8|5|19

MCA/M-19   **10511**
PROGRAMMING IN JAVA
MCA-14-41

Time : Three Hours]   [Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. **1** is compulsory. Attempt *four* more questions, selecting exactly *one* question from each Unit.

(Compulsory Question)

1. (a) Discuss the concept of Java Virtual Machine.

   (b) What will happen if an exception is not caught in Java ?

   (c) How can you make a particular part of a Java program synchronized ?

   (d) Can array be dynamic in Java ? If yes, how ?

   (e) Name various predefined streams and explain in brief.

   (f) What is a delegate ?

   (g) Discuss the significance of Java Beans.

   (h) What is the difference between local and remote applet ?   8×2=16

Unit I

2. (a) Write a program in Java to sort a given list of strings.   8

   (b) Differentiate between the following :

   (i) Final keyword and Abstract keyword.

   (ii) Method Overloading and Method Overriding.

   8

3. (a) Describe major features of Java. How are these features different from C++ ? Explain.   8

   (b) Write a short note on Interface and Packages.   8

Unit II

4. (a) Define an exception called "NoMatchException" that is thrown when a string is not equal to "India". Write a program that uses this exception.   8

   (b) Write a program in Java to implement multi-level inheritance.   8

5. What do you understand by multi-threading ? How can you perform multi-threading in Java ? What is the need of changing thread priorities ? Explain various methods in thread class.   16

Unit III

6. Write a program to create a sequential file that could store details about five products. Details include product code, cost and number of items available and are provided through the keyboard. After creating a file, read the data from that file and compute total value of all the five products. **16**

7. (a) What are Adapter Classes ? Explain with suitable examples. **8**

   (b) Write a program in Java to show the parameter passing to applets. **8**

Unit IV

8. (a) Write down a program in Java to utilize the JTable class and create a table of your own choice. **8**

   (b) What do you mean by a servelet ? Explain its life-cycle in detail. **8**

9. Explain purpose and working of Border and Card layout manager with the help of suitable examples. **16**