

**Code No: 155AB****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, September - 2021****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) Discuss various issues in distributed operating system.  
b) Explain in brief about communication primitives. [7+8]
2. Explain the following.  
a) Vector clocks.  
b) Termination detection. [8+7]
- 3.a) Explain Raymond's heuristic algorithm.  
b) Explain Lamport's algorithm. [8+7]
- 4.a) Distinguish between token and non-token based algorithms.  
b) Discuss in brief about the classification of mutual exclusion algorithms. [7+8]
- 5.a) Explain in brief control organizations for distributed deadlock detection.  
b) Discuss the issues in deadlock detection and resolution. [8+7]
6. Explain in brief hierarchical deadlock detection algorithms. [15]
- 7.a) Discuss the features of distributed file systems.  
b) Discuss about operating design issues. [8+7]
- 8.a) Explain the components of load distributed algorithm.  
b) Discuss the requirements for load distributing. [8+7]

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