Reg. No. : ....

Name : ....

Eighth Semester B.Tech. Degree Examination, April 2014
(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 the difference between mobile code and mobile agent ?

2. Give some examples of hardware and software that can/cannot be tolerated by the use of redundancy in a distributed system.

3. What is IP spoofing ?

4. Explain the issues in Remote Method Invocation.

5. Differentiate between sockets and ports illustrating significance of each.

6. Distinguish between monolithic kernels and microkernels.

7. How NFS is different from single user file system ?

8. When does "lost update" problem occur in concurrent transaction ? Explain with a suitable example.

9. Why should UFID be unique across all the file systems ?

10. What is the reason for phantom deadlock ?   **(10×4=40 Marks)**

PART – B

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

Module – I

11. a) Use the Word Wide Web as an example to illustrate the concept of resource sharing, client and server. 8

   b) Give an example of a URL. List three main components of URL. To what extent is a URL location transparent. 12

OR

12. a) Explain the fundamental models of distributed system design. 15

   b) What factors affect the responsiveness of an application that accesses shared data managed by a server ? Describe remedies that are available. 5

Module – II

13. Explain external data representation and marshalling. Describe how CORBA CDR represents following structure with value {'Smith', 'London', 1934}.

   Structure :   Struct person {

                 String name ;
                 String place ;
                 long year ;
                 } ;   20

OR

14. a) How does operating system architecture maintain security ? 15

   b) Explain IP multicast. 5

Module – III

15. Explain how to conduct concurrency analysis in a distributed system. 20

OR

16. a) Explain the architecture of Sun NFS. 15

   b) Show how locking rules ensure 'strict execution'. 5