ST. CLARET COLLEGE LIBRARY Bengaluru-13 AUTONOMOUS

St. Claret College

Autonomous, Bengaluru

Roll No:
Date:

UG END SEMESTER EXAMINATION-MAY 2026
BCA – II SEMESTER
CA 2224: OBJECT-ORIENTED PROGRAMMING USING JAVA

10

TIME: 3 hours. **MAX. MARKS: 80**

This paper contains TWO printed pages and FOUR parts

Instructions:
1. **Verify and ensure that the question paper is completely printed.**
2. **Any discrepancies or questions about the exam paper must be reported to the COE within 1 hour after the examination.**
3. **Students must check the course title and course code before answering the questions.**

PART-A

Answer ALL questions. Each answer carries ONE mark. **[10x1=10]**

1. JVM stands for
   a) Java Vargs Machine b) Java Virtual Machine
   c) Java Version Machine d) Java Vector Machine
2. Say True or False:
   The instanceof operator returns false if an object is an instance of a class.
   a) True b) False
3. In Java, this keyword is used to refer to the _____ object.
   a) Input b) Output c) Current d) Exception
4. Byte and Character streams are streams in Java based on the type of _____.
   a) Type of file b) Type of operation c) Type of error d) None of these
5. In Java, language utility classes such as random numbers, date etc. are part of _____ package.
   a) java.util b) java.lang c) java.net d) java.io
6. Which of the following options correctly arranges the visibility modifiers in Java in ascending order based on their scope (from least accessible to most accessible)?
   a) public < protected < default < private b) private < default < protected < public
   c) protected < private < default < public d) default < private < protected < public
7. What does the repaint() method do in Java?
   a) Redraws a component immediately b) Changes the component's color
   c) Schedules a component to be redrawn soon d) Clears the component.
8. Which of the following is a mutable string class in Java?
   a) String b) StringImmutable c) StringLiteral d) StringBuffer
9. What is the role of the Security Manager in Java?
   a) Manages memory allocation b) Handles garbage collection
   c) Optimizes code execution d) Controls access to system resources

10. What is the primary purpose of generic programming in Java?
    a) To create flexible and reusable code
    b) To make the code run faster
    c) To add graphics to the program
    d) To handle file operations

PART-B

Answer any FIVE questions. Each answer carries TWO marks. [5x2=10]

11. Distinguish procedure-oriented and object-oriented programming paradigms.
12. Mention the significance of public static void main(String args[]).
13. What is an interface in Java? Give the syntax of defining an interface.
14. Discuss any two standard i/o streams in Java.
15. How does an applet differ from a Java application?
16. How can you compare two strings in a case-sensitive and case-insensitive manner?
17. Describe Collections in Java.

PART-C

Answer any FOUR questions. Each answer carries FIVE marks. [4x5=20]

18. Illustrate arrays in Java. Give an example of how to create an array in Java.
19. Explain the method overriding with an example.
20. Discuss the util package in Java with an example.
21. Write a Java program to implement mouse events.
22. Write a Java program to perform string operations such as finding the length of the concatenation of the strings and extracting a substring.
23. What is the use of the finally block? Write a program to show its execution even when an exception occurs.

PART-D

Answer any FOUR questions. Each answer carries TEN marks. [4x10=40]

24. a) Explain the features of Java.
    b) Analyze the steps to create a user-defined package in Java with an example. (5+5)
25. Explain the types of inheritance in Java with examples.
26. a) Discuss the Scanner class in Java.
    b) Compare the Thread class vs. the Runnable interface for implementing multithreading. (5+5)
27. Discuss any eight GUI components in Java with examples.
28. Explain the life cycle of an applet in detail with a diagram.
29. a) Describe the branching constructs in Java with examples.
    b) Explain exception handling in Java with the help of an example. (5+5)