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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester, B.E. - Information Science and Engineering

Semester End Examination; June - 2017

Distributed Operating System

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

- 1 a. Define distributed computing systems. Explain the issues in designing a distributed operating system. 10
- b. Explain synchronization and process addressing with respect to message passing. 10
- 2 a. List and explain the issues of good message passing in IPC. 10
- b. List and explain the main components of distributed computing environment. 10

UNIT - II

- 3 a. What is transparency in RPC? Explain in brief. 8
- b. Describe the general architecture of DSM. 8
- c. Explain exception handling with respect to RPC. 4
- 4 a. List and explain design and implementation issues of DSM. 10
- b. Explain call semantics with respect to RPC. 6
- c. Describe the advantages of RPC. 4

UNIT - III

- 5 a. What is election algorithm? Explain in detail any one election algorithm. 10
- b. Explain in detail consistency models with respect to DSM. 10
- 6 a. Explain in brief deadlock with respect to DSM. 8
- b. Explain in brief replacement strategy with respect to DSM. 8
- c. What is event ordering in synchronization? 4

UNIT - IV

- 7 a. What is process migration? List and explain the steps in process migration. 10
- b. Explain in detail any one task assignment approach. 10
- 8 a. List and explain the desirable features of a good global scheduling algorithm. 10
- b. Explain in brief, load sharing and load balancing approaches. 10

UNIT - V

- 9 a. Describe file caching schemes in DFS. 10
- b. List and explain the desirable features of a good DFS. 10
- 10 a. Explain in detail, threads with respect to process management. 10
- b. Explain file models. 5
- c. Describe file sharing semantics in brief. 5