Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 15805 | Roll No. | [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

B. C. A. Examination 2021-22

(Even Semester)

PROGRAMMING WITH JAVA

Time : Three Hours]   *[Maximum Marks : 60*

Note :– Attempt all questions.

SECTION – A

1. Attempt all parts of the following : $8 \times 1 = 8$

    (a) List string manipulation functions of Java string class.

    (b) What happens when 'final' keyword is used with method?

    (c) Define bytecode.

    (d) What is a thread? What is runnable interface?

    (e) What is the use of 'super' keywords?

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(f)   Define unchecked exceptions.

(g)   What is JVM?

(h)   Briefly describe dynamic method dispatch.

SECTION–B

2.   Attempt any two parts of the following : $6 \times 2 = 12$

(a)   Write a program for bubble sort.

(b)   Explain the various access specifiers used in java with suitable example.

(c)   Write a runtime polymorphism program by using interface reference variable.

(d)   Write a java code that generates custom exception if any value from its command line arguments is negative.

SECTION – C

Note:-   Attempt all questions. Attempt any two parts from each questions. $5 \times 8 = 40$

3.   (a)   Write a program to print pascals triangle.

(b)   Write a program to print all prime numbers from 99 to 999.

(c)   Write a program to copy content of one arrary into another in reverse order.

4.   (a)   Explain the different types of constructors with examples.

(b)   What is the meaning and purpose of 'this' keyword? Write a program to explain the use of 'this' keyword.

(c)   Compare and contrast nested class and inner class. Also provide suitable example.

5.   (a)   Explain method overriding with a suitable example program.

(b)   What is inheritance? Why java does not support multiple inheritence? Can we implement the concept of multiple inhertence in some way in Java?

(c)   What is package? What is CLASSPATH? Explain how to create and use a package?

6. (a) What is the significance of layout managers? Discuss briefly various layout managers.

(b) Write a program to create AWT radio buttons using check box group.

(c) Explain the difference between throw and throws with suitable example.

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