Question Paper

MANIPAL UNIVERSITY

SCHOOL OF INFORMATION SCIENCES
SECOND SEMESTER MSc INFORMATION SCIENCE
DEGREE MAKE - UP EXAMINATION - JULY 2017
Wednesday, 12 July, 2017
Time: 10:00 to 13:00

Advance Programming Techniques [MIS 506]

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

All questions carry equal marks

1) Explain concept of object oriented programming (10)

2) Explain concept of Variables and Literals in java with an examples (10)

3) Explain the polymorphism via interface with an example (10)

4) What is java package and how is it used? How packages are protected via access modifiers? (10)

5) Explain constructor overriding with an example (10)

6) Give the differences between AWT and Swings (10)

7) Explain exception handling in Java (10)

8) What will be the output of the programs below, give proper reasons? (10)

I.

```
class A

{

   int i = 10;

}

 class B extends A
```

```
{
   int i = 20;
}
 public class MainClass
{
   public static void main(String[] args)
   {
      A a = new B();
      System.out.println(a.i);
   }
}
```

II. class X

```
{
   static void Method()
   {
      System.out.println("Class X");
   }
}
```

class Y extends X

```
{
   static void Method()
   {
      System.out.println("Class Y");
   }
}

public class MainClass
{
   public static void main(String[] args)
   {
      Y. Method();
   }
}
```

9) What will be the output of the programs below, give proper reasons? (10)

```
I.        class X
{
   void Method()
   {
      System.out.println("Class X");
```

```
    }
}
 class Y extends X
{
    void Method()
    {
        System.out.println("Class Y");
    }
}

public class MainClass
{
    public static void main(String[] args)
    {
        Y y=new Y();
        y. Method();
    }
}
```

II. class X

```
{
```

```
    void Method()
    {
        System.out.println("Class X");
    }
}

class Y extends X
{
    void Method()
    {
        System.out.println("Class Y");
    }
}

public class MainClass
{
    public static void main(String[] args)
    {
        X x=new Y();
        Y y=new X();
```

```
        x.Method();

        y.method();

    }

}
```

10) What will be the output of the programs below, give proper reasons? (10)

I.

```
class X

{

    public X(int i)

    {

        System.out.println(i);

    }

}


class Y extends X

{

    public Y()

    {

        super(10);


        System.out.println("20");
```

```
    }
}


public class MainClass
{
    public static void main(String[] args)
    {
        Y y=new Y();
        X x = new X(10);
     }
}

II. class X
{
     int i;
    public X(int i)
    {
      i = this.i
      System.out.println(i);
    }
}
```

```
class Y extends X
{
  int j;
  public Y(int i, int j)
    {
        super(i);
         j=this.j;


        System.out.println(i + " " + j);
    }
}


public class MainClass
{
    public static void main(String[] args)
    {
         Y y=new Y(10,20);
         X x = new X(10);
      }
}
```