

B.E. Eighth Semester (Computer Science & Engineering) (C.B.S.)
Distributed Operating System

P. Pages : 2

Time : Three Hours



NKT/KS/17/7608

Max. Marks : 80

- Notes :
1. All questions 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) Explain design issues in distributed operating system. **7**
b) State & explain Lamport logical clock algorithm. **7**
OR
2. a) What are cuts of distributed computation ? Explain termination detection algorithm. **7**
b) What are the limitation of distributed system ? **7**
3. a) Explain Lamport's Non-token based algorithm for distributed mutual exclusion. **7**
b) What are the requirement of mutual exclusion algorithm ? **6**
OR
4. a) Explain Singhal's Heuristic algorithm. **7**
b) State how to analyze performance of mutual exclusion algorithm ? **6**
5. a) What are the deadlock handling strategies in distributed system ? **6**
b) Explain path pushing deadlock detection algorithm. **7**
OR
6. a) What are the issues in deadlock detection & resolution ? Explain. **6**
b) Explain the classification of agreement problem. Provide the solution to byzantine agreement problem. **7**

7. a) Explain architecture of distributed file system. 7
b) Explain algorithm for implementing DSM. 6

OR

8. Explain the migration algorithm for implementing distributed shared memory. What is memory coherence in distributed shared memory? Explain it forms. 13

9. a) Explain the issues in load distributing. 6
b) Write about receiver-initiated algorithm for load distributing. 7

OR

10. a) Explain the requirements for load distributing task migration. 7

b) Explain Adaptive algorithm for load distribution. 6

11. a) Explain how the rolling back of processes can cause problem. 7

b) Explain the characteristic of check point algorithm. 7

OR

12. Write short note on : 14

- a) Static voting protocols.
b) Dynamic voting protocols.
c) Commit protocol.
d) Recovery in concurrent system.
