Roll No .....

MCA - 505(A)

M.C.A. V Semester

Examination, December 2014

Distributed Systems

(Elective - III)

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

UNIT - I

1. a) What are the goals of Distributed System?
   b) What do you mean by remote object invocation?
   c) Explain open Distributed system and its benefits.
   d) Explain how quality of service can be achieved in stream oriented communications.

   Or

   Explain the parameter passing mechanism used in Remote Procedure Call (RPC). Briefly discuss message oriented communication.

UNIT - II

2. a) What is mutual exclusion?
   b) Discuss the advantages and disadvantages of Code migration.
   c) Explain multithreaded client and multithreaded server.

   d) What do you mean by logical clocks? Discuss the lamport's approach for logical clock synchronization.

   Or

   Compare Centralized, Distributed and Token Ring algorithms of mutual exclusion.

UNIT - III

3. a) What do you mean by fault tolerance?
   b) What do you mean by Cryptography?
   c) Write the limitations of KERBEROS.
   d) What kind of consistency would you use to implement an electronic stock market? Justify your answer.

   Or

   The Diffie-Hellman key-exchange protocol can also be used to establish a shared secret key between three parties. Explain how.

UNIT - IV

4. a) What do you mean by Distributed COM?
   b) What are the goals of Distributed File System?
   c) Discuss the Service provided by CORBA system.
   d) Explain any four forms of communication supported by Corba's invocation Model.

   Or

   Discuss the designing issues of distributed file system.

UNIT - V

5. a) Discuss Java RMI in short.
   b) Discuss distributed document based systems in short.
   c) Explain Distributed shared memory servers.
   d) Explain Distributed shared memory. Explain the principle operations of a page-based DSM system.

   Or

   Explain the notion of co-ordination in distributed Systems and present an overview of JINI.