2023

COMPUTER SCIENCE — GENERAL

Paper : DSE-B-2

(Object Oriented Programming)

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer **question no. 1** and **any four** questions from the rest.

2×5

1. Answer **any five** questions :

   (a) Distinguish between class and object.

   (b) Why is Java more secured than C++?

   (c) Write the use of 'this' operator.

   (d) What is the purpose of 'final' keyword?

   (e) How will you declare single and multidimensional arrays in Java?

   (f) What do you mean by data encapsulation?

   (g) State differences between static and runtime polymorphism.

   (h) How does the garbage collection work in Java?

2. (a) Explain with example the significance of 'super' keyword and 'super()'.

   (b) Discuss on private, public and protected scope of a variable.

   (c) How does constructor differ from function?   4+4+2

3. (a) Define package. Which package is imported by default in Java? How will you import packages in Java?

   (b) What is the difference between equals() and "= ="?

   (c) Write a program in Java that inputs a string and print only the even positioned characters in upper case.

     Eg. string : Kolkata is my city

     output : O K T S M I Y   (1+1+2)+2+4

4. (a) What do you mean by auto boxing and auto unboxing?

   (b) Write down the syntax and purpose of valueOf() and indexOf() method.

   (c) State differences between applet and application.   3+(2+2)+3

Please Turn Over

5. (a) What do you mean by default constructor? What is the use of class? Give an example.

   (b) What is the use of interface in Java? State the difference between abstract class and interface in Java.   (2+4)+(2+2)

6. (a) Write a program in Java that implements overloading of constructor.

   (b) State differences between method overloading and method overriding.

   (c) What is JVM?   4+4+2

7. (a) Explain with diagram the life cycle of Applet.

   (b) State and explain the steps to connect database using JDBC.   5+5

8. Write short notes on (*any two*) :   5×2

   (a) Exception Handling

   (b) Life cycle of thread

   (c) Enumeration

   (d) Single level and multi-level inheritance.

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