

**1 Answer any Six**

- a What will be the output of the program? 1
- ```
class Test {  
    static int x = 10;  
    public static void main(String[] args) {  
        Test t1 = new Test();  
        Test t2 = new Test();  
        t1.x = 20;  
        System.out.print( t1.x + " " + t2.x);  
    }  
}
```
- b What will be the output of the following code if we provide command line argument as : 1
- ```
java Test This is a command Line program  
class Test{  
    public static void main(String args[]){  
        System.out.println(args[0]);  
    }  
}
```
- c What do you mean by platform independent? 1
- d Which of the following option is correct with respect to "this" keyword in java? 1
- i. refer to current class object.
  - ii. refer to static method of the class.
  - iii. refer to parent class object.
  - iv. refer to static variable of the class.
- e Can a method be overloaded based on different return type but same argument type? 1
- f Differentiate between method overloading and method overriding. 1
- g What will be the output of the following code? 1
- ```
class Test{  
    void sum(int a, int b){  
        System.out.println("int arg method invoked");  
    }  
    void sum(long a, long b){  
        System.out.println("long arg method invoked");  
    }  
}  
class BTest{  
    public static void main(String args[]){  
        Test obj=new Test();  
        obj.sum(20,20);  
    }  
}
```

|   |                                                                                                                                                                                                                                                                                                                   |   |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| h | What will be output of the following code?                                                                                                                                                                                                                                                                        | 1 |
|   | <pre> class XYZ{     protected void func(){         System.out.println("Hello java");     } }  class Simple extends XYZ {     void func(){System.out.println("Hello java");} }  class Test {     public static void main(String args[])     {         Simple obj=new Simple();         obj.func();     } } </pre> |   |

## 2 Answer any Three

|   |                                                                                        |   |
|---|----------------------------------------------------------------------------------------|---|
| a | Write a java program to read an array of integers and search an element in that array. | 3 |
| b | Write a program which will take two integres as input and compute GCD of two numbers.  | 3 |
| c | State the uses of "final" keyword with example.                                        | 3 |
| d | Explain the uses of “super” keyword with a suitable example.                           | 3 |

## 3 Answer any One

|   |                                                                                                                                                                                                                                                                                                                                                                |   |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| a | Write a java program to define a class Employee with data members empId, empName, designation and gorssSalary. Define default and parameterized constructor to initialize the members of the class. The class should also have a method to display the employee details. Read and display the details of 50 employees using an array of Employee class object. | 5 |
| b | Design a class Time having data members hour, minute and second. The class should have a parameterized constructor to initialize its data members. It should also have methods displayTime() to display the time in HH:MM:SS format and addTime() to add two time objects. Test these methods by creating a main method in another class.                      | 5 |

## 4 Answer any One

|   |                                                                                                                                                                                                                                                                                                                                                  |   |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| a | Define an abstract class named as Shape, having data members dimOne and dimTwo. Extend this class to create two concrete classes named as Rectangle and Triangle. Override the computeArea() method in the sub classes. Invoke the computeArea() method in the main method of another Driver class through an abstract class reference variable. | 5 |
| b | Define a class Employee having basic data members empName, empID and empSal, with necessary member functions and constructors. Define a class Manager which is inherited from Employee class and having a data member bonus. Define the driver class that create object of the class Manager and access Manager details.                         | 5 |