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13MCA32

**Third Semester MCA Degree Examination, Dec.2017/Jan.2018**  
**Programming using Java**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. Mention the features of Java and explain. (10 Marks)  
b. Explain type conversion and type casting. (06 Marks)  
c. Explain the operations of the following operators with example:  
(i) The ? operator (ii) The instances of keyword (04 Marks)
- 2 a. Define constructor. Describe constructor overloading. (04 Marks)  
b. Write a Java program to demonstrate constructor overloading by finding volume of a box. (06 Marks)  
c. Explain call by value and call by reference with suitable example. (10 Marks)
- 3 a. What are irregular arrays? How do you display irregular arrays using their length? (04 Marks)  
b. Briefly explain the behavior of static members of a class with suitable example. (08 Marks)  
c. Describe regionMatches( ) method, with an example. (08 Marks)
- 4 a. With suitable example, bring out the differences between final, finally and finalize. (06 Marks)  
b. What is dynamic method dispatch? Demonstrate with an example. (06 Marks)  
c. What is meant by instance variable hiding? How to overcome it? (04 Marks)  
d. Mention the uses of superkeyword. (04 Marks)
- 5 a. What are interfaces? What are their benefits? Explain how it is implemented. (10 Marks)  
b. Define package. Explain the access protection for class members. (10 Marks)
- 6 a. Define multithread. Distinguish between multiprocessing and multithreading. (04 Marks)  
b. What are two ways of creating a thread? Write a program to create a thread using any one of the approaches. (08 Marks)  
c. How do you create your own exception? Give an example. (08 Marks)
- 7 a. What is an applet? Write an applet that scrolls a message from right to left across the applet window. (08 Marks)  
b. Write the advantages of autoboxing over wrappers. Give suitable example to justify your claims. (06 Marks)  
c. What are generics? Explain with an example. (06 Marks)
- 8 a. List any four collection classes and explain linked list class. (04 Marks)  
b. What is TCP/IP client socket? Explain its constructors to create client socket. (08 Marks)  
c. Explain the concept of event delegation? Demonstrate mouse event program. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.