

**FACULTY OF ENGINEERING**  
**B.E. 4/4 (CSE) I Semester (Main) Examination, Dec. 2011**  
**DISTRIBUTED SYSTEMS**

Time: 3 Hours]

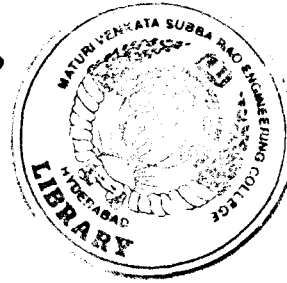
[Max. Marks: 75

**Note :** Answer *all* questions from Part A. Answer *any five* questions from Part B.

## PART – A

(25 Marks)

- |   |   |
|---|---|
| 1. Define distributed system. Give any two examples.        | 2 |
| 2. What is the use of Reflection in Implementation of RMI ? | 3 |
| 3. What is distributed Garbage collection ?                 | 2 |
| 4. Differentiate between RPC and LRPC.                      | 3 |
| 5. Explain the Berkeley Algorithm.                          | 3 |
| 6. What is Global state ?                                   | 2 |
| 7. What are dirty reads ?                                   | 2 |
| 8. What is the distributed shared memory ?                  | 3 |
| 9. Define nested transaction.                               | 2 |
| 10. What are the uses of Group Communication ?              | 3 |



## PART – B

(50 Marks)

- |  |    |
|--|----|
| 11. a) What is transparency ? List out the different levels of transparency and explain. | 5  |
| b) Explain the architectural models of Distributed system.                               | 5  |
| 12. a) What are the different ways of Invocations in Distributed system. Explain.        | 5  |
| b) What is meant by object serialization ? Explain.                                      | 5  |
| 13. a) Write the design issues of RMI.   | 5  |
| b) Write short notes on DNS.   | 5  |
| 14. a) Explain about distributed debugging.  | 5  |
| b) Write the central server and ring based algorithms for distributed mutual exclusion.  | 5  |
| 15. a) What is the time stamp ordering ? Explain.  | 5  |
| b) What is distributed Deadlock ? Explain about Edge chasing.                            | 5  |
| 16. Describe the architecture of SUN NET WORK file system.                               | 10 |
| 17. Write short notes on :   |    |
| a) Active replication.   | 5  |
| b) Elections.  | 5  |