BACHELOR IN COMPUTER APPLICATIONS

Term-End Examination

December, 2011

08131

CS- 74 : INTRODUCTION TO INTERNET PROGRAMMING

Time : 3 hours   *Maximum Marks : 75*

Note : *Question No. 1 is* **compulsory.** *Attempt any three from the rest.*

1. (a) What is Java Virtual Machine (JVM) ? Explain.   4

   (b) Write a program in Java to display the following pattern for a given number n.   6

       1

       2 2

       3 3 3 $n = 4$

       4 4 4 4

   (c) Explain the use of conditional operator with the help of an example.   3

   (d) What is call-by-value and call-by-reference in Java ? Explain with example.   6

   (e) Explain the need of various access specifiers with the help of suitable examples.   6

   (f) What is an inner class in Java ? Explain.   5

2. (a) What is user-defined exception in Java ? Explain with example. **5**

(b) Why can't we have more than one public class in the same file ? Explain. **5**

(c) What do you understand by the term late binding ? Explain. **5**

3. (a) Find the error(s) if any in the following code. Also correct the error(s). **4**

Interface A {

        void call( );

        void call( );

   }

class demo implements A {

  void call( ) {

    system.out.println("first version invoked");

     }

  void call( ) {

    system.out.println("second version invoked);

     }

}

(b) How are priorities used in Java ? Explain with an example. **6**

(c) What is default access in Java ? Explain. **5**

4. (a) Why do we use static data ? Explain. **3**

(b) Write a program using recursion to compute sum of first n terms of the following series : **6**

$$x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \ldots$$

(c) Write a program in Java to count number **6** of words, chars and lines in a file. Name of the file is accepted at command line.

5. (a) Give the output of the following : **4**

```
public class temp {
        public int f( )
                {
                  try
                    {
                      return 0;
                    }
                  .catch (Exception e)
                      {
                        return 2;
                      }
                }
        public int g( )
                {
                  try
                    {
                      return 3;
                    }
                  finally
                    {
                      return 4;
                    }
                }
        public static void main(string args[ ] )
                {
                        Take 0 = new temp( );
        system.out.println("f( )returns"+0.f( ) );
        system.out.println("g( )returns"+0.g( ) );
                }
}
```

(b) for (int i=31, i>=0, i− −)   4

    if(((i<<j)&i)!=0)

      system.out.print("*");

    else

      system.out.print("?");

if i=42 what is the output of the above code ?

(c) What are abstract classes in Java ? Why do   3
we need them ?

(d) What are various color constructors ?   4
Explain briefly.

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