



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

**Programme Name & Branch** : B.Tech Core CSE and all its specialization  
**Course Code and Course Name** : BCSE405L - Advanced Java Programming  
**Faculty Name(s)** : Dr. R. KANAGARAJ  
**Class Number(s)** : VL2025260101722  
**Date of Examination** : 23.08.2025  
**Exam Duration** : 90 minutes **Maximum Marks: 50**

**General instruction(s):**

- Answer All Questions
- M- Max mark; CO – Course Outcome; BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)
- 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.   | <p>A user account from the XYZ Bank can be accessed from different channels such mobile app, web browser, and ATM simultaneously. Each of these access points runs as a separate thread. The account allows both deposit and withdrawal.</p> <p>The initial account has a balance of Rs. 10000. At the same time:<br/>The amount Rs. 7000 is withdrawn from mobile application (Thread A).<br/>The amount Rs. 5000 is withdrawn from ATM (Thread B).</p> <p>If both transactions are processed concurrently without proper synchronization, the system may force end up allowing both transactions. Write a Java Program to use the concept of synchronization method to avoid the account to go into a negative balance.</p> | 10 | 1  | 3  |
| 2.   | <p>Why is multithreading important? Explain thread life cycle with proper state diagram. Write a program that reads data of employees from the keyboard and write it into the file emp.doc using proper exception handling with try catch blocks.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10 | 1  | 2  |
| 3.   | <p>Write a JAVAFX program that divides the frame into five regions by using Stage Class. Prepare a program with three text boxes First Number, Second Number, and Result and four buttons add, subtract, multiply and divide. Handle the events to perform the required operation and display results.</p>                                                                                                                                                                                                                                                                                                                                                                                                                    | 10 | 2  | 3  |
| 4.   | <p>a) Write a JAVAFX program to create login form with user id, password, ok button, and cancel button. Handle key events such that pressing 'L' performs login and pressing 'X' clears text boxes and puts focus on user id text box.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5  | 2  | 3  |
|      | <p>b) Create a desktop application called "Study" to allow students to access online study materials directly from the application. Write a JAVAFX program to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5  |    |    |



# VIT

Vellore Institute of Technology  
(Deemed to be University under section 3 of UGC Act, 1956)

REG.NO.:

SLOT: G2+TG2

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|    |                                                                                                                                                                                                                                                                                 |    |   |   |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---|---|
|    | implement a simple Web browser feature that can load any given URL and display it using a WebView component.<br>Construct a JavaFX application which has the TextField where the user can enter a URL<br>(e.g., <a href="https://www.studies.com">https://www.studies.com</a> ) |    |   |   |
| 5. | Write a java program using Socket Programming such that client sends number to server and display the output given by the server. The server computes factorial of the number received from client.                                                                             | 10 | 3 | 3 |

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