

B.E.Eighth Semester (Information Technology) (C.B.S.) -  
**Distributed Systems**

P. Pages : 2

Time : Three Hours



**NKT/KS/17/7618**

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.

1. a) Draw and explain distributed operating system architecture. **7**
- b) Write short note on software concepts of distributed system. **6**

**OR**

2. a) Discuss various design issues of distributed operating systems. **6**
- b) Explain the architecture of client/server distributed systems with neat diagram. **7**
3. a) What are the advantages of message passing mechanism in distributed system? **6**
- b) Write short notes on.
  - i) Shared data approach. **4**
  - ii) Message passing approach. **4**

**OR**

4. a) Describe the role of dynamic binding in remote procedure call. **7**
- b) How extended RPC models used for communication in distributed systems? **7**
5. a) Explain the following about threads. **8**
  - i) Three processes with one thread each.
  - ii) One process with three threads.
- b) Describe the use of synchronized clocks in distributed systems. **5**

**OR**

6. a) Explain the election algorithm in detail. 7  
b) Write short mutual exclusion in distributed system. 6
7. a) Define deadlock, Explain system model of distributed deadlock system in detail. 7  
b) How to prevent deadlock in distributed system? 6

**OR**

8. a) Explain Chandy- Misra -Haas's edge chasing algorithm. 8  
b) Describe a path- pushing algorithm of distributed deadlock detection. 5
9. a) Describe the distributed shared memory with neat diagram. 7  
b) Discuss different issues in design of distributed shared memory. 7

**OR**

10. a) Write short notes on.  
a) Write - invalidate protocol. 4  
b) Write - Update protocol. 4  
b) Explain thrashing in detail. 6
11. a) What are the requirements of distributed file system? 6  
b) Draw and explain architecture of distributed file system. 7

**OR**

12. a) Discuss the various file accessing models. 7  
b) Write short note on file sharing. 6

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