KUMARAGURU
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B.E/B.TECH DEGREE EXAMINATIONS: NOV /DEC 2024

(Regulation 2018)

Sixth Semester

INFORMATION SCIENCE AND ENGINEERING

U18ISI6203: Internet and Web programming

COURSE OUTCOMES

CO1: Develop front end application using HTML5 and CSS3.

CO2: Enhance interactivity and perform validation using JavaScript.

CO3: Design responsive webpages using Bootstrap.

CO4: Develop server-side applications using Node JS and MongoDB.

CO5: Understand essential functionalities like user authentication and services like Backend as a Service.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1. Illustrate styling an HTML list using CSS3 to create custom bullet points and spacing.	CO1	[K_2]
2. Define the box model in CSS3. How does it affect the layout of elements on a webpage?	CO1	[K_3]
3. Difference between == and === operators in JavaScript with example.	CO2	[K_3]
4. Create a JavaScript function to validate a form input field to ensure it is not empty.	CO2	[K_4]
5. What is responsive design, and why is it important in modern web development?	CO3	[K_1]
6. List the methods involved in creating a responsive image.	CO3	[K_1]
7. Differentiate between MongoDB and Mongoose.	CO4	[K_3]
8. List the three types of node modules.	CO4	[K_1]
9. What is Firebase?	CO5	[K_1]
10. Difference between React and Angular client.	CO5	[K_2]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11. a) Create a basic webpage layout using HTML5 that includes semantic tags for header, nav, section, and footer. Apply CSS3 styling to customize the layout, including font sizes, colors, and margins. Additionally, demonstrate the use of (8)	CO1	[K_4]

advanced selectors to style specific elements differently.

b) Develop a simple webpage that includes multimedia content such as images and videos using HTML5 elements. Apply CSS3 styling to customize the appearance of multimedia elements, including borders, shadows, and positioning. Implement transitions to add interactive effects when users interact with multimedia content, such as hovering over images or clicking on videos. (8) CO1 [K4]

12. a) Create a visually appealing menu page with the layout that includes sections for different categories of dishes (appetizers, mains, desserts) displayed in a tabular format. Each dish should be listed with its name, description, and price in separate table cells. Implement CSS3 styles to enhance the appearance of the menu, including custom fonts, colors, and borders for better presentation. (8) CO1 [K4]

b) Develop a form using HTML5 to collect user information such as name, email, and feedback. Apply JavaScript for form validation to ensure that required fields are filled and email addresses are correctly formatted. (8) CO2 [K4]

13. a) Describe the process of iterating over an array in JavaScript using loops. Provide code examples for "for" and "while" loops. (8) CO2 [K2]

b) Explain the concept of event handling in JavaScript. Provide an example of attaching an event listener to a button element. (8) CO2 [K2]

14. a) Explain the role of media queries in creating responsive web designs. (8) CO3 [K2]

b) Create HTML and Bootstrap code to create a responsive navigation bar for a website. (8) CO3 [K4]

15. a) Describe the role of Express.js in building web applications with Node.js. (8) CO4 [K2]

b) Explain the concept of callback functions in Node.js. Provide an example of using a callback to handle asynchronous operations (8) CO4 [K2]

16. a) Outline steps involved in integrating the Angular Client and Server. (8) CO5 [K2]

b) Discuss the benefits of using a Backend as a Service (BaaS) in web development. (8) CO5 [K2]

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