Third Semester MCA Degree Examination, June/July.2015
Programming Using Java

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1 a. Explain about the primitive data types available in Java. (04 Marks)
  b. Explain about automatic type conversion in assignments with a example. (04 Marks)
  c. Explain any four types of operators in Java. Evaluate the expression.
     $C = -2 + 3 * 5 + 6 / 3 * + + 7 + (4 + 2)$ (12 Marks)

2 a. Write a program to generate prime numbers from 1 to 100. (08 Marks)
  b. Explain the concept of a default constructor and a parameterized constructor with a example. (06 Marks)
  c. Write a short note on Garbage collection and finalize() method (06 Marks)

3 a. Write a Java program demonstrating the use of an array and it's length member. (06 Marks)
  b. Explain the difference between String class and String Buffer classes. Explain any four methods each for String and String Buffer classes. (10 Marks)
  c. Explain two constructors each for both String and String Buffer classes. (04 Marks)

4 a. Explain the concept of method overloading through a program for calculating the area of geometrical figures. (06 Marks)
  b. Explain varargs or variable length arguments using an example. (06 Marks)
  c. What is method overriding? Give an example. (08 Marks)

5 a. Define a package. Explain the creation of a package using an example. (06 Marks)
  b. Explain the four types of access specifiers in Java. (08 Marks)
  c. Define an interface. How interfaces are useful? Give an example. (06 Marks)

6 a. Define an exception. Give an example of Java program where in an Arithmetic exception occurs. (06 Marks)
  b. Define a thread. Explain the two methods for creating threads. (06 Marks)
  c. Explain how Java achieves synchronization using an example. (08 Marks)

7 a. Explain an enumeration using an example. Explain the usage of values ( ) and value OF ( ) methods. (08 Marks)
  b. What is the importance of generics? Give an example. (06 Marks)
  c. Explain the life cycle of an Applet using an example. (06 Marks)

8 a. Explain the two key features of swing. (06 Marks)
  b. Explain about the two types of TCP sockets used for networking in Java. (06 Marks)
  c. What are collections? Write a program to demonstrate in linked list class. (08 Marks)

* * * * *