

Distributed Systems

P. Pages : 2

Time : Three Hours



TKN/KS/16/7703

Max. Marks : 80

- Notes :
1. All question carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What do you mean by Distributed operating system? Discuss various design issues in distributed system. 7

b) Explain the various computing models in Distributed system. 6

OR

2. a) Explain client – server Model in Distributed systems. 7

b) Give the software classification of Distributed O.S. Explain the features of Distributed systems. 6

3. a) Explain Remote procedure call with an example and diagram. 6

b) Explain message passing model in Distributed system. 7

OR

4. a) Explain Remote object Invocation. 7

b) Give the various types of message buffering. 6

5. a) Explain Lamport Algorithm for logical clock synchronization. Also explain the concept of vector Logical clock. 7

b) Explain the various Election Algorithms. 7

OR

6. a) Explain Ricart Agrawala's algorithm for Mutual Exclusion. 6

b) Write short notes on : 8

i) Threads.

ii) Code Migration.

7. a) Explain the centralized control Ho-Ramamoorthy deadlock detection algorithm. 7
b) How deadlocks can be resolved in Distributed systems. 6

OR

8. a) Explain path pushing and Edge chasing deadlock detection algorithms in distributed systems. 7
b) What are the Distributed system Models of Deadlocks. 6
9. a) Give the design and implementation of Distributed Shared Memory (DSM). 8
b) What are the advantages of Distributed shared memory. 5

OR

10. a) Explain the issues of DSM. 7
b) What are the various consistency models? 6
11. a) What are the desirable features of a food distributed file system? 7
b) Write short notes on : 7
i) File Models.
ii) Caching Methods.

OR

12. a) Explain voting protocols. What do you mean by static and Dynamic voting protocols? 7
b) Explain two-phase commit protocols, in Fault Tolerance. 7
