



Reg. No. :

PART - B

Name :

**Eighth Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)**

08.804 : DISTRIBUTED SYSTEMS (R)

Time : 3 Hours



Max. Marks : 100

PART - A

Answer **all** questions. **Each** question carries **4** marks.

1. What is meant by middlewave ? What is its role in a distributed computing environment ?
2. What is the difference between fail-stop and crash failure ?
3. What is clock drift rate ? Explain clock drift in the context of synchronous and asynchronous distributed systems.
4. List different methods for defeating security threats in distributed systems.
5. Explain the terms (i) socket and (ii) ports in the context of interprocess communication.
6. Describe the request reply message structure in client server communication.
7. Differentiate between remote and local method invocations.
8. What is a persistent object in the context of RMI ?
9. What is the role of virtual file system in NFS.

10. Explain lost update problem.

(10×4=40 Marks)



PART – B

Answer **one** question from **each** Module. **Each** question carries **20** marks.

Module – I

11. a) What are the challenges associated with distributed system design ? 10
 b) Explain the model that simplifies and abstracts the functions of individual components of a distributed system. 10

OR

12. a) Describe and illustrate the client server architecture of three major internet applications. 10
 b) Can firewall prevent denial of service attacks ? What are the other methods available to deal with such attacks ? 10

Module – II

13. a) Explain how external data representation and marshalling is done in CORBA. 8
 b) Why is there no explicit data typing in CORBA CDR ? 5
 c) How can we create a new process in a distributed system ? 7

OR

14. a) Explain how traditional object model can be extended to distributed systems. 10
 b) Explain how an event-based distributed system works with suitable examples. 10

Module – III

15. a) Describe the architecture of Andrew File System (AFS) emphasizing the distribution of processes in the file system. 10
 b) Explain how optimistic concurrency control schemes work. 10

OR

16. a) Explain how transaction serialization is done using locks. 10
 b) Illustrate different techniques for replicating transactions. 10