# 2006 Punjab Technical University M.C.A

**JAVA PROGRAMMING**
**MCA-502**
**5th semester (2096)**

**Time allowed: 3 Hours**

**Max Marks: 75**

Note: attempt Ten question in all.Q.no.1 is compulsory.

Section – A

1.

a) Describe the process of data encapsulation.

b) When do I need to add the null constructor to a class? Can an inner class be extended?

c) What is difference between hyper-threading and superthreading in computer processors?

d) Explain the size & purpose of java.Applet library

e) What are exceptions, and when should I use them?

f) Define the interaction between threads,and between threads and object locks

g) What is sequence for calling the methods by AWT for applets?

h) How do Applets differ from Applications?

i) Should I use Serversocket or Datagram Socket in my applications? Explain

j) Explain which component and containers are supported by the AWT

k) Compare HttpServlets & GenericServlets

l) Explain which classes and interfaces support layouts and event handling

m) What is Servlet Life Cycle

n) Why can`t my applet connect via socket, or bind to a local port? What are socket options, and why should I use them?

o) How do I control the amount of a socket will linger before resetting?

Section-B

(5X9=45)

1. Why does Java not used Multiple inheritance & Explain what type of problems can occur in implementation.

2. What is role of the data sink streams in the java I/O liabraries? Provide two example of data sink streams that are found in the Java I/O liabraries.

3. Write a Java program to concatenate two string

4. Describe that major features of Java exception handling. How is exception handling carried out in java? What are the major statements that are employed in java exception

handling and what do they do?

5. Write a Java programe to computers & prints the number of permutations of N.

6. In Java programming, what is the difference between a checked exception and an unchecked exception?

7. What are the basis steps that are required to write data out to a stream? What are the basic steps that are required to read data from a stream? In your answer, provide pseudo code or Java code.

8. In Java, how does one perform formatted output where the spacing and precision of numbers can be controlled?

9. Write a subroutine named "stars" that will output a line of stars to standard output. ( A star is the character"*"). The number of stars should be given as a parameter to the subroutine. Use a for loop. For example, the command "stars(20) would output
**********************

10. Illustrate how components and containers are assembled into applets and applications.

11. Identity the types of methods provided by the Graphics class.

12. Describe the class and interface hierarchy supported by the Collection API.