JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-I Semester (CSE/IT/BT/ECE/CE)

COURSE CODE (CREDITS): 25B11CI518 (3) MAX. MARKS: 15

COURSE NAME: MERN Stack Development

COURSE INSTRUCTOR: GAURAV NEGI MAX. TIME: 1 Hour

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	Explain how middleware execution works in Express.js. What is the role of next() in middleware chaining?	1	2
Q2	Develop an Express.js server for a Student Management System with the following routes: *GET /api/students* *GET /api/students/:id* *POST /api/students* *PUT /api/students/:id* *DELETE /api/students/:id* Implement suitable middleware for JSON parsing and request logging. Demonstrate how middleware and routing work together.	1	5
Q3	Consider the following middleware sequence: *Request* ↓ *Request ID Middleware* ↓ *Logger Middleware* ↓ *Authentication Middleware* ↓ *Validation Middleware* ↓ *Controller* ↓ *Error Handler*	1	4

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	A request reaches the authentication middleware, but the middleware does not call next() and does not send a response. Analyze what will happen to the request. Explain how you would identify and resolve this problem during Postman testing.		
Q4	Design a RESTful Course Management API with the following operations: • Create course • Retrieve all courses • Retrieve a course by ID • Update course • Delete course For each operation specify: 1. HTTP method 2. Endpoint 3. Request body, wherever applicable 4. Appropriate HTTP status code 5. Sample response	2	4

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