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

Distributed Operating System

P. Pages : 2 **NRT/KS/19/3690**

Time : Three Hours * 0 6 9 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) Explain design issues in distributed operating system. **7**

b) What is meant by cuts of distributed compilation? Explain consistent cut. **6**

OR

2. a) Explain Lamport logical clock with suitable example. **7**

b) What are the limitation of distributed system. **6**

3. a) Explain Raymond's tree – based algorithm. **7**

b) What are the requirements of mutual exclusion algorithms? Explain. **7**

OR

4. a) Explain Singhal's Heuristic algorithm. **7**

b) State & Explain comparative performance analysis of all token – based and non – token based algorithm. **7**

5. a) Explain path pushing deadlock detection algorithm. **7**

b) What are Agreement protocols? Explain it **6**

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 memory coherence with example. **7**

OR

8. a) Explain coherence protocols. **7**

b) List and explain various algorithm for implementing distributed shared memory. **7**

9. a) Discuss the various policies of load distributing algorithm. **8**

b) Describe major components of load distribution algorithm. **5**

OR

10. a) State & Explain receiver – initiated algorithm for load distributing. **7**

b) Explain Adaptive algorithm for load distribution. **6**

11. a) What is commit protocol? Explain two phase commit protocol. **7**

b) Explain phases of checkpoint algorithm with the help of diagram. **6**

OR

12. a) Explain dynamic voting protocols. **7**

b) Explain following with help of example- **6**
i) Orphan messages and domino effect.
ii) Problem with live lock.

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Itâ€™s hard to beat a person who never gives up.

~ Babe Ruth