

Based on Revised Syllabus (M2-R5.1)

Web Designing and Publishing



English Medium

~Author~

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PREFACE

Swami Vivekananda once said – “Education is the manifestation of perfection present already in man.” Education is the most powerful weapon which one can use to change the world. When it comes to technical education we must be thankful to NIELIT to setup an institution at national level and providing equal opportunity to all to expand their knowledge to technology. No matter to which stream of education you belong you can still get the technical knowledge and test the technical knowledge by various courses and examinations conducted by NIELIT. The 'O'-level, 'A'-level, 'B'-level and 'C'-level are the four most popular courses that provides certification from diploma to degree.

We have prepared this book for one of the papers in 'O'-level examination namely “Web Designing and Publishing”. Based on the latest syllabus prescribed by NIELIT, this book is covering each and every concept of web designing and publishing. Every tool is described in detail with diagrams and examples. Using special computer technique we have tried to present all windows, visuals or dialog boxes in this book, which appears on screen while working on computer. It makes the understanding of the subject better and interesting. This book is divided into 9 chapters where at the end of each chapter some exercises have been given in the same patters as of 'O'-level examination. All the readers of this book are requested to solve those exercises.

We have tried our best to complete this book without errors and other mistakes in printing or proof reading but still some errors may be possible and in this regard your kind cooperation is solicited. We shall feel obliged to the readers if they send us their critical opinion regarding coverage, readability and presentation in this book and request them to email their suggestion, if any, to improve the quality of this book.

Authors 

Outline of Module

Objectives

This module is designed to start web designing, irrespective of knowledge currently the students have in this area. The businesses, nowadays, are heavily relying on web based applications. The purpose of this module is to provide skill to students in designing layouts of web sites. By the end of this module, students will be able to describe the structure and functionality of the World Wide Web, create web pages using a combination of HTML, CSS, and JavaScript and Angular JS.

The students will also learn how to design and integrate multimedia objects in web site. Further, the student will learn how web sites are published. After completing the module, the student will be able to:

- Design and create effective web pages.
- Integrate graphics in web pages.
- Integrate various tools and techniques like HTML, CSS, JavaScript, Angular JS etc.
- Design and edit images using tools.
- Embed the images in web pages

Duration

120 Hours - (Theory: 48hrs + Practical: 72 hrs)

Sr.	Module Unit or Chapter Name	Duration		Marks (Max.)
		Theory	Practical	
1.	Introduction to Web Design	2	3	25
2.	Editors	2	3	
3.	HTML Basics	10	15	
4.	Cascading Style Sheets (CSS)	10	15	20
5.	CSS Framework	6	9	15
6.	JavaScript and Angular JS	10	15	20
7.	Photo Editor	6	9	20
8.	Web Publishing and Browsing	2	3	
Total		48	72	100

INDEXING

1. Introduction to Web Design.....	1-16
2. Editors.....	17-32
3. HTML Basics.....	33-102
4. Cascading Style Sheets (CSS).....	103-175
5. CSS Framework.....	176-221
6. JavaScript and Angular JS.....	222-277
7. Photo Editor	278-300
8. Web Publishing and Browsing.....	301-326
9. Practical Assignments.....	327-330
10. Sample Paper.....	331-340

DETAILED SYLLABUS

1. Introduction to Web Designing

- 1.1 Introduction of Internet
- 1.2 World Wide Web (WWW)
 - 1.2.1 Hypertext System
 - 1.2.2 Graphical User interface
 - 1.2.3 Interactivity
 - 1.2.4 Information Organization
 - 1.2.5 Web Casting
 - 1.2.6 Platform Independence
- 1.3 What is Website?
 - 1.3.1 Domain Name System (DNS)
 - 1.3.2 How the website Work?
- 1.4 Web Pages
- 1.5 Front-end and Back-end
- 1.6 Client and Server Scripting Language
- 1.7 Responsive Web Designing
- 1.8 Types of Website

2. Editors

- 2.1 Introduction
- 2.2 Notepad
 - 2.2.1 File Menu
 - 2.2.2 Edit Menu
 - 2.2.3 Format Menu
- 2.3 Notepad++
 - 2.3.1 Working with text effects
 - 2.3.2 Editing the text effects
 - 2.3.3 Searching and Replace

2.4 Sublime Text editor

- 2.4.1 Working with files
- 2.4.2 Editing the text
- 2.4.3 Searching and Replace
- 2.4.4 Writing Program code
- 2.4.5 Multi Line Editing

