

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATIONS- 2026

B.Tech-IV Semester (CSE/IT)

COURSE CODE (CREDITS): 25B11CI417 (3)

MAX MARKS: 35

COURSE NAME: ADVANCED FRONT-END

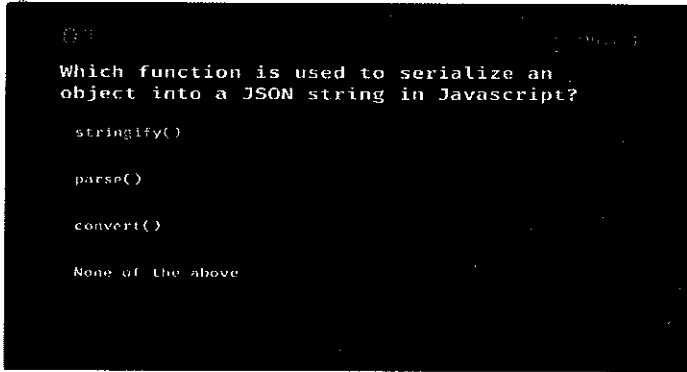
COURSE INSTRUCTOR: Ms. PALAK AAR

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is not allowed

Q.No	Question	CO	Marks
Q1	Design and implement a React-based hospital management system using dynamic routing and useParams() to display doctor, patient, and appointment details fetched from an API. Implement nested routes for schedules and medical history.	4	6
Q2	Design and implement a GitHub Actions workflow file for a React application that includes dependency installation, application build, automated testing, and deployment to a cloud platform. Configure the workflow to trigger on every push and pull request to the main branch, use separate jobs for build, test, and deployment stages, and securely manage environment variables using GitHub Secrets.	5	5
Q3	Create a React-based quiz application that dynamically displays multiple-choice questions with a timer, score tracking, and navigation between questions. Use useState() to manage quiz state and answers, useEffect() to implement the countdown timer, and useRef() to control timer intervals and automatic focus handling. Fetch quiz questions from an API and display the final score after quiz completion. 	4	8

Q4	A React application performs 2 API requests inside useEffect() whenever a route parameter changes. If the route changes 15 times, calculate the total API calls executed. Also explain the role of dependency arrays in controlling useEffect() execution.	3	5
Q5	Develop a weather dashboard using React and Axios that dynamically fetches weather data based on city selection. Use useEffect() to update weather information whenever the selected city changes, useState() for state management, and store recently searched cities in local storage. Configure API keys securely using .env files	4	6
Q6	How are runners configured in a workflow YAML file? Describe how automation is achieved in a CI/CD lifecycle. Differentiate between static routing and dynamic routing. What types of information are commonly stored as GitHub Secrets?	5	5