

Roll No .....

**MCTA - 205**  
**M.E./M.Tech., II Semester**  
Examination, June 2016  
**Distributed System**  
Time : Three Hours

Maximum Marks : 70

**Note :** Total number of questions eight. Attempt any five questions.

1. a) Why architectural model is important in the distributed system design? Also discuss the resource sharing and its importance? 7  
b) What do you understand the term "absence of a global clock" in distributed system? 7
2. a) Discuss the general organization of distributed computing system and explain their characteristic features. 7  
b) What is remote method invocation? What are the commonalities and differences between RPC and RMI? 7
3. a) What is distributed deadlock and why are they hard to detect? 7  
b) What is Distributed File System? Explain the architecture of Andrew file system. 7

4. a) Explain the time stamping ordering protocol with suitable examples. Why it is useful in transaction processing? 7  
b) What are the requirements for distributed mutual exclusion algorithms? 7
5. a) What is Distributed Multimedia? Write the characteristics of multimedia data. 7  
b) Explain in brief transaction with replication data. 7
6. a) How distributed system can be scaled? What problems arise during the scaling of the systems? 7  
b) Explain fault tolerant services in a distributed system. 7
7. a) Describe how a non-recoverable situation could arise if write locks are released after the last operation of a transaction but before its commitment. 7  
b) Explain how the security is achieved in distributed file system. 7
8. Write short notes on the following: (Any Four) 14  
a) Digital Signatures  
b) Distributed Debugging  
c) Events and notification  
d) Process and threads  
e) Atomic commit protocols

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