



SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
FALL SEMESTER 2025-2026

Programme Name & Branch : B.Tech, Core CSE
Course Code and Course Name : BCSE405L - Advanced Java Programming
Class Number(s) : VL2025260101721
Faculty Name : Dr. M. Sinthuja
Date of Examination : 19.08.2025
Exam Duration : 90 minutes **Maximum Marks: 50**

General instruction(s):

1. Answer All Questions
2. M - Max mark; CO - Course Outcome; BL - Blooms Taxonomy Level (1 - Remember, 2 - Understand, 3 - Apply, 4 - Analyse, 5 - Evaluate, 6 - Create)
3. Course Outcomes:
 1. Choose the appropriate OOP technique for solving the given problem and use multithreads when required.
 2. Design Graphical User Interface using JavaFX.
 3. Build applications using java networking concepts and Deploy distributed applications using RMI.

Q. No	Question	M	CO	BL
1.	A car manufacturing company is simulating an assembly line process. Two workers are involved, <u>Worker1 assembles the car chassis</u> . Worker2 paints the chassis after assembly. Both workers should work in <u>parallel using threads</u> , but painting should only happen after the chassis is assembled. Write a Java program using threads to simulate the above process. Ensure Worker2 waits until Worker1 finishes assembling the chassis using proper thread <u>synchronization</u> .	10	1	3
2.	The developer is creating a banking application that supports various account types like <u>SavingsAccount</u> , <u>CurrentAccount</u> , and <u>FixedDepositAccount</u> . They are creating a Java interface called BankAccount, which implements methods like <u>deposit</u> , <u>withdraw</u> , and <u>display balance</u> . The interface is implemented in three classes: <u>SavingsAccount</u> , <u>CurrentAccount</u> , and <u>FixedDepositAccount</u> . Write a java code to demonstrate each account type's behavior through deposit and withdrawal operations and balance display.	10	1	3
3.	A startup is developing a desktop-based travel information kiosk for tourists. The application should allow users to browse different <u>travel websites</u> within the app itself. The application should include. A window titled " <u>Travel Info Kiosk</u> ". A <u>WebView</u> for <u>displaying travel-related websites</u> . A <u>TextField</u> for entering the desired website URL. A " <u>Browse</u> " button to load the URL into the <u>WebView</u> . Write a JavaFX program that integrates these <u>components</u> and handles user input using <u>event handling</u> .	10	2	3



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4.	a. Illustrate the JavaFX architecture with a neat diagram and explain each layer.(5)	10	2	2
5.	b. Explain the life cycle of JavaFX.(5) A school aims to create a reliable internal communication system for teachers and administrators, allowing messages to be sent and received within the local network. Write a Java program using TCP to create a client-server chat system, with the server accepting incoming connections and displaying received messages, and the client connecting to the server and sending user-entered messages.	10	3	3
