February 2010

Bachelor of Computer Applications (BCA) Examination

V Semester

Introduction to Java

Time : 3 Hours]
[Max. Marks : 50

Note : All questions are compulsory. all questions carry equal marks.

1. (a) Explain how Java is different from other programming languages.
   (b) Classify the various data types in Java. Explain how strings can be handled in Java.

   OR

   (a) Identify the design goals of Java and relate JAVA and the Internet.
   (b) Explain how variables and assignments are handled in Java.
   (c) Discuss bitwise and shift oprators.

2. (a) Classify the various control flow constructs.
   (b) Write an application in Java that calculates the sum of the odd integers from 1 to 20.

   OR

   (a) Describe how arrays are handled in Java.
   (b) Write an application in Java that uses any five methods of string class. Also write its output.

3. (a) Distinguish between a class and an object. Explain how a class can be defined.
   (b) Demonstrate how object instancs are created and used, how methods are defined and used with the help of programming example.

   OR

   What is Constructor? Write an Employee class with suitable instance variables, methods and constructors. Demonstrate its object creation and method calling through main ( ).

4. (a) Explain the concept of : Method Overloading and Overriding.
   (b) Explin the basic concepts of Multi-threading. How it is different from Multitasking?

   OR

(a) Explain the concept of class inheritance, abstract class and interfaces in Java.
(b) Differentiate any two of the following :
   (i) throw and throws   (ii) final and finally
   (iii) try and catch.

5. (a) Explain JVM and name some of the Java compilers and tools.
   (b) Differentiate :
      (i) header file in C and packages in Java.
      (ii) Java application and applets.

   OR

   (a) Write a Java program to print the following output :
      1, 2, 2, 4, 8, 32, 256 .... (20 such numbers)
   (b) Discuss various Access Specifiers in Java.

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