H **Roll No.** ....

TBC–301

B. C. A. (THIRD SEMESTER)
MID SEMESTER EXAMINATION, 2021
JAVA PROGRAMMING

Time : 1½ Hours
Maximum Marks : 50

Note : (i) Answer all the questions by choosing any *one* of the sub-questions.

(ii) Each question carries 10 marks.

1. (a) Define JVM and its need in Java Programming. Explain by using suitable diagrammatic representation.

10 Marks (CO1)

OR

(b) Define abstraction in Java. Write a program to show the implementation of an abstract class and abstract methods in Java. 10 Marks (CO1)

P. T. O.

2. (a) Define Inheritance. Write a program to show the implementation of multiple inheritance in Java.   10 Marks (CO1)

OR

(b) Write short notes on the following :

10 Marks (CO1)

(i) Inner class

(ii) Static class

(iii) Packages

(iv) Method overriding

3. (a) Explain wrapper classes in Java. Write a Java program to perform the basic arithmetic operations.   10 Marks (CO1)

OR

(b) Define constructors and its types supported by Java. Write a java program to show the implementation of constructors in Java.   10 Marks (CO1)

4. (a) Define exceptions in Java. Explain the role of exception handling in Java. Write a Java program to show the implementation of ArrayIndexOutOfBound exception in Java.   10 Marks (CO2)

OR

(b) Write short notes on the following :

10 Marks (CO2)

(i) Throw

(ii) Throws

(iii) Finally

(iv) Errors

5. (a) Discuss thread in Java. Explain how it is different from multithreading. Write a life cycle of threading in Java.

10 Marks (CO2)

OR

(b) Write a Java program to show the implementation of multithreading in Java.

10 Marks (CO2)