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

Distributed Operating System

P. Pages : 2 **NIR/KW/18/3690**

Time : Three Hours * 1 3 4 7 * Max. Marks : 80

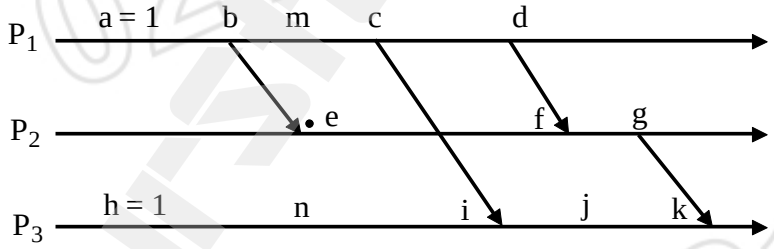
Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Assume suitable data whenever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Define distributed operating system & discuss the designing issues of distributed operating system. **7**

b) What do you mean by cuts of distributed computation? Explain termination detection algorithm. **7**

OR

2. a) Describe how vector clock can overcome the limitation of Lamport clock. Consider the following set of events & assign the missing vector logical timestamps to the event. **8**



b) Explain Chandy Lamport's Global state Recording Algorithm. **6**

3. a) Explain Raymond's tree based algorithm. **6**

b) Justify how Ricart-Agrawala's algorithm achieves mutual exclusion. **7**

OR

4. a) Give comparative performance analysis of all Token-based and non token based algorithm. **7**

b) Explain Suzuki-Kasami Broadcast algorithm. **6**

5. a) Explain Ho-Ramamoorthy centralized deadlock detection algorithm. **7**

b) Explain different issues in deadlock detection & resolution. **7**

OR

6.	a)	Explain the classification of agreement problems.	**7**
	b)	Explain Edge chasing algorithm for distributed deadlock detection with the help of example.	**7**
7.	a)	Explain the mechanism for building distributed file system.	**6**
	b)	Describe the Migration algorithm for implementing distributed shared memory.	**7**

OR

8.	a)	Explain with the help of diagram distributed file system architecture.	**6**
	b)	Describe coherence protocols in detail.	**7**
9.	a)	Discuss the performance comparision of different load distributing algorithms.	**6**
	b)	Explain the concept of load distributing along with sender initiated algorithm.	**7**

OR

10.	a)	Explain different issues in load distributing.	**7**
	b)	Describe the components load distribution algorithms.	**6**
11.	a)	What is commit protocol? Explain two phase commit protocol.	**7**
	b)	Explain dynamic voting protocols.	**6**

OR

12.	a)	Describe checkpoint Algorithm in detail.	**6**
	b)	Explain the algorithm for site Recovery.	**7**

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The secret of getting ahead is getting started.

~ Mark Twain