B.E. Seventh Semester (Computer Technology) (C.B.S.) -
Elective - II : Advance Operating System

P. Pages : 2

Time : Three Hours

NKT/KS/17/7484

Max. Marks : 80

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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)	Explain the issues in the design of distributed operating system.	**7**
	b)	Describe the Lamport's logical system to order the events. State it's limitations.	**6**

OR

2.	a)	What is cut? Differentiate between consistent & inconsistent cut.	**6**
	b)	Explain the advantages of distributed system over traditional time sharing system.	**7**
3.	a)	Describe different mechanism for mutual exclusion handling.	**7**
	b)	Explain Lamport's algorithm for mutual exclusion.	**7**

OR

4.	a)	State & explain the Raymond's tree based algorithm for mutual exclusion.	**7**
	b)	Explain the following requirement to be satisfied by mutual exclusion algorithm.	**7**

i) Freedom from deadlock

ii) Fairness

iii) Fault tolerance

5.	a)	Explain Ho-Ramamoorthy algorithm with it's application.	**6**
	b)	Explain basic issues in deadlock detection & resolution.	**7**

OR

6.	a)	Show that Byzantine agreement can not be reached among four processors if 2 processors are faulty.	**7**
	b)	Differentiate between	**6**

i) Synchronous and Asynchronous computations.

ii) Authenticated & non authenticated messages.

7.	a)	Illustrate the issues in the design & implementation of distributed file system.	**7**
	b)	Draw & explain architecture of distributed file system.	**7**

OR

8.	a)	Explain client server & fault Replication algorithm of distributed shared memory.	**7**
	b)	Explain mechanism for building distributed file system.	**7**
9.	a)	Describe the sender initiated load sharing mechanism.	**7**
	b)	State & explain the various requirements to be satisfied by a load distributing scheme.	**6**

OR

10.	a)	Define task migration. Explain various steps involved in task migration.	**7**
	b)	Write & explain receiver initiated algorithm for load sharing.	**6**
11.	a)	Write note on:	**7**

        i)   Commit protocol

        ii)   Voting protocol

	b)	Explain the operation based approach for backward error recovery.	**6**

OR

12.	a)	Write note on	**6**

        i)   Orphan messagess

        ii)   Domino Effect

	b)	Explain different types of faults in distributed system.	**7**

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