(UG589)

Roll No.

S.C.No.—2214502

B. C. A. EXAMINATION, Dec. 2024

(Fifth Semester)

(Batch 2022-23)

(Main)

PROGRAMMING IN JAVA

22BCA502

Time: 3 Hours Maximum Marks: 80

Note: Attempt Five questions in all, selecting one question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

- 1. (a) What is Java Virtual Machine (JVM)? 2
 - (b) Define the term 'Keyword'. 2
 - (c) What are Abstract classes?
 - (d) Explain Array.

(7-1224-11/18**H-2214502** (UG589)

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- (e) Differentiate Run-Time and Compile-Time polymorphism. 2
- (f) What are Interfaces?
- (g) Why is Inheritance used?
- (h) What are the advantages of a Java Package?

Unit I

2. Differentiate between:

 $4 \times 4 = 16$

- (a) Procedural Programming and Objectoriented Programming.
- (b) Keywords and Identifiers
- (c) Logical operators and Bitwise operators
- (d) Java Virtual Machine and Java Development Kit (JDK).
- 3. (a) Why are switch statements required ? What is the syntax of the switch statements ? Draw its flow diagram. 8
 - (b) Explain Do-while loop with a suitable example. How does it differ from while statement?

Unit II

- 4. (a) Explain constructor. Also explain different types of constructor by using an example.
 - (b) Explain various steps to create an abject.
- (a) Explain various string operations by using an example.
 - (b) How can strings be created using: $4\times2=8$
 - (i) String class
 - (ii) String Buffer class ?

Unit III

- 6. (a) Explain the concept of Method overloading with example. 8
 - (b) Distinguish between static binding and dynamic binding. 8

7. (a) Explain various types of Inheritance by using example. 10

(b) What are the visibility modes? Explain in detail.6

Unit IV

- What do you mean by Thread ? Explain Java
 Thread model in detail.
- (a) Explain various types of Exceptions in Java.
 - (b) Explain various steps to create and implement an user defined package in Java by using example.8

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