CBCS SCHEME

USN

BIS601

Sixth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
Full Stack Development

ACHARYA INSTITUTE OF TECHNOLOGY MCA Library Date BANGALORE

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M: Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Define statements and comments in JavaScripts. Create a script that calculates the sum of 2 numbers and displays the result in a alert Box.	6	L1	CO1
	b.	Explain the various Data types in JavaScripts with examples.	6	L2	CO1
	c.	Define an array. Create an array of 5 cities and perform the following operations : i) Log the total number of cities ii) Add a new city at the end iii) Remove the first city	8	L3	CO1
		OR			
Q.2	a.	Define a Function in JavaScript. Write a function is Plaindrome (str) that checks if a given string is a palindrome?	6	L3	CO1
	b.	Define an object. Create an object student with properties : name (strings), grade (number), subject (array) displayInfo( ) (method of log student's details)	6	L3	CO1
	c.	Explain loops in JavaScripts. Discuss the following types of loops with examples i) For loop ii) While loop iii) Do-while loop	8	L2	CO1
		Module – 2			
Q.3	a.	Explain a DOM Tree. Discuss the working with DOM Tree using i) getElement by Id( ) ii) getElement by ClassName( ) iii) getElement by TagName( )	8	L2	CO2
	b.	Explain an Event. Discuss the various types of events in JavaScript.	6	L2	CO2
	c.	Explain Event listeners in JavaScript. Discuss how to add event listeners to DOM element nodes.	6	L2	CO2
		OR			
Q.4	a.	Discuss event Delegation in JavaScripts, explain with a example of handling clicks on a list of items.	8	L2	CO2
	b.	Create a button in HTML with text "Click Me" Add event listener to log "Button clicked" to the console, when the button is clicked. Add a event listener to the document that logs the key pressed by the user.	12	L2	CO2

		Module – 3			
Q.5	a.	Discuss, what is MERN? Explain the MERN stack components.	6	L3	CO3
	b.	Discuss what are React classes and its features. Explain a simple React class using a jsx File.	6	L3	CO3
	c.	Explain how React and React DOM can be used in HTML file to creak a server-less Hello world.	8	L3	CO3
		OR			
Q.6	a.	Explain the usage of Issue Tracker used in the React components.	6	L2	CO3
	b.	Discuss what are composing components used in React Components. Write a code in jsx file using composing components.	6	L3	CO3
	c.	Build a React application to track issues. Display a list of issues (use static data). Each issue should have a title, description and status (eg open/closed). Render a list using a functional component.	8	L3	CO3
		Module – 4			
Q.7	a.	Explain, what are Initial state and Async state initialization.	6	L2	CO4
	b.	Explain Event handling in inter active issue.	7	L2	CO4
	c.	Discuss the use of stateless components? Give an example of converting class components to stateless components.	7	L2	CO4
		OR			
Q.8	a.	Explain Designing components in React state. Compare State Vs Prop.	6	L3	CO4
	b.	Explain Express for Node.js. Discuss the Routing in Express.	8	L3	CO4
	c.	Discuss Key Features of GraphQL. Explain GraphQL Query.	6	L2	CO4
		Module – 5			
Q.9	a.	Explain MongoDB. Discuss MongoDB Document structure.	6	L2	CO5
	b.	Explain MongoDB collection and database schema.	7	L2	CO5
	c.	Explain the various MongoDB CRUD operations.	7	L2	CO5
		OR			
Q.10	a.	Explain Back End Modules. Discuss how key modules interact in Issue Tracker API.	6	L2	CO5
	b.	Explain Front end modules with webpack.	6	L2	CO5
	c.	Explain Hot Module Replacement (HMR) and discuss the HMR implementing in a Express based UI server.	8	L2	CO5

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