(b) Explain any two types of inheritance in JAVA with examples. (5)

[This question paper contains 8 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1029 **F**

Unique Paper Code : 6202451202

Name of the Paper : PROGRAMMING IN JAVA

Name of the Course : **B.Voc**

Semester : II

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.

2. Attempt total 4 questions. Q1 is compulsory to attend. Rest, Attempt any 3 questions more.

(15×4=60)

1. (a) Give any two methods from File class with their usage. (2)

(b) What is comment? Explain the different types of comments that are used in java. (3)

(c) Explain the life cycle of an applet. (3)

(d) What is the use of super keyword? (2)

(e) Differentiate between interface and abstract class. (2)

(f) What is the name of the Java concept that uses access modifiers to protect variables and hide them within a class? (1)

(i) Encapsulation

(ii) Inheritance

(iii) Abstraction

(iv) Instantiation

5. (a) What do you mean by polymorphism. How run time polymorphism can be achieved. Discuss the concept of late binding. (10)

(b) Compare the following (ANY TWO) (2.5×2=5)

(i) Method Overriding and Method Overloading.

(ii) Abstract class and Interface

(iii) AWT and Swings

(iv) Exception and Error

6. (a) Develop a Java Program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method print Area ( ) that prints the area of the given shape. (10)

```
        b1 =
        true;
        x++;
        if ( 5 > 6 )
        {
          x++;
        }
        if ( !b1 )
           x = x + 10;
        else if ( b2 = true
           ) x = x + 100;
        else if ( b1 | b2
           ) x = x +
           1000;
    }
}
System.out.println(x);
```

4. (a) What is an Operator? Explain type of operators in Java with example programs. (10)

(b) Write a program that includes a try block and a catch clause which processes the arithmetic exception generated by division-by-zero error. (5)

(v) Polymorphism

(g) What are the merits of swing components over AWT? (2)

2. (a) Discuss about Source, Event and Listeners in event handling. Write an applet program to handle all mouse events. (10)

(b) Explain delegation event model. (5)

3. What will be the output of following codes: (15)

(a) CODE 1: (3)

```
class Product {
    double price;
}

public class Test {
    public void updatePrice(Product product, double price) {
        price = price * 2;
        product.price = product.price + price;
    }
    public static void main(String[] args) {
        Product prt = new Product();
        prt.price = 200;
        double newPrice = 100;

        Test t = new Test();
        t.updatePrice(prt, newPrice);
        System.out.println(prt.price + " : " + newPrice);
    }
}
```

What is the result?

(b) CODE 2 : (3)

```
public static void main(String[] args) {
    StringBuilder sb = new StringBuilder("Java");
    String s = "Java";

    if (sb.toString().equals(s.toString())) {
        System.out.println("Match 1");
    } else if (sb.equals(s)) {
        System.out.println("Match 2");
    } else {
        System.out.println("No Match");
    }
}
```

What is the result?

(c) Code 3 : (4)

```
interface MyInterface
{
  public void method1();
  public void method2();
}
class XYZ implements MyInterface
{
 public void method1()
 {
   System.out.println("implementation of method1");
 }
 public void method2()
 {
   System.out.println("implementation of method2");
 }
 public static void main(String arg[])
 {
   MyInterface obj = new XYZ();
   obj. method1();
 }
}
```

(d) CODE 4 : (5)

```
public class If2
{
  static boolean b1, b2;
  public static void main(String [] args)
  {
    int x =
    0; if (
    !b1 )
{
      if ( !b2 )
      {
```