

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**

**TEST-3 EXAMINATION- 2025**

**B. Tech-V Semester (IT)**

**COURSE CODE (CREDITS):** 18B11CI511 (3)

**MAX. MARKS:** 35

**COURSE NAME:** Advanced Java

**COURSE INSTRUCTOR:** Amol Vasudeva

**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

Q No	Question	CO	Marks
Q1	Implement a secure user authentication system for a web application using Java Servlets and JDBC. This system involves a user registration process and a login mechanism that validates credentials against a table called USERS. USERS (user_id INT PRIMARY KEY, username VARCHAR(50) NOT NULL UNIQUE, password VARCHAR(20) NOT NULL);	2	7
Q2	Create a JavaBean named StudentBean with properties for name, roll number, and course. Build a JSP form page to collect these details from the user, and another JSP page that uses <jsp:useBean>, <jsp:setProperty>, and <jsp:getProperty> to display the submitted student information.	3	7
Q3	Design a simple Java RMI application that provides a remote greeting service. The server should expose a method greet(String name) which returns a personalized message, and the client should invoke this method remotely to display greetings for different users.	5	7
Q4	Design a Java socket program that allows a client to send a message to a server, and the server responds back. This will demonstrate basic communication using TCP sockets.	4	7
Q5	Create a Stateless Session Bean named DiscountCalculatorBean. The bean should expose a method calculateDiscount(double amount, String customerType) that: <ul style="list-style-type: none"><li>• Returns 10% discount for "REGULAR" customers.</li><li>• Returns 20% discount for "PREMIUM" customers.</li><li>• Returns 0% discount for any other customer type.</li></ul> The bean should be accessible via a local interface so that multiple applications can use it.	6	7