

D. E mjee

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

B.Tech-VI Semester (ECE)

COURSE CODE: 19B1WCI734

MAX. MARKS: 25

COURSE NAME: OBJECT-ORIENTED TECHNOLOGIES USING JAVA

COURSE CREDITS: 2

MAX. TIME: 1 Hour 30 Min

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. (a) What is the purpose of static methods and variables in Java? Explain with example [2]

(b) What is the constructor? How many types of constructors are used in Java? [3]

Q2. (a) What is 'this' keyword in java? What are its main uses? [2]

(b) What are the different 'access specifiers' in Java? Describe their visibility in various types of classes and packages. [3]

Q3. Give the output of the following Java program with a short explanation. [1 x 5]

(a)

```
class Main {  
    public static void main (String args[]){  
        System.out.println(10 + 20 + "Java Program");  
        System.out.println("Java Program" + 10 + 20); } }
```

(b)

```
class Main{  
    public static void main(String args[]) {  
        int k = 3;  
        System.out.print(++k * 4); } }
```

(c)

```
class Main {  
    public static void main(String args[]) {  
        int x;  
        x = 10;  
        { int y = 20;  
          System.out.print(x + " " + y); }  
        System.out.println(x + " " + y); } }
```

(d)

```
class A {  
    public int i;  
    private int j; }  
class B extends A {  
    void display() {  
        super.j = super.i + 1;  
        System.out.println(super.i + " " + super.j); } }  
class Main {  
    public static void main(String args[]) {  
        B obj = new B();  
        obj.i=1;  
        obj.j=2;  
        obj.display(); } }
```

[P T O]

- Q4. Define a class Matrix in Java with methods to add, subtract and multiply two matrices.
Write the main method to test the functionality of the class. [5]
- Q5. Write an abstract class OfficeEquipment with abstract method display(). Derive two classes Printer and Scanner from OfficeEquipment. Printer should have attributes print speed and model number. Scanner should have attributes resolution and scan speed. [5]
-