

**MASTER OF COMPUTER APPLICATION (TWO YEAR) SEMESTER I
EXAMINATION 2022-23**

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M.Sc. in COMPUTER SCIENCE SEMESTER I EXAMINATION 2022-23

CS - 204 : Object Oriented Programming

Time : Three hours

Max. Marks : 70

(WRITE YOUR ROLL NO. AT THE TOP IMMEDIATELY ON THE RECEIPT OF THIS QUESTION PAPER)

Note: Question 1 is compulsory, attempt any four questions from the remaining seven questions.

1. (a) How many types of memory areas are allocated by JVM? Explain each one with a suitable example. [4]

- (b) What is the output of the following Java program? Justify your answer. [2]

```

1 class Test
2 {
3     public static void main (String args[ ])
4     {
5         for(int i=0; 0; i++)
6         {
7             System.out.println("Hello World");
8         }
9     }
10 }

```

- (c) What is the purpose of a default constructor? [2]

- (d) What is the output of the following Java program? Justify your answer. [2]

```

1 class Test
2 {
3     int test_a, test_b;
4     Test(int a, int b)
5     {
6         test_a = a;
7         test_b = b;
8     }
9     public static void main (String args[ ])
10    {
11        Test test = new Test();
12        System.out.println(test.test_a+" "+test.test_b);
13    }
14 }

```

- (e) What are the main uses of "this" and "super" keywords? Give a suitable Java example of each. [4]

2. (a) Give a real-world example in Java where polymorphism, encapsulation, and inheritance are used. [6]

- (b) What are the Buzzwords in Java? Explain each buzzword with a suitable example. [8]

3. (a) What are the differences between the method Overloading and Overriding? Give a suitable Java example of each. [3]

(2)

- (b) What are the differences between final, finally, and finalize? Give a Java example of each of them. [4]
- (c) What are the differences between compile-time polymorphism and runtime polymorphism? Give a suitable Java example of each. [4]
- (d) How to make read-only and write-only classes in Java? Give a suitable example of each. [3]
4. (a) Explain the working function of JVM, JRE, and JDK with a suitable example. [6]
- (b) Write a Java program to multiply two matrices by passing the matrices to a function. [5]
- (c) How many types of exceptions can occur in a Java program? [3]
5. (a) What is exception propagation? Give a suitable Java example. [4]
- (b) What is the meaning of immutable regarding String? Give a suitable Java example. [4]
- (c) Write a Java program to count the number of words present in a string. [6]
6. (a) Write a Java program that prints all the values given at the command line. [5]
- (b) What are the two ways of implementing thread in Java? Give a Java example of each. [5]
- (c) Write the differences between Thread and Process. [4]
7. (a) Given two files with a list of words, write a program to show the common words in both the files. [5]
- (b) Write a program to check whether two given Arrays are equal, given both contain the same data type and the same length. [5]
- (c) Write a program to search a specific element in an Array. [4]
8. (a) What are the data types in Java? Explain each data type with a suitable example.. [6]
- (b) Why Java is a strongly typed language? Explain your answer with a suitable example. [3]
- (c) How many types of access modifiers are available in Java? Explain each one with a suitable example. [5]

***** The End *****