



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
<b>Q 1</b>	<b>Attempt any 2 parts of the following</b>		
<del>1a</del>	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
<del>1b</del>	What does browser portability mean, and why is it essential for modern web development? Demonstrate how to create a horizontal navigation <u>menu</u> using an HTML list and CSS. Explain how to style the menu items and add hover effects.	4	CO2
<del>1c</del>	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
<b>Q 2</b>	<b>Attempt any 2 parts of the following</b>		
<del>2a</del>	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
<del>2b</del>	Discuss event handling in JavaScript and the use of event listeners. Write a JavaScript program that listens for user clicks and <u>logs the coordinates of the mouse click</u> .	4	CO3
<del>2c</del>	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
<b>Q 3</b>	<b>Attempt any 2 parts of the following</b>		
<del>3a</del>	Describe the purpose of XSL Transformations (XSLT) and how they are used to transform XML data into different formats. Explain with example.	4	CO4
<del>3b</del>	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
<del>3c</del>	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
<b>Q 4</b>	<b>Attempt any 2 parts of the following</b>		
<del>4a</del>	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 <u>"status"</u> column is set to "active."	4	CO1
<del>4b</del>	What is PHP, and how does it differ from other <u>server-side</u> scripting languages like JavaScript or Ruby? Create a PHP script that processes a simple HTML <u>form</u> , retrieves user input, and displays it on a web page.	4	CO2, CO3
<del>4c</del>	What is the primary purpose of ERB in Ruby on Rails? In a Rails view, how would you display the value of a variable <u>user_email</u> within a paragraph tag using ERB?	4	CO5
<b>Q 5</b>	<b>Attempt any 2 parts of the following</b>		CO3
<del>5a</del>	Write a program for ASP.NET web page with Ajax functionality, such as form validation.	4	CO3
<del>5b</del>	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
<del>5c</del>	What are the key advantages of using JavaServer Faces ( <u>JSF</u> ) for building web applications. Explain JSF Architecture.	4	CO5

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

Max. Marks: 15

Duration: 1:30 Hours

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**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