1. Define Distributed System. State the advantages and disadvantages of a distributed system.
2. Explain different issues and goal related to design of Distributed System. Explain transparency in detail.
3. Explain different types of transparencies in distributed system.
4. State the goals of distributed system.
5. Explain different types of distributed systems with neat diagram.
6. What are various system models of distributed system?
7. Discuss in brief the different architectural models in Distributed System. Explain with neat diagram.
8. Explain different types of Failure Models.
9. Differentiate between NOS, DOS and Middleware in the design of a Distributed Systems.
10. Explain different types of middleware in the distributed system.
11. What are the different models of middleware?
12. Define Inter-process Communication. Explain different types of Communications.
13. Explain the concept of Message Passing Interface (MPI) in detail.
14. Define Remote Procedure Call (RPC). Explain the working of RPC in detail.
15. Explain call semantics of RPC.
16. Explain different communication protocols used in RPC.
17. Explain Stream Oriented Communication with a suitable example.
18. Differentiate between Message oriented and Stream oriented communications.
19. Explain group communication in detail with its types.
20. Explain Berkeley Physical Clock Algorithm.
21. What are Physical Clocks ? Explain any one Physical Clock Synchronization Algorithm.
22. What is a logical clock? Why are logical clocks required in distributed systems? How does Lamport synchronize logical clocks? Which events are said to be concurrent in Lamport’s Timestamp ?
23. Describe any one method of Logical Clock Synchronization with the help of an example.
24. Write a note on Election Algorithm.
25. What is coordinator process? Explain algorithms used for selection of a coordinator.
26. Explain Bully Election Algorithm.
27. Explain the distributed algorithms for mutual exclusion. What are the advantages and disadvantages of it over centralized algorithms?
28. Explain Lamport’s Mutual Exclusion Algorithm**.**
29. Discuss Ricart-Agrawal’s Algorithm and justify how this algorithm optimized the message overhead in achieving mutual exclusion.
30. Write a note on: Lamport’s Algorithm.
31. Write a Suzuki-Kasami’s broadcast algorithm. Explain with suitable example.
32. Discuss Raymond’s Tree based algorithm of token based distributed mutual exclusion.
33. Differentiate between Token-based algorithm and Non-Token based algorithm. Explain in detail Raymond’s Tree Based Algorithm.