

**BACHELOR OF COMPUTER APPLICATIONS**

**(BCA) (Pre-Revised)**

**Term-End Examination**

**December, 2017**

01460

**CS-74 : INTRODUCTION TO INTERNET  
PROGRAMMING**

*Time : 2 hours*

*Maximum Marks : 60*

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*Note : Question number 1 is compulsory. Attempt any two questions from the rest.*

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1. (a) What would happen when the following code is compiled and executed ? 2

```
public class MyClass {  
    public static void main (string[] args)  
    {  
        String a, b, c;  
        c = new String ("mouse");  
        a = new String ("cat");  
        b = a;  
        a = new String ("dog");  
        c = b  
        System.out.Println(c);  
    }  
}
```

- (b) What are the error(s) in the following code and in which line number does it occur? 3

```
1:  Class Test {
2:      Static void show( )
3:      {
4:          System.out.Println ("static
                               method in Test");
5:      }
6:  }
7:  public class MyClass extends Test
8:  {
9:      void show( )
10:  {
11:      System.out.Println ("overridden
                            static method in MyClass");
12:  }
13:  public static void main (String[] args)
14:  {
15:  }
16: }
```

- (c) State whether the following statements are *true* or *false* : 5

- (i) The method definitions inside interfaces are public and abstract. They cannot be private or protected.
- (ii) A class that is abstract may not be instantiated.
- (iii) A static variable indicates there is only one copy of that variable.
- (iv) If a Java program defines both a package and an import statement, then the import statement must come before the package statement.
- (v) A Java file without any class or interface definitions can also be compiled.

- (d) Write a program fragment to show the use of Break and Continue statement. 4
- (e) With the help of examples, explain the difference between call-by-value and call-by-reference. 6
- (f) Write a program in Java to find out if a number (between 1 and 1000) is prime or not. 5
- (g) What is 'Finally' in Java ? How many Finally blocks can be associated with a try block ? Give an appropriate example and explain. 5
2. (a) What is a Bitwise Operator ? List any four bitwise operators of Java with examples. 6
- (b) What is the difference between constructor and normal methods ? 4
- (c) Write a program in Java to print the following structure : 5
- ```
*  
* * *  
* * * * *  
* * *  
*
```

3. (a) What is an Inner Class ? How does it differ from Nested Classes ? Explain with an example. 5
- (b) Explain the event delegation model in AWT. What are the components of an event ? 5
- (c) Write a program that reads the contents of a file and writes it into another file. 5
4. (a) Differentiate between overloading and overriding with the help of an example. 8
- (b) What is Garbage Collection ? How is it performed in Java ? 4
- (c) What is the function of 'this' keyword in Java ? 3
5. (a) What is Multithreading ? Give two advantages of multithreading. Explain one way of creating threads in Java. Also explain, how thread priority is set in Java. 8
- (b) What is an Interface ? Can you extend the interface in Java ? Explain your answer with the help of a Java code fragment. 5
- (c) What is the output of the following code ? 2
- ```
int i = 16;
int j = 17;
System.out.Println ("i >> 1 = " + (i >> 1));
System.out.Println ("j >> 1 = " + (j >> 1));
```
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