Total No. of printed pages = 5

63/2 (SEM-1) CSIT 1·1

2021

(held in 2022)

CSIT

(Theory Paper)

Paper Code : CSIT-1·1

(Advanced Concepts in OOP)

Full Marks – 80

Time – Three hours

The figures in the margin indicate full marks for the questions.

• Answer the following : 1×6=6

1. Which of the following is not an Object Oriented Programming Concept ?

   (a) Encapsulation

   (b) Polymorphism

   (c) Abstraction

   (d) Exception

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2. Which feature of OOP describe the reusability of code ?

(a) Inheritance (b) Data abstraction

(c) Polymorphism (d) Encapsulation

3. A Java program contains _____ class(es).

(a) only 1 (b) only 100

(c) any number (d) no class

4. Which two features of OOP are the same ?

(a) Abstraction and Polymorphism

(b) Encapsulation and abstraction

(c) Polymorphism and Inheritance

(d) Inheritance and Abstraction

5. Which of the following feature is also known as run time binding or late binding ?

(a) Dynamic typing

(b) Dynamic loading

(c) Dynamic binding

(d) Data hiding

6. Which option is false about the "final" keyword ?

(a) Final method cannot be overriden

(b) Final class cannot be extended

(c) Final class cannot extend other classes

(d) Final method can be inherited.

• Answer the following questions : 2×5=10

7. Define different types of errors in a program.

8. What are identifiers ?

9. What are attributes ?

10. Define interface in Java.

11. Why is Java known as platform neutral language ?

• Answer any *six* of the following questions : 5×6=30

12. Explain what are the tokens in Java ?

13. Write the general form of "If-else" statement and draw the flowchart of its execution.

14. Explain the relational operators and logical operators used in Java.

15. Determine the value (in true or false) for each of the following logical expressions if a = 5, b = 10 and c = –6 : 1×5=5

(i) a>b && a<c

(ii) a<b && a>c

(iii) a == c||b>a

(iv) b>15 && c<0||a>0

(v) (a/2·0 == 0·0 && b/2·0 ! = 0·0)||c<0·0

16. Describe static members using a Java Program.

17. How the conditional operator (? :) and Instance of operator works in Java ?

18. Write a program in Java to illustrate nesting of methods.

19. Write a Java program to demonstrate the application of single inheritance.

20. Explain instance variables, class variables and local variables.

• Answer any *two* of the following questions : 10×2=20

21. Describe the basic concepts of Object Oriented programming.

22. Differentiate between methods overloading and methods overriding using Java programs.

23. What is exception and how they are handled ? Write a program to demonstrate Try and Catch for exception handling.

• Answer any *one* of the following questions : 14×1=14

24. Discuss different types of inheritances and how multiple inheritance can be achieved illustrate using a Java program.

25. What are constructors ? Demonstrate the application of default and parameterized constructors.