

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

P. Pages : 2

Time : Three Hours



TKN/KS/16/7571

Max. Marks : 80

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- Notes :
1. All questions carry marks as indicted.
 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) What is Distributed system and Discuss in detail various issues regarding the design of Distributed system. 8
- b) What are the features and drawbacks of Distributed system and what are their impacts? 3
- c) What are the differences between Distributed system and centralized system? 3

OR

2. a) What are the types of Advanced operating systems. 7
- b) What is a cut? How is it useful in taking global snapshot? 3
- c) What is the role of Happened before relation in logical clocks. 4
3. a) Explain Ricart – Agrawala algorithm. 6
- b) Compare the performance of various token based algorithms on the basis of: 7
- i) Message traffic at low-load. ii) Message traffic at high-load.
- iii) Response time iv) Synchronisation delay.

OR

4. a) What are the requirements of mutual exclusion algorithm? 7
- b) Explain Raymonds tree based algorithm for providing mutual Exclusion. 6
5. a) Show that byzantine agreement cannot always be reached among four processors if two processors are faulty. 7
- b) What is deadlock? What are the issues in distributed deadlock? 6

OR

6. a) Discuss deadlock handling strategies in distributed system. **6**
 b) Explain the Ho-Ramamoorthy Algorithms including phase-I and phase-II Algorithms. **7**
7. a) Draw the architecture of distributed file system and explain it with help of diagram. **8**
 b) Explain Mechanisms for building distributed file system. **6**

OR

8. a) Draw and Explain Architecture of Distributed Shared Memory (DSM) system. **6**
 b) State and explain the advantages of distributed shared memory system. **8**
9. a) Explain the following Load distributed Algorithms. **9**
 i) Sender – initiated algorithm. ii) Receiver – initiated algorithm.
 b) Explain issues in task migration. **4**

OR

10. a) Explain components of a Load Distributed Algorithms. **5**
 b) State and explain the various requirements to be satisfied by a load distribution scheme. **4**
 c) What are the issues in load Distributing. **4**
11. a) What do you mean by Domino effect? Explain that in details with an example. **4**
 b) Explain the Rollback Recovery Algorithm with help of neat sketch. **5**
 c) Explain the consistent set of checkpoints. **4**

OR

12. a) What do you mean by voting protocols? Explain the following in detail with neat sketch. **8**
 i) Static voting protocol. ii) Dynamic voting protocol.
 b) What is Fault – Tolerance (Fault tolerance)? And Explain commit protocols in details. **5**
