



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Programme 5th Semester Examination, 2020, held in 2021

**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 JVM?
  - (b) What is the difference of error and exception?
  - (c) What is data abstraction?
  - (d) What is the function of 'this()' in Java?
  - (e) Differentiate between final and finally.
  - (f) Is it possible to have a 'try' block without a 'catch' block?
  - (g) What is garbage collection in java?
  - (h) State two similarities between Interfaces and Classes.

**GROUP-B**

**Answer any *five* questions**

**8×5 = 40**

2. (a) Describe the thread life cycle. 5+3  
(b) Explain all the terms of public static void main (String args []).
3. (a) What is an Applet? Explain the life cycle of an Applet. 5+3  
(b) What are the differences between an Applet and a Java Application.
4. (a) What is abstract class in Java? 3+5  
(b) Explain multilevel inheritance with example.
5. (a) What is static variable and static method? 3+5  
(b) Explain the differences between method overriding and method overloading.  
Give example.

6. Briefly describe the behaviour of an user define exception with an example. What is constructor overloading? 5+3
7. Write a program to accept number from user and convert into binary by using wrapper class methods. Explain wait() method related to thread. 3+5
8. (a) Write down the difference between String class and String Buffer class. 3+5  
(b) Write a program in Java to extract a portion of string and print the extracted string.
9. Write short notes on any *two* of the following: 4×2 = 8
- (a) Access specifiers
  - (b) Strings in Java
  - (c) Stream classes
  - (d) Constructor chaining.

**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.*

—x—