B.Sc. Part – II Computer Science (Optional) (Semester – III)
Course Code: DSC-C11   Computer Science Paper –V
Course Title: Web Technology
Total Contact Hours: 36 Hrs (45 Lectures of 48 Min.)
Teaching Scheme: Theory – 03 Lect. / Week

Credits: 02   **Total Marks: 50**

Course Outcomes:
Upon successful completion of this course, students will be able to
1. understand the principles of web design.
2. construct basic websites using HTML and Cascading Style Sheets.
3. build dynamic web pages with validation using JavaScript.
4. develop a modern web application that meets the current industry requirement.

Unit – 1: Introduction to Internet, HTML, CSS and JavaScript   **18 Hrs.**

1.1 Fundamentals
    1.1.1 Introduction Internet.
    1.1.2 WWW, Web Browsers, Web Servers.URL and URI.

1.2 Overview of different protocols
    1.2.1 HTTP, SMTP, FTP.

1.3 HTML
    1.3.1 Introduction,
    1.3.2 Standard HTML Document Structure
    1.3.3 Basic Text Formatting Elements <b>, <strong>, <i>, <s>, <emp>, <u>, <small>, <big>, <tt>.
    1.3.4 Images <img>, Hypertext Links<a>, <span> and <div>,Lists -Ordered and Unordered, <input> (Type – Text, Password, Button, Submit, Reset).

1.4 Cascading Style Sheets
    1.4.1 Introduction
    1.4.2 Types of CSS
    1.4.3 Basic syntax
    1.4.4 Selectors –element, id, class, group, universal.
    1.4.5 Style Properties of color, font, text, size and border

1.5 Java Script
    1.5.1 Introduction
    1.5.2 Document Object Model
    1.5.3 Variables, Datatypes and Operators
    1.5.4 Control Statement – if, if-else, break
    1.5.5 Looping Statements – while, for
    1.5.6 Element Access in Java scripts – getElementById() and getElementsByName()
    1.5.7 Event and event handling – onClick(), onBlur(), onFocus(), onKeyPress()
    1.5.8 dialog boxes – alert(), prompt(), confirm().

Unit – 2: Introduction to PHP   18 Hrs.

2.1 Introduction PHP –

    2.1.1 Introduction and Features,

    2.1.2 PHP basic syntax <?php...?>,

    2.1.3 Comment(single and multiline),

    2.1.4 Echo command, PHP script execution in web browser.

    2.1.5 Variables: Basics, Variable naming rules, unset(), gettype(), isset(),

    2.1.6 constants -define() and constant()

    2.1.7 Operators: Arithmetic, Comparison, Relational, Assignment, Increment Decrement, Ternary, Other operators(., $, @, {}, ``, =>),

    2.1.8 Strings: Single Quoted and Double Quoted, escape sequences,

    2.1.9 Forms: HTML forms, action and get & post methods. PHP super global variables ($_GET, $_POST, $_REQUEST

    2.1.10 Decision-Making Statements: if, if... else, if ... elseif...else, switch statement, iterative Statements: for, while, do... while, foreach, break and continue statement

    2.1.11 Exit statements: exit, die

    2.1.12 User-Defined Functions: Declaring functions, Function call

    2.1.13 Arrays: Concept, Types(Numerical/List, Associative/Maps, Multidimensional), accessing array elements

2.2 Database Connection – Connection to MySQL

    2.2.1 Establishing Connection - mysqli_connect()

    2.2.2 Closing connection - mysqli_close()

    2.2.3 Select a database - mysqli_select_db()

    2.2.4 Execute MySQL commands- mysqli_query()

    2.2.5 Fetch data from tables - mysqli_fetch_row(), mysqli_fetch_array(), mysqli_fetch_assoc()

Reference Books –

1. Web Programming – John Dean, John and Bartlett Learning
2. Internet Fundamentals & Concepts – Shubhra Garg, S.K.Kataria& Sons
3. Web Technologies HTML, JavaScript, PHP, Java, JSP, ASP.NET, XML, and AJAX - Comprehensive Problem Solver, Black Book -Kogent Learning Solutions Inc, Dreamtech Press, Willey India Pvt Ltd.
4. Internet and World Wide Web How to Program – P. J. Deitel, H. M. Deitel,, Pearson
5. PHP and MySQL byDreamtech Publications
6. PHP Concepts Unleashed for Novice – Vol I - By Poornima Naik, Kavita Oza, Evincepub Publishing
7. PHP A Beginner's Guide – Vikram Vaswami
8. Beginning PHP 6, Apache, MySQL Web Development- By Timothy Boronczyk, ElizabethNaramore, Jason Gerner, Yann Le Scouarnec, Zeremy Stolz, Michael K. Glass
9. PHP and MySQL by Rajendra Salokhe, Aruta Publications
10. Learning Laravel: The easiest way – Jack Vo, Lean Publishing
11. Beginning Laravel -Sanjib Sinha, Apress
12. Web application development with Laravel PHP Framework version 4 - Jamal Armel, Metropolia