

8E5003

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**B.Tech. (Sem.VIII) (Main/Back) Examination - 2013**  
**Computer Science**  
**8CS3 Distributed Systems**

Time : 3 Hours

[Total Marks : 80  
[Min. Passing Marks : 24

**Instructions to Candidates :**

Attempt any five questions selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

**UNIT - I**

1. (a) What is Distributed system ? What are the basic features of Distributed system. 8  
(b) Explain Distributed Computing and its Paradigms. 8

**OR**

1. (a) Explain DCE architecture model and its components in detail. 8  
(b) Explain Chandy - Lamport algorithm for consistent state recording. 8

**UNIT - II**

2. (a) What are the basic difference between vector and matrix logical clock? 8  
(b) Explain Two level concurrency of Process and Threads. 8

**OR**

2. (a) Explain Client Server Communication model on RPC and message passing? 8  
(b) Write Chang and Roberts ring election algorithm for Leader election. 8

**UNIT - III**

3. (a) Give the model of static process scheduling. 8  
(b) Explain Rate Monotonic for Real time scheduling 8

**OR**

3. (a) What are the basic applications of Distributed Process Implementation? 8  
(b) Give the brief description of DFS Design and Implementation. 8

**UNIT - IV**

4. (a) Explain Write-invalidate in Cache Coherence protocols. 8  
(b) How does AFS works in Coda file Systems? 8

**OR**

4. (a) What is Distributed Shared Memory? Explain any memory management algorithm in detail. 8  
(b) Explain Lamport timestamps. 8

**UNIT - V**

5. (a) Explain Fault, Errors and Failure in Distributed System in brief. 8  
(b) What is Replication? Explain in detail. 8

**OR**

5. Write short notes on : (any two)  
(a) CORBA Service  
(b) Byzantine Faults  
(c) Update Propagation

8×2=16