CBCS SCHEME

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BIS601

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

Full Stack Development

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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