Seat No: _____   Enrollment No:_____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech./Int. Btech Summer 2022-2023 Examination

Semester: 4/8   **Date: 24/03/2023**
Subject Code: 203105241   **Time: 02:00 pm to 04:30 pm**
Subject Name: Java Programming   **Total Marks: 60**

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (Fill in the blanks, one word answer, MCQ-not more than Five in case   **(15)**
of MCQ) (All are compulsory) (Each of one mark)

1. Which component is responsible for converting byte code into machine specific code?
    a. JVM   b. JDK   c. JIT   d. JRE

2. What will be the output of the program?

```
public class Test {

        public static void main(String[] args) {

        int x=3;

        int y = ++x * ++x;

        System.out.println(x+","+y);

        }

    }
```

   A. Compile Time Error   B. 5,20   C. 5,16   D.4,20

3. Which inheritance in java programming is not supported?

   A. Multiple inheritance using classes   B. Multiple inheritance using interfaces

   C. Multilevel inheritance   D. Single inheritance
4. Which of these keywords is not a part of exception handling?
    A. try   B. finally   C. thrown   D. catch

5. What is the package name is using for collections?
    A. java.io   B. java.lang   C. java.util   D. java.math
6. Default value of Boolean data type_____
7. Write the output of a>>4, when a=55, output_____

8. Write Three Transfer or Jump Statements names in Java_____

9. What is the collection in java_____

10. super keyword is used for_____
11. What is package?
12. What are three main Features of Java?
13. What is Multithreading?
14. What is the main difference between String class and StringBuffer Class?
15. What is abstraction in java?

Q.2 Answer the following questions. (Attempt any three) (15)

    A) Write Program to count the number of digits from given input?

    B) Define array and Explain types of arrays with Examples?

    C) Define Class and Types of Constructors with Example?

    D) Write a program to swap two number without using method?

Q.3 A) (Compulsory) (07)

    Write and Explain with example about Inheritance.

    B) i. Write Program to display the below pattern using Loops statement. (5+3)

```
    *

   ***

  *****

 *******
```

    ii. Write Program to display even numbers example?

<div align="center">OR</div>

    B) i. What is Multithreading and its advantages? Explain its life cycle of all states? (08)

Q.4 A) Write all types operators in java and write a program for Bitwise Operators with output? (07)

<div align="center">OR</div>

    A) Write a program for given input string is a palindrome string are not (don't use predefined method)? (07)

    B) (Compulsory) What is Exception Handling and Explain about blocks of Exception Handling keywords with one Example Program? (08)