WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 2nd Semester Examination, 2020

CMSACOR03T-COMPUTER SCIENCE (CC3)

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.
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 *four* questions from the following: 2×4 = 8

 (a) What do you mean by bytecode in context of Java programming?

 (b) What is abstract class?

 (c) What is the function of 'final' keyword?

 (d) What do you mean by synchronised block?

 (e) What is the purpose of using a 'new' keyword in a Java program?

 (f) Distinguish between String class and String buffer class.

 (g) What is the output of the following Java program explain.

```
class Test
{
  public static void main (String args[ ])
  {
    for(int i = 0;  0;  i++)
    {
        System.out.println("Hello Javatpoint");
    }
  }
}
```

GROUP-B

Answer any *four* questions from the following   8×4 = 32

2. (a) What is recursion? Explain with example.   5

   (b) What is the function of 'this' keyword?   3

3. (a) What do you mean by constructor overloading? Explain with suitable program code.   4

   (b) Explain multilevel inheritance with example.   4

4. (a) Show the use of static keyword with proper coding example.   5

   (b) What do you mean by data encapsulation?   3

5. (a) Show the use of static keyword with proper coding example.   4

   (b) How can you return an object from the method of a class?   4

6.   Explain virtual function and friend function mechanism of Java with proper coding example.   4+4=8

7. (a) Explain exception handling mechanism with try block having multiple catch blocks.   5

   (b) What happens if there is no catch block with try block in exception handling?   3

8.   What is a package in Java? List down various advantages of packages.   4+4=8

   What is the output of the following Java program?

```
public class Test
{
    Test(int a, int b)
    {
        System.out.println("a = " +a+" b = "+b);
    }
    Test(int a, float b)
    {
        System.out.println("a = " +a+" b = "+b);
    }
     public static void main (String args[ ])
    {
        byte a = 10;
        byte b = 15;
    }
}
```

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.*

——×——