

**Code No: 155AB****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, August - 2022****ADVANCED OPERATING SYSTEMS****(Common to CSE, IT)****Time: 3 Hours****Max. Marks: 75**

**Answer any five questions**  
**All questions carry equal marks**

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- 1.a) What is distributed operating system and write its characteristics and advantages.
- b) Describe blocking and non blocking communication primitives in distributed operating system. [7+8]
- 2.a) Explain frame work of logical clocks.
- b) Give the architecture of distributed operating system. [8+7]
- 3.a) Define critical section problem and explain with an example.
- b) State and explain Singhal's heuristic algorithm for Mutual exclusion. [7+8]
- 4.a) Write Lamport's algorithm for distributed mutual exclusion.
- b) Device performance and optimality for Lamport's algorithm for distributed mutual exclusion. [7+8]
- 5.a) Describe deadlock handling strategies in distributed operating system.
- b) Explain edge chasing algorithm for deadlock detection. [7+8]
- 6.a) Explain wait-for graph with an example.
- b) Discuss diffusion computing algorithm for dead lock detection. [7+8]
- 7.a) Explain the architecture of distributed file system.
- b) Discuss the issues in multi processor operating systems and compare with distributed operating system. [7+8]
- 8.a) Elaborate components of load distribution algorithm.
- b) Write the advantages and abstract view of distributed shared memory. [7+8]

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