18BC205WEB TECHNOLOGIES

Course Description and Objectives:

This course teaches the creation of web pages and websites. It also teaches the process of hosting the web pages on the internet. The students will also learn about the data interchange format that is used in internet technology.

Course Outcomes:

The Student will be able to:

- Understand different components in Webpages using HTML/XHTML.
- Create a professional document usingCascadedStyleSheets.
- Construct websites foruser interactions usingJavaScript and use the XMLinformationinterchangeformat.
- Develop application logic by writing the server side script.

Skills:

- To impart thedesign, development andimplementation of DynamicWeb Pages.
- To develop programs forthe Web usingScripting Languages.
- To use XML DataInterchange format in Web applications.

Activities:

- Installation and configuring the web server.
- Develop a web application or a web site.
- Publish the developed web site through the web server.
- Addition of dynamic content to the web site or application.

Syllabus

UNIT - 1 **12 Hours**

MARKUP LANGUAGES: an introduction to HTML, Fundamentals of HTML elements, Lists, Tables, Frames, Forms, Creating HTML documents, Case Study.

UNIT - 2 **12 Hours**

STYLE SHEETS:Introduction to cascading style sheets, cascading style sheet features, CSS core syntax, Style sheets and HTML, Style Rule cascading and Inheritance, Text Properties, CSS Box model

UNIT - 3 **12 Hours**

CLIENT-SIDE PROGRAMMING:Introduction to Java script, java script in perspective, basic syntax, variables & data types, statements, operators, literals, functions

UNIT - 4 **12 Hours**

CLIENT-SIDE PROGRAMMING:Objects, Arrays, Built-in objects

UNIT - 5 **12 Hours**

REPRESENTING WEB DATA:XML documents and vocabularies, XML version and the XML declaration, Defining XHML's abstract syntax, XML Namespaces.

Lab Experiments:

1. Create a HTML page having four frames named
    a. top
    b. center
    c. bottom
    d. left

The top frame should contain company logo and title. The bottom frame should contain copy right information. The left frame should contain various links like Home, Products, Services, Branches, About us, etc. When clicked on those links, the contents should appear in the display on to center frame.

2. Create a HTML document to demonstrate Form Elements that includes Form, input-text, password, radio, checkbox, hidden, button, submit, reset, label, text area, select, option, file upload.

3. Write a HTML program with at least two <h1>, two images, two buttons and appropriate CSS to display
    a. All <h1> with font-size 12pt, and bold in Verdana font using Inline CSS.
    b. All <img> with border color yellow, thickness 10px using Document Level CSS
    c. All <input type='button'> should change background color to red on mouse over them using External CSS.

4. Design a HTML page having a text box and four buttons viz Factorial, Fibonacci, Prime, and Palindrome. When a button is pressed an appropriate java script function should be called to display the following:
    a. factorial of that number
    b. fibonacci series up to that number
    c. prime numbers up to that number
    d. is it palindrome or not?

5. Write Java script programs to demonstrate the following objects with at least five methods:
    a. Math.
    b. String.
    c. Array.
    d. Date.

6. Write a Java script program to display message on OnBlur and OnFocus events.

7. Create an XML document where CSEBooks is the root tag, it consists of 5 books named as(book1, book2, book3, book4, book5) whose copies of books are 10 and provide the child tag such as author, title, pages, price for all books.

8. For the above program, provide an associate DTD.

9. Create an XML document where automobiles is the root tag, it consists of 5 vehicles named as (vehicle1, vehicle2, vehicle3, vehicle4, vehicle5) and use attributes type, model, engine number, color, cc.

10. For the above 9th program, provide an associated Schema.

Text Book:

Jeffrey C. Jackson,"Web Technologies-A computer science perspective", 2nd edition, Pearson, 2008.

Reference Books:

1. R.W.Sebesta, "Programming world wide web", 4th Edition, Pearson, 2011.
2. Dietel and Nieto, "Internet and World Wide Web — How to program", 5th edition, Pearson, 2012.