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Sixth Semester B.E. Degree Examination, Dec.2024/Jan.2025
Programming in Java

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1. a. Explain any four features of OOP. **(08 Marks)**
   b. What is literal? Explain different types of literals in Java. **(06 Marks)**
   c. What is Scope of variable in Java? Explain with an example program. **(06 Marks)**

OR

2. a. Explain control statements in Java with example program. **(08 Marks)**
   b. What is an array? Explain how 1D and 2D arrays are declared in Java. Write a program to find sum of all the elements of a two dimensional array. **(08 Marks)**
   c. Write a Java Program to find area and perimeter of a circle. **(04 Marks)**

Module-2

3. a. Describe bitwise operators with example. **(08 Marks)**
   b. Explain different access modifiers in Java. **(04 Marks)**
   c. Write a program to implement simple calculator using,
   (i) if-else
   (ii) Switch statements **(08 Marks)**

OR

4. a. Explain iterative statements in Java with an example for each. **(08 Marks)**
   b. Write a Java program to search an element and find its position in an array by using linear search. **(06 Marks)**
   c. Write Java program to find largest of three numbers using, (i) nested if (ii) ternary operator. **(06 Marks)**

Module-3

5. a. What is constructor? Explain different types of constructors with example. **(06 Marks)**
   b. Explain the operation of stack with example program. **(08 Marks)**
   c. What is inheritance? Explain single inheritance with example. **(06 Marks)**

OR

6. a. What is overloading of methods? Explain with example program. **(05 Marks)**
   b. Distinguish between call by value and call by reference with example. **(08 Marks)**

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6. c. Write an abstract class shape, which has an abstract method area ( ). Derive three classes Triangle, Rectangle and Circle from the shape class and to override area ( ). Implement run time polymorphism by creating array of references to super class. Compute area of different shapes and display the same. **(07 Marks)**

Module-4

7. a. What is Package in Java? Explain with an example. **(06 Marks)**
   b. Distinguish between abstract classes and abstract methods. **(06 Marks)**
   c. What is nested try statement? Write program to illustrate the same. **(08 Marks)**

OR

8. a. What is exception handling in Java? Explain with an example, the use of try and catch. **(06 Marks)**
   b. Explain interface, with an example program illustrate the implementation of an interface. **(08 Marks)**
   c. Explain the operation of throw with a program. **(06 Marks)**

Module-5

9. a. What is enumeration in Java? Explain with example program. **(07 Marks)**
   b. Write a program to read data from file. **(07 Marks)**
   c. Explain different type wrappers in Java. **(06 Marks)**

OR

10. a. What is Java applet? Explain program to display "Hello" using applet. **(08 Marks)**
    b. Explain special string operations. **(08 Marks)**
    c. What are transient and volatile modifiers? **(04 Marks)**

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