M. Sc. DEGREE END SEMESTER EXAMINATION - NOVEMBER 2025

SEMESTER 1: COMPUTER SCIENCE (ARTIFICIAL INTELLIGENCE)

COURSE: **24P1CAIT02: OBJECT ORIENTED PROGRAMMING WITH JAVA**

(For Regular 2025 Admission & Improvement/Supplementary 2024 Admission)

Time: Three Hours   Max. Weightage: 30

PART A

Answer any 8 questions.   **Weight: 1**

1. Explain various primitive data types in Java.   (U, CO1)

2. Write a Java program to read and display the student details.   (A, CO1)

3. Discuss the use of 'final' keyword in Java.   (U, CO2)

4. Write a Java program to implement method overloading.   (A, CO2)

5. Explain the creation of user defined packages in Java.   (A, CO2)

6. Illustrate the declaration and implementation of interfaces in Java.   (A, CO2)

7. Explain the different methods of creating threads in Java.   (A, CO3)

8. Enumerate any five methods used in networking along with their descriptions.   (U, CO4)

9. Briefly describe any five AWT classes and their syntax.   (U, CO5)

10. Illustrate the delegation event model.   (U, CO5)

(1 x 8 = 8)

PART B

Answer any 6 questions.   **Weights: 2**

11. Discuss the basic OOP concepts.   (U, CO1)

12. Describe any five features (buzzwords) of Java programming language with suitable examples.   (A, CO1)

13. Explain the commonly used thread methods in Java. Give a short example of how each method is used.   (A, CO3)

14. Write a Java program to demonstrate the use of abstract classes in Java.   (A, CO2)

15. Write a Java program that takes age as input and throws a user defined   (A, CO3)
    exception named InvalidAgeException if the age is less than 18. Otherwise
    print "Eligible to vote".

16. Explain the concept of packages in Java. List and briefly describe any five   (U, CO2)
    commonly used Java packages with examples of classes they contain.

17. Write a Java program to display the IP address of a given website.   (A, CO4)

18. Write short notes on: i) Event sources ii) Event Listener interfaces.   (U, CO5)

(2 x 6 = 12)

PART C

Answer any 2 questions.   **Weights: 5**

19 Explain the concept and features of constructors in Java. Discuss different   (A, CO2)
    types of constructors with appropriate examples.

20 Explain the mechanism of Exception handling in Java with suitable   (A, CO3)
    examples.

21 Explain TCP socket programming in Java and the role of ServerSocket and   (A, CO4)
    Socket. Write a Java program where the server sends a greeting message to
    the client.

22 Explain the features of Java AWT and the role of containers, components,   (A, CO5)
    and layout managers in GUI applications. Write a Java program to design a
    simple login form using AWT.

(5 x 2 =10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO1	Describe the fundamental concepts and features of Java Programming language.	U	1,2,11,12	6
CO2	Apply the concepts of class, methods, constructor, polymorphism, inheritance, packages and interfaces.	A	3,4,5,6,14,16, 19	13
CO3	Apply exception handling, file handling mechanisms, and multithreading models in Java to solve practical programming problems.	A	7,13,15,20	10
CO4	Apply networking concepts to real-world scenarios, such as chat applications, file transfer protocols, and web server-client interactions.	A	8,17,21	8
CO5	Design GUI based applications in Java by importing applet, AWT, Swing and Event handling.	Cr	9,10,18,22	9

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER