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B.E.(Information Technology) Eighth Semester (C.B.S.)

Distributed Systems

P. Pages : 2 **NRT/KS/19/3700**

Time : Three Hours * 0 8 1 4 * 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) Discuss various design issues of distributed operating systems. **6**

b) Explain client – server model in distributed system. **7**

OR

2. a) Discuss about Hardware & Software classification of distributed system. **7**

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

3. a) Explain various types of communication primitives in detail. **7**

b) What are the different mechanism required for RPC (Remote Procedure Calls)? Explain stub and skeleton. **7**

OR

4. a) Explain message format & different message buffering strategies in message passing system. **7**

b) What is mean by message communication? Explain different types of communication in detail. **7**

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

b) Write a short note mutual exclusion in distributed system. **6**

OR

6. a) Explain Bully & Ring Election Algorithms with proper example. **8**

b) Explain threads in distributed system with the help of neat diagram. **5**

7. a) How to prevent deadlock in distributed system? **6**

b) Explain Edge chasing algorithm with example. **7**

OR

8. a) Describe a path- pushing algorithm of distributed deadlock detection. **6**

   b) Explain the different methods used to handle the deadlocks. **7**

9. a) Describe the distributed shared memory with neat diagram. **7**

   b) What a Thrashing? Explain in detail. **6**

OR

10. a) Explain the issues of DSM. **7**

    b) Explain different types of consistencies in distributed shared memory. **6**

11. a) Draw and explain architecture of distributed file system. **7**

    b) What are the desirable features of a food distributed file system? **7**

OR

12. a) Write short note on CORBA. **7**

    b) Discuss the various file accessing models. **7**

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High expectations are the key to everything.

~ Sam Walton