

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATION- 2026

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

COURSE CODE (CREDITS):18B11CI511(3)

MAX. MARKS: 15

COURSE NAME: Advanced Java

COURSE INSTRUCTOR: Harsh Srivastava

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	(a) Explain the Collection Framework in Java. Differentiate between a Set and a Map interface with respect to how they store and manage data. (b) What is the role of hashing in collections? Explain how ArrayList differs from Vector in terms of synchronization and performance.	CO1	1.5+1.5
Q2	(a) What is Event Handling in Java? Explain the Delegation Event Model and describe the roles of Event Source, Event Listener, and Event Object. (b) What are Adapter Classes in Java? How do they simplify event handling? Provide an example of an adapter class and explain its corresponding listener interface.	CO1	1.5+1.5
Q3	(a) Explain the basic steps involved in establishing a database connection using JDBC. Describe what happens during the loading of the driver and creation of the connection. (b) What is the ResultSet interface in JDBC? How is it used to retrieve and process data from a database after executing an SQL query?	CO2	1.5+1.5
Q4	(a) List and briefly explain the four types of JDBC drivers. Also, mention the advantages and disadvantages of each type.	CO2	1.5+1.5

	(b) Distinguish between the Two-Tier and Three-Tier Client/Server models in JDBC. Explain how the middle-tier server functions in the Three-Tier model.		
Q5	(a) What are the key features of Swing components over AWT components? Explain how Swing provides extended GUI capabilities with examples. (b) Explain the role of the java.util package in Java. How do collection classes like ArrayList and Vector support GUI applications when handling dynamic data?	CO1	1.5+1.5

UNIT TEST-1 EXAMINATION AUG-2026