USN [| | | | | | | | | |]   **10MCA33**

Third Semester MCA Degree Examination, December 2011
Programming with JAVA

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1 a. Briefly explain the three OOPS principles. **(06 Marks)**
   b. What is type casting? Illustrate with an example. What is meant by automatic type promotion? Give an example. **(08 Marks)**
   c. Explain the operations of the following operators, with example :
      i) Left shift, right shift
      ii) The ? operator. **(06 Marks)**

2 a. Define constructor and overloaded constructor. Demonstrate it by writing a Java program to find the volume of a box. **(10 Marks)**
   b. Explain call by value and call by reference, with suitable examples. **(06 Marks)**
   c. Explain :   i) Static   ii) Finalize ( ) method. **(04 Marks)**

3 a. Explain how superclass constructors are called using super. **(05 Marks)**
   b. What is dynamic method dispatch? Demonstrate with the help of example. **(08 Marks)**
   c. What is an exception? How does Java handle exception? List some of the most common types of exception that might occur in Java. **(07 Marks)**

4 a. Define multithread. Distinguish between the multiprocessing and multithreading. **(05 Marks)**
   b. What is synchronization? Explain how interthread communication can be achieved in multithreading. **(05 Marks)**
   c. Mention any five byte stream classes and write their meaning. **(10 Marks)**

5 a. Explain the following :
      i) Enumeration
      ii) Type wrapper
      iii) Autoboxing and autounboxing. **(08 Marks)**
   b. What are the generics? Write a simple generic program. **(06 Marks)**
   c. Define a string. Explain with example two string methods to search a string for a specified character or substring. **(06 Marks)**

6 a. Explain the following :
      i) Primitive type wrappers   ii) Collection interfaces. **(10 Marks)**
   b. Mention any four collection classes. Explain with example linked list class. **(10 Marks)**

7 a. What is TCP/IP client sockets? Explain the two constructors used to create client sockets. **(08 Marks)**
   b. Define HHPURL connection class. Explain any four methods of URL class. **(08 Marks)**
   c. What are inet4address and inet6address? **(04 Marks)**

8 a. What is an applet? Write an applet program that scrolls a message from right to left across the applet window. **(08 Marks)**
   b. Define the event, event source, and event listener. **(06 Marks)**
   c. What is swing? Explain the two key features of swing. **(06 Marks)**

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