



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, October 2014
(2008 Scheme)**

08.804 : DISTRIBUTED SYSTEMS (R)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions :

1. Can firewall prevent denial of service attack ? What other methods are available to deal with such attacks ?
2. Distinguish between architecture model and fundamental model for distributed systems.
3. Discuss the issue of naming applied to shared memory regions.
4. What is the role of skeleton in RMI ?
5. A search engine is a web server that responds to client requests to search in its stored indexes and (concurrently) runs several web crawler tasks to build and update the indexes. What are the requirements for synchronization between these concurrent activities ?
6. How can we detect distributed deadlock ?
7. What is the function of automounter in NFS ?
8. Compare the worker pool multi-threading architecture with the thread-per-request architecture.
9. Mention the role of coordinator in distributed transaction.
10. Compare flat and nested transactions. **(10×4=40 Marks)**



PART – B

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

Module – I

11. a) Describe the various design requirements for distributed architectures.
b) List the three main software components that may fail when a client process invokes a method in a server object, giving an example of a failure in each case. To what extent are these failures independent of one another ?

OR

12. a) Explain the significance of failure model of distributed system design.
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) Briefly explain distributed event notification.
b) Explain how object model can be extended to make it applicable to distributed objects ?

OR

14. a) Explain request-reply protocol with HTTP as example.
b) Describe the architecture of multi-threaded server.

Module – III

15. a) Explain the architecture of NFS.
b) Explain how concurrency is increased in locking schemes.

OR

16. a) Explain distributed deadlock detection technique.
b) Explain the architecture of AFS with specific focus on the distribution of processes in the file system.

(3×20=60 Marks)