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**MCA-505(A)****M.C.A. V Semester**

Examination, November 2018

**Distributed System****(Elective-III)****Time : Three Hours****Maximum Marks : 70**

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.

1. a) Discuss various methods for interprocess communication. Explain with the help of example. 7  
b) What do you understand by a Stub and Skelton? How it helps in communication between various components in a heterogeneous system? 7
2. a) Explain the working of bully algorithm for election of a co-ordinator. 7  
b) What is a distributed transaction? Discuss the protocols used to manage distributed transactions. 7
3. a) Explain the concepts of clock synchronization in distributed system. 7  
b) Explain the limitations of logical clock and also discuss the vector clock. 7

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4. a) Write short notes on: 7  
i) Kerberos  
ii) Client Server Communication  
b) Describe the distributed mutual algorithm that uses multicast and logical clocks. 7
5. a) Explain in detail about sun network file system. 7  
b) Discuss the features of CORBA. 7
6. a) A file system allows links from one directly to another. In this way, a directory can "include" a subdirectory. In this context, what is the essential criterion that distinguishes a tree-structured directory system from a general graph-structured system? 7  
b) The terms loosely-coupled system and tightly-coupled system are often used to describe distributed computer systems. What is the different between them. 7
7. a) How memory management is done in a Distributed System? Explain with the help of an example. 7  
b) How we Invoke remote objects with the help of Java RMI? How messages are Passed between remote objects? 7
8. Write short notes on: 14  
a) . Data centric consistency model  
b) Fault tolerance in distributed system  
c) Distributed security architecture  
d) Cryptography

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