

PRN No.	
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PAPER CODE	U225-213(EST)
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(AY:2024-25) May 2025 (ENDSEM) EXAM

SY B.TECH (SEMESTER - II)

COURSE NAME: WEB TECHNOLOGY

Branch: AI and DS

COURSE CODE: AD22233

SY (Pattern 2023)

Time: [1Hr 30 Min]

[Max. Marks: 40]

(\*) Instructions to candidates:

- 1) Figures to the right indicate full marks. Use of scientific calculator is allowed
- 2) Use suitable data wherever required
- 3) All questions are compulsory. Solve any two sub question each from Questions 1, 2, 3 and 4

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Explain how the grouping selector in CSS improves code efficiency and maintenance.	[5]	CO[1]	Understanding
	b) Write an HTML code snippet that includes an element with a unique id. Then, using CSS, apply a style to that element with an id selector.	[5]	CO[1]	Applying
	c) Evaluate the benefits of using different CSS selectors (element, id, and class selectors) when designing a web page. How does choosing the appropriate selector improve the maintainability of a website?	[5]	CO[1]	Evaluating
Q2	a) Explain the basic structure of a Promise, including the roles of the resolve and reject functions.	[5]	CO[2]	Understanding
	b) Explain how the if-else statement works in JavaScript. Provide a simple example that checks if a number is positive or negative.	[5]	CO[2]	Understanding
	c) Write a JavaScript code snippet that creates an array of five numbers. Then, use a loop to calculate the sum of all elements and log the result to the console.	[5]	CO[2]	Applying
Q3	a) Why is Node.js considered memory efficient?	[5]	CO[3]	Evaluating
	b) Create a route in Express that serves an HTML file using the fs module.	[5]	CO[3]	Applying
	c) Explain how callbacks work in an asynchronous function in Node.js.	[5]	CO[3]	Understanding

Q4	a) Analyze the effect of state changes on React rendering.	[5]	CO[4]	Analyzing
	b) Why is rendering performance important in React apps? Justify with an example.	[5]	CO[4]	Evaluating
	c) Explain the purpose of templates in Angular.	[5]	CO[4]	Understanding