

8E8163

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B.Tech. VIII Semester (Main/Back) Examination, April/May-2017  
Computer Science & Engineering  
8CS3A Distributed Systems

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 26

**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 suitable be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

**Unit-I**

1. a) State and explain the challenges of distributed system. (10)  
b) Explain Architecture models. (6)

**OR**

1. a) Define the term distributed system and explain with two examples. (6)  
b) What is theoretical issues in distributed system? (6)  
c) Explain Distributed Computing Environment (DCE). (4)

**Unit-II**

2. Discuss the design and implementation issues in Remote Method Invocation. (16)

**OR**

2. a) Discuss the detail about communication and invocations (8)  
b) Where do you need RPC? Explain with suitable example. (8)

**Unit-III**

3. a) Classify the type of transparency that a distributed file system should support? (8)  
b) What is distributed process implementation and also explain static process scheduling with communication. (8)

**OR**

3. Write short note on (any two) : (2×8=16)
- a) General parallel file system and window's file system
  - b) Andrew and coda file systems
  - c) Sun network file system

**Unit-IV**

4. a) Explain how mutual exclusion is handled in distributed system? (8)
- b) What is the implementation of DSM system? (8)

**OR**

4. a) Describe mechanism for deadlock detection in distributed system. (6)
- b) What is Dynamic distributed manager algorithm and also explain Thrashing? (10)

**Unit-V**

5. a) Define Byzantine agreement problem with its solution. What do you mean by agreement protocol? (8)
- b) Discriminate passive replication and active replication. (8)

**OR**

5. Write short notes on (any two) : (2×8=16)
- a) Atomic Multicast
  - b) CORBA RMI
  - c) Failure and Recovery in DS
  - d) Byzantine faults

