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7673

Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, November 2015
(2008 Scheme)**

08.804 : DISTRIBUTED SYSTEMS (R)

Time : 3 Hours

Max. Marks : 100

PART - A



Answer **all** questions.

1. What is meant by logical time ? How can this parameter be used to order events in a distributed system ?
 2. Compare synchronous and asynchronous distributed systems.
 3. Give some examples of faults in hardware and software that can/cannot be tolerated by the use of redundancy in a distributed system. To what extent does the use of redundancy in the appropriate cases make a system fault-tolerant ?
 4. Distinguish between buffering and caching.
 5. List the types of local resource that are vulnerable to an attack by an untrusted program that is downloaded from a remote site and run in a local computer.
 6. Explain process migration.
 7. When does 'lost update' problem occur in concurrent transactions ? Give an example.
 8. Compare flat and nested transactions.
 9. What factors identified in the cost of a remote invocation also feature in message passing ?
 10. How does NFS automounter help to improve the performance and scalability of NFS ?
- (10×4 = 40 Marks)**

P.T.O.



PART – B

Answer **one full** question from **each** Module.

Module – I

11. a) Explain the failure model of distributed systems.
b) What do you understand by location transparency ? Discuss the extent to which an HTTP URL is location transparent.

OR

12. a) Explain the architecture of distributed systems.
b) What factors affect the responsiveness of an application that accesses shared data managed by a server ? Describe remedies that are available and discuss their usefulness.

Module – II

13. a) Discuss the main features of IP multicast protocol.
b) A server creates a port which it uses to receive requests from clients. Discuss the design issues concerning the relationship between the name of this port and the names used by clients.

OR

14. a) Explain how RPC is implemented.
b) Describe the ways in which the request-reply protocol masks the heterogeneity of operating systems and of computer networks.

Module – III

15. a) Explain the architecture and implementation details of Andrew File System.
b) What are the advantages and drawbacks of multiversion time stamp ordering in comparison with ordinary time stamp ordering ?

OR

16. a) Discuss on replicated transactions.
b) Compare and contrast the three concurrency control methods in distributed systems namely strict two-phase locking, optimistic methods and time-stamp ordering. **(3×20 = 60 Marks)**