

05/06/2025 TE CSE-AIML SEM-V C-SCHEME WEB COMP. QP CODE: 10082301

(3 hours)

Total Marks: 80

- N.B.**
1. Question No. 1 is compulsory
 2. Attempt any three questions from the remaining five questions
 3. Assume suitable data if necessary and justify the assumptions
 4. Figures to the right indicate full marks

- Q1 Answer the following questions.
- A What is DNS? Explain the working of DNS with its components. 05
Write a JavaScript function that validates:
- B
- Username (alphanumeric, 5-15 characters) 05
 - Password (minimum 8 characters, must contain uppercase, lowercase, and number)
- C Explain the concepts of Arrow Functions in JavaScript ES6 with examples. 05
- D What is a callback in Node.js? Explain with a suitable example. 05
- Q2 A Explain Document Object Model (DOM) and its levels. Write a JavaScript program that accepts two numbers as input and displays their sum. 10
- B What is React.js? Discuss different features and advantages of React.js. What are components in React? Give examples. 10
- Q3 A Explain different types of Node.js modules. What are the modules that provide core functionality? 10
- B Write a stepwise process to create an APP using ReactJS to print “Hello World”. 10
- Q4 A Compare and contrast MVC, FLUX, and Redux architectures. Explain their use in modern web applications. 10
Write a Node.js program using Express to create a basic server that:
- B
- Handles GET and POST requests 10
 - Implements basic routing
 - Includes error handling Provide complete code with explanations.
- Q5 A Explain the concept of React Hooks. What are the rules of using Hooks? Provide examples of useState and useEffect. 10
- B What is ExpressJs? Explain features of ExpressJS. 10
- Q6 A Describe the architecture of Node.js with a neat diagram. Explain its event-driven programming model. 10
- B Write JavaScript code to process an online form with the following validations: 10
- All fields must be filled
 - Email must contain “@” and “.”
 - Age must be between 18 and 60 Include proper error messages and form submission handling.
