(b) Write short notes on the following :

    (i)   Reader class

    (ii)   Serialization

    (iii) Adapter classes

Unit – V

9. (a) Describe RMI architecture. How many types of protocol implementations does RMI have ?

   (b) Write an employee class in which pay () is a method which calculates the gross pay from basic pay. Write an application which runs this method remotely using RMI.

Or

10. (a) What is meant by collection interface ? How can we use hashset in collection interface ?

   (b) Explain the following :

    (i)   Proxy servers

    (ii)   Inet address

    (iii) Reserved sockets

    (iv) UDP sockets

MCA–405(B)

**M. C. A. (Fourth Semester)
EXAMINATION, June, 2012**

(Grading/Non-Grading)

JAVA PROGRAMMING AND TECHNOLOGIES

(Elective – I)

[MCA – 405(B)]

Time : Three Hours

Maximum Marks : $\begin{cases} GS : 70 \\ NGS : 100 \end{cases}$

Note : Attempt any *one* question from each Unit. All questions carry equal marks.

Unit – I

1. (a) Compare Java and C + +.

   (b) Write in brief about the following :

    (i)   bytecode

    (ii)   CLASSPATH

    (iii) Labelled continue

    (iv) Packages

   (c) What is Copy Constructor ? Write a program in Java to illustrate the use of copy constructor.

   (d) What are Finalizers ?

Or

2. (a) Why is Java called a strongly typed language ?

(b) Write a program in Java to accept a positive integer from the user and print whether it is a Fibonacci number or not.

(c) What is the purpose of the this keyword ? Explain it with the help of example.

(d) Write a brief note on method overiding and dynamic method dispatch.

Unit – II

(a) Differentiate between a class and an interface. What are the uses of interface ? Write a program to illustrate the use of an interface.

(b) Write short notes on the following :

   (i) throw

   (ii) throws

   (iii) getmessage

   (iv) printStackTrace

Or

(a) What is meant by a chained exception ? Discuss the various constructor and methods of the throwable class. Is it possible to have more than two exceptions in a chain ?

(b) Compare the following :

   (i) Multithreading and multiprocessing

   (ii) Daemon thread and selfish thread

   (iii) Yielding and sleeping

Unit – III

5. (a) Explain the order of method invocation in an applet.

(b) Explain the applet tag with example.

(c) Differentiate between component and container class.

(d) Describe Java's event delegation model in brief. What are its basic components ?

Or

6. (a) What is the difference between an applet and an application program ?

(b) What are the interfaces available in applet class ?

(c) Explain the following components :

   (i) scroll list

   (ii) frame

   (iii) grid layout

   (iv) card layout

(d) What is the difference between checkbox and checkbox group ?

Unit – IV

7. (a) Explain the working of four types of JDBC drivers in JAVA.

(b) Write a JDBC program for student mark list processing.

Or

8. (a) Explain the constructors of FileOutputStream class. Write a program to read a text file stored in the same directory as program and write it to another text file without vowels present.