B.E. (Computer Technology) Semester Seventh (C.B.S.)

Elective - II : Advance Operating System

P. Pages : 2 **KNT/KW/16/7484**

Time : Three Hours * 0 8 5 1 * 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) What are the features & drawbacks of distributed system & what are their impacts? **5**

b) What are the issues in distributed operating system? **9**

OR

2. a) What is cut? Differentiate between consistent & inconsistent cut? **5**

b) Write Chandy – Lamport's global state recording algorithm. **9**

3. a) Define the terms with diagram. **6**

i) Response time

ii) Synchronization delay

iii) System throughput

b) Explain Lamport's algorithm for mutual exclusion. **7**

OR

4. a) Discuss different mechanisms for mutual exclusion handling. **6**

b) Explain the working of Raymond's tree based algorithm. **7**

5. a) What is deadlock? What are the different types of deadlocks? **4**

b) Explain Ho-Ramamoorthy algorithm. **5**

c) Differentiate between **4**

i) Synchronous Vs. Asynchronous computations

ii) Authenticated Vs. Non - authenticated messages.

OR

6.	a)	Show that byzantine agreement cannot be reached among four processors if 2 processors are faulty.	**7**
	b)	What are the basic issues in deadlock detection & resolution?	**6**
7.	a)	Explain mechanisms for building distributed file systems.	**7**
	b)	Draw & explain architecture of DSM system.	**6**

OR

8.	a)	What are the forms of memory coherence?	**5**
	b)	Explain design issues in distributed file systems.	**8**
9.	a)	Explain Sender - initiated algorithm.	**7**
	b)	State & explain the various requirements to be satisfied by a load distributing scheme.	**4**
	c)	Differentiate between load balancing & load sharing.	**3**

OR

10.	a)	What is task migration? Write down the steps involved in task migration.	**6**
	b)	Differentiate between preemptive & non - preemptive task transfer.	**3**
	c)	Explain the components of any load distributing algorithm.	**5**
11.	a)	Explain in short -	**7**
		i) Commit protocols	
		ii) Voting protocols.	
	b)	What do you mean by orphan messages? Explain with the help of diagram.	**6**

OR

12.	a)	Explain 2-phase commit protocol.	**7**
	b)	Explain different types of faults in distributed system?	**6**

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