ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27

MSc Computer Science – I SEMESTER
END SEMESTER EXAMINATION: JANUARY 2021
CS 7118 - Object Oriented Programming using Java

Time- 2 1/2 hrs   **Max Marks-70**

This paper contains two printed pages and One part

PART A

Answer any <u>SEVEN</u> of the following questions   10 * 7=70

1. a) Discuss various access modifiers available in Java? How access modifiers effect the visibility of a member in different access locations? (5marks) +(5marks)
   b) Differentiate the following: - (i) throw vs throws (ii) Multi threading vs Multiprocessing

2. a) Write a Java program to demonstrate the following: (5marks)
   i) To convert lower case string to uppercase
   ii) To compare two strings
   b) Define an exception. Demonstrate the working of nested try block with an example.
                                          (5 marks)

3. a) What are the benefits of using packages? Write down the steps in creating a package and using it in a Java program with an example. (5marks) +(5marks)

   b) An University has applied promotion criteria for students. According to criteria a student cannot promote to next academic year if he has less than 4.5 CGPA. A developer is trying to implement this situation using exception handling in JAVA. Write a correct Java code to help him.

4. a) Define an interface. Explain how to implement and assign variable in interface to perform "one interface multiple method".   (7 marks)
    b) What is the difference between overloading and overriding?.   (3 marks)

5. a) Write the steps involved in creating thread by implementing runnable interface.
    b) With code snippets explain Jump statement in Java. (5marks) +(5marks)

6. a)What is a constructor? Mention the properties and illustrate example to overload constructor. (5marks) +(5marks)
    b) Explain the following methods related to thread
       i) wait () ii) sleep()

7. a) If multiple threads are running concurrently then during their communication the synchronization problem may occur, so discuss the ways to resolve the problem with suitable example ? (6marks) +(4marks)
    b) What is the difference between class and abstract class?

8. public class Date
    {
    public int day;
    public int month;
    public int year;
    public Date(int d, int m, int y)
    {
    Day=d;
     Month=m;
    Year=y;
    }
    }
    i)   Using new , write a statement which creates a date corresponding 15th August 2020 and assign it to data variable called date.
    ii)   Write an instance method whose heading is boolean equals (Date d) for the date class. The method returns true if the date stored in the instance is equal to d and false otherwise.

9. a) Explain the concept of JDBC and JDBC drivers. (6marks) +(4marks)
    b) Explain RMI concept and illustrate server side program.

** CS-7118-A-20