## UTTARANCHAL UNIVERSITY, DEHRADUN
## UTTARANCHAL SCHOOL OF COMPUTING SCIENCES
### MID TERM EXAMINATION
### EVEN SEMESTER 2024-25
### BCA | 4TH SEMESTER
### Programming in JAVA | BCA – C404

Time: **1:15 Hour**                                     Max. Marks: 30

*Note: All questions are compulsory.*

**Q.1- Answer the following questions.**          **(1 x 6 = 6 Marks)**

**Multiple Choice Questions**

a) What is the output of the following java code?

```
int m = 1000;
int k = 3000;
while (+ + m < – – k);
System.out.println(m);
```
                                                                    (CO-1, BL-1)
     a. 2000          b. 3000

     c. 1000          d. 4000

b) Predict output: System.out.println("1"+2);          (CO-1, BL-6)

     a. 3          b. 1

     c. 12          d. Error

c) Which of the following is NOT a java primitive type?

                                                                    (CO-2, BL-2)

     a. short          b. long

     c. long double          d. Boolean

**State True/ False**

d) JVM is platform independent.          (CO-1, BL-3)

e) java.util is the default package of java.          (CO-2, BL-1)

f) reverse () is method of String class.

                                                                    (CO-5, BL-2)

**Q.2-Write short note on any two (up to 70 words)**          **(2 x 3 = 6 Marks)**

a) Explain any five features of Java.          (CO-2, BL-2)

b) Difference between JDK, JVM and JRE.          (CO-2, BL-2)

c) Write a program in java to add two matrices(2*2).          (CO-2, BL-6)

**Q.3-Attempt any one of the following**          **(1 x 6 = 6 Marks)**

a) Differentiate between abstract class and interface.

                                                                    (CO-2, BL-3)

**OR**

b) How method overloading differs from overriding? Explain with the help of an example. (CO-2, BL-4)

**Q.4- Attempt any one of the following.** (1 x 6 = 6 Marks)

a) What is String. Explain any five functions of String with example (CO- 2, BL-4)

**OR**

b) Explain constructor and its types in Java. (CO- 2, BL-3)

**Q.5- Attempt any one of the following.** (1 x 6 = 6 Marks)

a) Is multiple inheritance supported in java. If yes then explain how (with the help of program). (CO- 2, BL-6)

**OR**

b) What is an exception? Why is exception handling required? How exception can be handled? Write a java program to demonstrate the use of finally block and throw keyword to handle the exception. (CO-5, BL-6)