

MCTA-205

M. E./M. Tech. (CTA) (Second Semester)
EXAMINATION, June, 2012

(Grading/Non-Grading)

DISTRIBUTED SYSTEM

Time : Three Hours

RGPVONLINE.COM { GS : 70
NGS : 100

Note : Attempt any five questions. All questions carry equal marks.

1. (a) What is Distributed System ? What are advantages and disadvantages of distributed system over centralized one ? Explain the concept of parallelism transparency.
(b) Explain parameter passing mechanism used in RPC.
2. (a) What is file service architecture in distributed file system ? Explain briefly.
(b) What do you mean by communication between distributed object systems and explain various services provided by CORBA.
3. (a) What do you mean by logical clocks ? Discuss Lamport's approach for clock synchronization.
(b) What is mutual exclusion ? Explain Bully algorithm.

4. (a) What do you mean by Distributed deadlock in distributed system and how to handle these problems ?
(b) Explain how the write ahead log distributed transaction can be used to recover from failures.
5. (a) Explain multithreaded client and multithreaded server models.
(b) Explain the Berkeley algorithm for clock synchronization in brief.
6. (a) What are the differences between a distributed transaction and nested transactions ?
(b) What is concurrency control ? Explain what are main use of concurrency control in distributed transaction ?
7. (a) What is recovery failure ? Explain backward recovery and forward recovery with example.
(b) Explain the security techniques ? How to work digital signatures ?
8. Write short notes on the following :
 - (i) Object replication
 - (ii) Cryptography
 - (iii) Fault tolerance
 - (iv) Transparency issues of distributed system

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