

# BACHELOR IN COMPUTER APPLICATIONS

Term-End Examination

December, 2008

## CS-74 : INTRODUCTION TO INTERNET PROGRAMMING

Time : 3 hours

Maximum Marks : 75

Note :

- (i) Question number 1 is compulsory.
- (ii) Attempt any three questions from the rest.
- (iii) Use Java as programming language.

1. (a) What is Java Virtual Machine (JVM) ? 4  
Explain.
- (b) Why do we use interfaces in java ? Explain 2+4  
with example.
- (c) What happens if an abstract modifier is 5  
applied to a class ? Explain.
- (d) What do you mean by static data in a class ? 3
- (e) Differentiate between : 4+4+4
  - (i) Thread and process
  - (ii) Applet and application prog.
  - (iii) Final and finalize

2. (a) Write a program in java that prompts the user to enter an integer number. It should throw a user-defined exception Invalid Number if number is negative. Also write the code for creating the user-defined function. 6
- (b) Will an error occur if a class with the same name exists in two different packages that you import using star form ? How can the error be avoided ? 3+2
- (c) When do we use parseInt ( ) function ? Explain. 4
3. (a) What is synchronized block in java ? Why do we use it ? 6
- (b) What are predefined streams in java ? 3
- (c) Describe the various mouse events in MouseEvent class in brief. 4
- (d) Write the output of the following statements : 2
- ```
int a = -4 b = 8
```
- (i)  $a^b$
- (ii)  $a << 2$

4. (a) Explain the use of super keyword in java with the help of suitable example. 5
- (b) Write a recursive function in java to find sum of n terms of the following series : 5

$$1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} \dots$$

- (c) Give the output of the following code : 5

```
class numeric {  
    static int fact (int n)  
    {  
        int p=1;  
        int i=n;  
        while (i > =2)  
        {  
            i--;  
            p=p*i;  
        }  
        return p;  
    }  
    public static void main (String args [ ])  
    {  
        int X=4;  
        System.out.println (fact (X));  
    }  
}
```

5. (a) What is the difference between throwing an exception and catching an exception ? Explain with example. 6
- (b) Write a program in java that displays all Command Line arguments in reverse order. 6
- (c) Static functions can only access static data. Why ? 3

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