3. HTML Basics

- 3.1 Introduction
- 3.2 Creating and Running HTML Code
- 3.3 Elements, Tags and Attributes
 - 3.3.1 Types of Elements
 - 3.3.2 Basic Structure of HTML
- 3.4 Basic HTML Tags
- 3.5 Formatting Tags
 - 3.5.1 HR Element
 - 3.5.2 Paragraph Element
 - 3.5.3 Image Element
 - 3.5.4 Marquee Element
- 3.6 Body Tag Elements
 - 3.6.1 Background Image Attribute
 - 3.6.2 BGCOLOR Attribute
 - 3.6.3 Text Attribute
 - 3.6.4 Link Attribute
 - 3.6.5 Alink Attribute
 - 3.6.6 VlinkAttribute
- 3.7 Heading Elements

3.8 Font Tags

3.9 <Div> Elements

3.10 Pre-formatted Elements

3.11 Comment in HTML

3.12 Anchor Element

3.12.1 Hypertext reference attribute

3.12.2 Name attribute

3.12.3 Title Attribute

3.12.4 Target Attribute

3.12.5 Global Link

3.13 Create List

3.13.1 Ordered List Element

3.13.2 Unordered List Element

3.13.3 Definition List Element

3.13.4 Nested Lists

3.14 Creating Tables in HTML

3.14.1 Table Tag

3.14.2 TR Tag

3.14.3 TD Tag

3.14.4 Attribute in Table, TD, TR tag

3.14.5 TH Tag

3.14.6 Caption tag

3.15 FRAME and FRAMESET

3.15.1 <FRAMESET> tag

3.15.2 <FRAME> tag

3.16 HTML Form's

3.16.1 Form's Element

3.16.2 Input Element

3.17 HTML 5.0

3.17.1 Features of HTML 5

3.17.2 New Tags of HTML 5

3.17.3 HTML5 Block Elements

3.18 HTML5 Form Validations

3.18.1 "required" Attribute

3.18.2 "pattern" Attribute

3.18.3 "autofocus" Attribute

3.18.4 input element "email"

3.18.5 input element "number"

3.18.6 input element "date"

3.18.7 input element "range"

