WEST BENGAL STATE UNIVERSITY

B.Sc. Programme 5th Semester Examination, 2021-22

CMSGDSE01T-COMPUTER SCIENCE (DSE1)

PROGRAMMING IN JAVA

Time Allotted: 2 Hours   Full Marks: 50

The figures in the margin indicate marks of question.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.

GROUP-A

1.   Answer any *five* questions: 2×5 = 10

   (a) What do you mean by portability of a program? Is Java language portable?

   (b) Differentiate between Method Overloading and Overriding.

   (c) How do applets differ from application programs explain with an example.

   (d) What are the two uses of keyword super in Java?

   (e) Describe charAt() method related to String.

   (f) Differentiate between final and finalize.

   (g) Difference between throw and throws.

   (h) Differentiate class, abstract class.

GROUP-B

Answer any *five* questions from the following   8×5 = 40

2. (a) What happens if String args[] is not written in main() method?   2+2+2+2

   (b) Can we declare a class as 'private'? Explain briefly.

   (c) Differentiate between default constructor and parameterized constructor.

   (d) What is constructor overloading?

3. (a) What do you mean by inheritance? What purpose does it serve? Explain.   4+4

   (b) How single inheritance is implemented in Java? Explain with an example.

4. (a) Why Java is suitable for Internet? 3+2+1+2

   (b) What do you mean by abstraction?

   (c) Can we apply Modulus operator on floating-point numbers?

   (d) What is the difference between an executable file and a .class file?

5. (a) What do you mean by encapsulation? 2+3+3

   (b) How encapsulation is achieved in Java? Explain with an example.

   (c) Briefly explain the use of final keyword.

6. (a) Describe the uses of super keyword with respect to inheritance. Give an example. 5+3

   (b) What is Hybrid Inheritance? Give an example.

7. (a) What is the difference between instance variables and class variables? 2+2+2+2

   (b) What is abstract method?

   (c) Can we declare a class as abstract and final also?

   (d) Can we override private method?

8. (a) Why Java is called a system independent programming language? 2+2+2+2

   (b) Name the primitive/single types available in Java.

   (c) Explain the operator 'new'.

   (d) Explain the keyword 'this'.

9. (a) Differentiate between object and object reference. 2+3+3

   (b) Differentiate between instant variable and class variable.

   (c) Give an example block of code in Java to demonstrate an array of objects of a class.

   N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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