



Course Title: Web Technologies

Course Code: COCSC04/ CACSC04/CDCSC04

Time: 03 Hours

Max. Marks: 40

Note: - Attempt all the five questions. Missing data/ information (if any), maybe suitably assumed & mentioned in the answer.

Q. No.	Question	Marks	CO
Q 1	Attempt any 2 parts of the following		
1a	In web development, why is it crucial to validate XHTML code, and how can web developers utilize the W3C XHTML Validation Service to ensure compliance with web standards and best practices? Provide code examples if applicable.	4	CO1
1b	What does browser portability mean, and why is it essential for modern web development? Demonstrate how to create a horizontal navigation menu using an HTML list and CSS. Explain how to style the menu items and add hover effects.	4	CO2
1c	What are Rich Internet Applications, and how do they enhance user experiences on the web? Show how to style HTML form elements (text inputs, buttons, checkboxes, etc.) using CSS to enhance the user experience.	4	CO2, CO3, CO5
Q 2	Attempt any 2 parts of the following		
2a	How can JavaScript be used to dynamically change the styles of HTML elements in a web page? Create a JavaScript program that allows users to change the background color of a webpage using buttons.	4	CO2, CO3
2b	Discuss event handling in JavaScript and the use of event listeners. Write a JavaScript program that listens for user clicks and logs the coordinates of the mouse click.	4	CO3
2c	Explain the difference between recursion and iteration in JavaScript with example. Write JavaScript code to access and modify elements in the DOM tree.	4	CO3
Q 3	Attempt any 2 parts of the following		
3a	Describe the purpose of XSL Transformations (XSLT) and how they are used to transform XML data into different formats. Explain with example.	4	CO4
3b	Develop a web page that allows users to load an XML document and use JavaScript to manipulate the Document Object Model (DOM) to extract specific data.	4	CO4
3c	Explain the key differences between traditional web applications and Rich Internet Applications (RIAs) powered by Ajax. Write JavaScript code for a basic Ajax request using the XMLHttpRequest object to fetch data from a remote server and display it in the browser.	4	CO2, CO3
Q 4	Attempt any 2 parts of the following		
4a	Explain the role of web servers like IIS and Apache in hosting and serving web applications. Write an SQL query to retrieve all records from a database table where the "status" column is set to "active."	4	CO1
4b	What is PHP, and how does it differ from other server-side scripting languages like JavaScript or Ruby? Create a PHP script that processes a simple HTML form, retrieves user input, and displays it on a web page.	4	CO2, CO3
4c	What is the primary purpose of ERB in Ruby on Rails? In a Rails view, how would you display the value of a variable user_email within a paragraph tag using ERB?	4	CO5
Q 5	Attempt any 2 parts of the following		CO3
5a	Write a program for ASP.NET web page with Ajax functionality, such as form validation.	4	CO3
5b	Create and run a simple ASP.NET web form that includes input fields, labels, and a submit button. Retrieve and display user input on the web page.	4	CO5
5c	What are the key advantages of using JavaServer Faces (JSF) for building web applications. Explain JSF Architecture.	4	CO5

B.Tech III Semester
MID-SEMESTER EXAMINATION, September 2023

Max. Marks: 15

Course Title: **Web Technologies**

Duration: 1:30 Hours

Course Code: **COCSC04/ CACSC04/CDCSC04**

Note: - Attempt all questions in the given order only. Missing data/information (if any), maybe suitably assumed & mentioned in the answer.

Q. No.	Question	Marks	CO
1a	What is the primary function of a web browser, and how does it enable users to access web content?	1	CO1
1b	Describe the role of JavaScript in form validation. Give an example of using JavaScript to validate a user's input in an HTML form.	2	CO3
2a	Describe the role of cascading style sheets (CSS) in web design. Provide an example of how CSS can be used to style a web page element.	1	CO2
2b	Build an HTML table with three columns and three rows. Populate the table with sample data, such as names, ages, and cities. Apply CSS to add alternating background colors to the table rows and center-align the table content.	2	CO2
3a	Define Web 2.0 and provide an example of a technology or feature commonly associated with it.	1	CO1
3b	Create the basic structure of an XHTML document, including the necessary document type declaration (DTD) and the root elements. Add a sample title and a heading to the document, and explain the purpose of each part of the code.	2	CO2
4a	Define the concept of "counter-controlled repetition" in JavaScript.	1	CO3
4b	Explain the concept of the Document Object Model (DOM) in JavaScript. How can you use DOM manipulation to dynamically modify the content of a web page? Provide an example of adding a new element to an existing web page using DOM methods.	2	CO4
5a	Explain the concept of recursion in JavaScript and provide an example of a recursive function.	1	CO3
5b	Write a JavaScript function that takes a string as input and reverses the order of words in the string. For example, if the input is "Hello World," the function should return "World Hello."	2	CO3