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## Fourth Semester MCA Degree Examination, June/July 2011

### Topics in Enterprise Architecture – I

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. Explain : i) Encapsulation ii) Inheritance. (05 Marks)  
b. Give the output for the following program.

```
class x
{
    Public static void main(string arg[])
    {
        byte b = (byte) (130 * 2);
        int i = b | 2;
        long l = 26 + i << 2;
        float f = l ^ 2;
        double d = f % l;
        System.out.println("b =" + b + "\ni =" + i + "\nl =" + l + "\nf =" + f + "\nd =" + d);
    }
}
```

- c. Explain the following, with a suitable example (05 Marks)  
i) instance variable ii) class variable iii) local variable. (06 Marks)  
d. Explain the call by value and call by reference, with a suitable example. (04 Marks)

- 2 a. Give the output for the following program

```
class c1
{
    c1 () { system.out.print ln("this never prints");}
    void m(float a){ system.out.print ln("This prints last" +a);}
}
class c2 extends c1
{
    c2(){system.out.print ln("This prints first");}
    c2(int a){system.out.print ln("This prints a value" +a);}
    void m(int a) {super.m(a);
        {system.out.println("Value of a is " +a);}
    }
    public static void main(string arg[ ] )
    {
        c2 x = new c2();
        c2 y = new c2(100);
        x.m(500);
    }
}
```

- b. With a suitable example, explain the uses of (06 Marks)  
i) super ii) static iii) final. (10 Marks)  
c. Explain the nested and inner class, with a suitable example. (04 Marks)

- 3 a. Give the output for the following program

```

class NewException extends Exception
{
    public String toString( )
    {
        return "This is my exception";
    }
}
class UseException
{
    static void m( ) throws NewException.
    {
        throw new NewException( );
    }
    public static void main(String arg[ ])
    {
        try { m( );
        }
        catch (NewException ne)
        {
            try {
                System.out.println(ne);
                System.out.print ln(100/(2>>2));
            }
            catch(UnsupportedOperationException ue)
            {
                System.out.println("Unknown Operation");
            }
            catch(Exception e)
            {
                System.out.println("System exception");
            }
            finally
            {
                System.out.println("This will not print");
            }
        }
    }
    finally
    {
        System.out.println("This is not an exception");
    }
}

```

(06 Marks)

- b. Explain the dynamic method dispatch, with a suitable example. (04 Marks)
- c. Write a java applet program to create a scrolling text, where text has to be passed from an HTML file to this applet. (10 Marks)
- 4 a. Explain how interthread communication can be achieved in multithreading. (05 Marks)
- b. Explain the adapter classes, with an example. (05 Marks)
- c. Write a java program to handle mouse event using mouse listener. (10 Marks)

- 5 a. Explain the key features of swing. (05 Marks)  
b. Explain the MVC connection. (05 Marks)  
c. A frame contains 2 buttons named "COPY" and CLEAR", and 2 text fields. When you press "COPY" button, content of one text field has to be copied to another textfield, and when you press "CLEAR" button both the textfield have to be clear. Write a swing program to perform this. (10 Marks)
- 6 a. Give the procedure to create the association between the database and the JDBC /ODBC bridge. (06 Marks)  
b. Explain :  
i) Statement object  
ii) Prepared statement object  
iii) Callable statement object. (06 Marks)  
c. Write a java servlet program to implement a dynamic HTML using servlet (Username and password should be accepted using HTML and display using a servlet) (08 Marks)
- 7 a. Write a java JSP program to print 10 even number and 10 odd numbers. (10 Marks)  
b. Explain RMI concept, in detail. (10 Marks)
- 8 Explain the following :  
a. Painting in swing  
b. Applet tag  
c. JSP tags  
d. EJB interfaces. (20 Marks)

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