4. Cascading Style Sheet (CSS)

4.1 Introduction

4.2 Types of Cascading Style Sheet

4.2.1 Inline CSS

4.2.2 Internal or Embedded CSS

4.2.3 External CSS

4.3 Priorities of CSS

4.4 CSS Syntax

4.5 CSS Selectors

4.5.1 Universal Selector

4.5.2 Id Selector

4.5.3 Class Selector

4.5.4 Attribute Selector

4.5.5 Group Selector

4.6 CSS Properties

4.6.1 Border Properties

4.6.2 Block Properties:Display

4.6.3 Box Properties

4.6.4 LIST Properties

4.6.5 Positioning Properties

4.6.6 Text Properties

4.6.7 Font Properties

4.6.8 Background Properties

4.7 CSS List

4.7.1 Setting List Style Type

4.7.2 Image as the List Item Marker

4.7.3 Remove Default Settings

4.7.4 Styling List with Colours

4.8 CSS Table

4.8.1 Tables Border

4.8.2 Collapse Table Borders

4.8.3 Table Width and Height

4.8.4 Horizontal & Vertical Alignment

4.8.5 Table Padding

4.8.6 Hoverable Table

4.8.7 Striped Tables

4.8.8 Table Color

4.9 CSS Menu Design

4.9.1 Vertical Navigation bar

4.9.2 Horizontal Navigation bar

4.10 CSS Image Gallery

5. CSS Framework

5.1 Introduction to W3.CSS

5.2 W3.CSS Website Template

5.3 W3.CSS Color

5.3.1 Coloring HTML Element

5.3.2 Hover Colors

5.4 W3.CSS Containers

5.4.1 Add color with w3-container

5.4.2 Headers and Footers

5.4.3 Articles and Sections

5.5 w3-css Panels

5.5.1 Panels for Notes or Quotes

5.5.2 Rounded Panels

5.5.3 Collapsible Panel

5.5.4 Hidden Panel

5.6 W3.CSS Borders

5.6.1 Rounded Borders

5.6.2 Thick and Hoverable Borders

5.6.3 Invisible Border

5.7 W3.CSS Font

5.7.1 Font Size Classes

5.7.2 Overriding the w3.css defaults

5.7.3 Overriding the Page Font

5.8 W3.CSS Text

5.8.1 Text Alignment

5.8.2 Wide Text, Shadow & Opacity

5.9 W3.CSS Table

5.9.1 Basic Table

5.9.2 Striped and Border Table

5.9.3 Hoverable Table and Colors

5.9.4 Table as a Card

5.10 W3.CSS List

5.10.1 Colored List as a Card

5.10.2 Hoverable List with Fixed width

5.10.3 Classable List Items

5.10.4 Avatar List

5.10.5 List with Pre-defined sizes

5.11 W3.CSS Image

5.11.1 Text on Images

5.12 W3.CSS Grid

6. JavaScript and Angular JS

6.1 Introduction to JavaScript

6.2 Uses of JavaScript

6.3 Program Structure

- 6.4 Operators in JavaScript
- 6.5 Variable
- 6.6 JavaScript Statement, Code and Block
- 6.7 Reserved Words
- 6.8 Data Types
- 6.9 JavaScript Comment
- 6.10 JavaScript Popup Box
 - 6.10.1 Prompt Box
 - 6.10.2 Alert Box
 - 6.10.3 Confirm Box
- 6.11 Conditional Statement
 - 6.11.1 'if' Statement
 - 6.11.2 'if-else' Statement
 - 6.11.3 'Nested if' Statement
 - 6.11.4 Complex Condition
- 6.12 Switch Statement
- 6.13 Functions
 - 6.13.1 Math Functions
 - 6.13.2 String Functions
 - 6.13.3 User Define functions
- 6.14 JavaScript Event
 - 6.14.1 Interactive Form and Object
 - 6.14.2 Form Elements
 - 6.14.3 Events
- 6.15 Event Handling and Form Validation
 - 6.15.1 Window Event Handling
 - 6.15.2 Button Element
 - 6.15.3 Text Element
 - 6.15.4 Check box Element
 - 6.15.5 Password Element
 - 6.15.6 Radio Element
 - 6.15.7 Select Element

- 6.15.8 Text Area Element
- 6.15.9 Pausing with timeout
- 6.16 What is Angular JS?
 - 6.16.1 Difference between JavaScript and Angular JS
 - 6.16.2 Angular JS Development Environment
 - 6.16.3 Angular JS Example
- 6.17 Angular JS Directives
- 6.18 Angular JS Expressions
- 6.19 Angular JS Controller
- 6.20 Angular JS Module
- 6.21 Angular JS Form

7. Photo Editor

- 7.1 Features of Photo Editing
- 7.2 Introduction to Photoshop
- 7.3 Photo Editing in Photoshop
 - 7.3.1 Background Change
 - 7.3.2 Dress Color Change
 - 7.3.3 Tonal Changes
 - 7.3.4 Black/White to color, vice-versa
 - 7.3.5 Removing unwanted Objects
 - 7.3.6 Wrinkle Removal
 - 7.3.7 Image Retouching
- 7.4 Common Photo Formats and sizes
- 7.5 Color Modes
- 7.6 Getting Start Photoshop
- 7.7 Palettes
- 7.8 Photoshop Tools
 - 7.8.1 Moov Tool
 - 7.8.2 Rectangular Marquee Tool

7.8.3 Lasso Selection Tool

7.8.4 Quick Selection Tool

7.8.5 Crop Tool

7.8.6 Spot healing brush Tool

7.8.7 Brush Tool

7.8.8 Erase Tool

7.8.9 Gradient Tool

7.8.10 Blur Tool

7.8.11 Type Tool

7.8.12 ShapeTool

7.8.13 ZoomTool

7.9 Transform

7.9.1 Free Transform

7.9.2 Transform

7.10 Color Mode

7.10.1 Bitmap Mode

7.10.2 Grayscale Mode

7.10.3 Duotone Mode

7.10.4 Indexed Color Mode

7.10.5 RGB Color mode

7.10.6 CMYK Mode

7.10.7 Lab Mode

7.11 Brightness/Contrast

7.12 Layers

7.12.1 Createb New Layer

7.12.2 Duplicate Layer

7.12.3 Delete Layer

7.12.4 Layer Properties

7.12.5 Layer Style

7.12.6 New Fill Layer

7.12.7 New Adjustment Layer

7.12.8 Layer Mask

7.13 Filter

8. Web Publishing and Browsing

8.1 Web Publishing

8.2 SGML

8.3 Web Hosting

8.4 HTML

8.5 Common Gateway Interface (CGI)

8.6 Document Interchange Standard

8.7 Components of Web Publishing

8.8 Document Management

8.9 Web page design consideration and principles

8.9.1 Simple

8.9.2 Consistency

8.9.3 Typography and Readability

8.9.4 Mobile Compatibility

8.9.5 Color Palette and Imagery

8.9.6 Easy Navigation

8.9.7 Easy Loading

8.9.8 Communication

8.10 Search and Meta Search Engines

8.10.1 Search Engines

8.10.2 Meta Search Engines

8.11 World Wide Web (WWW)

8.12 Browser

8.13 Hyper Text Transfer Protocol (HTTP)

8.14 Publishing Tools

8.14.1 Backstage desktop studio

8.14.2 Netscape Navigator Gold

8.14.3 Adobe Page Mill and Site Mill

8.14.4 Other Web Publishing Tools