

## Distributed computing

Q.P. Code : 622602

(3 Hours)

[ Total Marks: 100

- N.B. :** (1) **Q.No.1** is compulsory  
 (2) Solve any **four** questions from the remaining questions.

1. (a) Explain desirable features of good message passing system. 10  
 (b) Explain RPC System Model for communication in distributed system in detail. 10
  2. (a) Explain issues in designing a distributed operating system. 10  
 (b) What are good features of a distributed file system? Explain file sharing semantics of it. 10
  3. (a) Explain the distributed algorithms for clock synchronization. 10  
 (b) Explain the different load estimation policies and process transfer policies used by load balancing algorithms. 10
  4. (a) Explain distributed algorithm for mutual exclusion. What are the advantages and disadvantages of it over centralized algorithm. 10  
 (b) Explain different issues for designing of Distributed Shared Memory (DSM). 10
  5. (a) Compare stateful and stateless servers. 10  
 (b) Explain Election algorithms with advantages and disadvantages. 10
  6. (a) Write a note on system oriented names and human oriented names. 10  
 (b) Explain failure handling related to client and server communication. 10
  7. Write a note on: (**any Two**) 20
    - a) File caching for distributed system
    - b) Lightweight RPC
    - c) Process migration mechanisms
    - d) Distributed Computing Environment (DCE)
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