

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

Answer any five questions
All questions carry equal marks

- 1.a) Explain the design issues in distributed operating system.
b) Compare vector Vs logical clocks. [8+7]
- 2.a) Describe message passing communication model.
b) Explain any one termination detection algorithm. [8+7]
- 3.a) Explain the steps to achieve mutual exclusion using token based algorithms.
b) State and explain Shingal's Mutual exclusion algorithm. [8+7]
- 4.a) Explain the properties and performance of Lamport's Mutual exclusion algorithm.
b) Write Lamport's algorithm for mutual exclusion. [8+7]
- 5.a) Discuss the issues in deadlock detection in distributed systems.
b) Explain edge chasing algorithm for dead lock detection. [8+7]
- 6.a) Explain hierarchical deadlock detection algorithm.
b) Explain the deadlock handling strategies in distributed systems. [7+8]
- 7.a) Give note on process synchronization in multiprocessor operating system.
b) Describe the architecture of distributed file system. [8+7]
- 8.a) Explain full replication algorithms for distributed shared memory.
b) Explain components of load distributing algorithms. [8+7]

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