mail Basic Introduction;** Advantage and disadvantage, structure of an e-mail message, working of e-mail (sending and receiving messages), managing e-mail (creating new folder, deleting messages, forwarding messages, filtering messages) Implementation of outlook express.

## Section–B
**Internet protocol**: Introduction, file transfer protocol (FTP), Gopher, Telnet, other protocols like HTTP and TCPIP.
**New group**: Basic concepts of newsgroup, connecting to a news server, subscribing to newsgroup, organization of articles, reading messages, posting replies and new messages, managing newsgroup and messages.

## Section–C
**WWW**: Introduction, working of WWW, Web browsing (opening, viewing, saving and printing a web page and bookmark), web designing using HTML, DHTML with programming techniques.

## Section–D
**Search engine**: About search engine, component of search engine, working of search engine, difference between search engine and web directory.
**Intranet and extranet**: Introduction, application of intranet, business value of intranet, working of intranet, role of extranet, working of extranet, difference between intranet and extranet.

**Reference:**
Internet and its Applications by Ackerman.
Internet – The Complete Reference

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## PAPER IV: PC COMPUTING

**Time: 3 Hrs.**                                                                         **M.M: 100**
                                                                                          **Theory: 50**
                                                                                          **Practical: 50**

**Instructions for the Paper Setters:-**
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.
**The student can use only Non-programmable & Non-storage type calculator.**

### Section–A
**MS-Word:** Introduction to Ms-Office, Ms-Access, Ms Excel. Parts of window of word (Title bar, menu bar, status bar, ruler) , Creation of new documents, opening document ,insert a document into another document .Page setup, margins, gutters, font properties, A!ignment, page breaks, header footer .deleting ,moving, replace, editing text in document. Saving a document, spell checker, printing a document. Creating a table, entering and editing Text in tables. Changing format of table, height width of row or column. Editing, deleting Rows, columns in table. Borders, shading, Templates, wizards, Drawing objects, mail merge

### Section–B
**MS-Power Point:** Introduction to Ms power point. Power point elements (templates wizard Views, color schemes ,Exploring power point menu (opening & closing menus, working With dialogues boxes) , adding text, adding title, moving text area, resizing text Boxes, adding pictures. Starting a new slide, saving presentation, printing slides .Views (slide View slide sorter, notes view, outline view) .Formatting & enhancing text formatting, Choosing transitions. Creating a graphs, displaying slide show, adding multimedia .Slide transitions. Timing slide display, adding movies & sounds. Using a pick look Wizards to change format.

### Section–C
**MS-Excel:** Introduction to Worksheet/Spreads, Features of excel, Describe the excel Window, different functions on different data in excel, creation of graphs. editing it and formatting. changing chart type to 2d chart or 3d chart, creation of worksheet, adding, deleting, moving the text in worksheet, linking different sheets, sorting the data, querying the data, filtering the data (auto and advance filters), What-if analysis, printing a worksheet.

### Section–D
**MS-Access:** Introduction, Understanding Databases. Creating the tables. entering records in table, deleting table, modifying table fields, linking tables, Queries. Forms, formatting forms, relating a form to tables, Reports(building reports, formatting report. displaying the information of table using reports Adding Graphs to your reports. .

**References:**
1. Window Based Computer Courses by Gurvinder Singh & Rachpal Singh, Kalyani Publishers.
2. PC Computing By R.K .Taxali