8E5003

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B. Tech. VIII Semester (Main) Examination-2014
Computer
8CS3 Distributed Systems

Time : 3 Hours

Maximum 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 are the design issues in Cooperative Autonomous systems? Discuss.(8)
   b) How will you ensure the consistency of a cut in state recording of the various process? Explain. (8)

OR

1. a) What are the design issues in Distributed operating system? Discuss. (8)
   b) What is the significance of marker in Chandy - Lamport algorithm? Explain.(8)

Unit - II

2. a) What do you understand by 'language mechanisms for Synchronisation'? Explain. (8)
   b) Where do you need RPC? Explain with a suitable example. (8)

OR

2. a) What do you understand by 'Transaction communication'? Explain. (8)
   b) Is there any difference between RPC and RMI? Explain. (8)

Unit - III

3. a) Why do you need dynamic load sharing and balancing? Explain. (8)

   b) Describe Andrew file system. (8)

3. a) What are the issues in Concurrency control in a distributed file system? Explain. (8)

   b) Describe code file system. (8)

Unit - IV

4. a) What do you understand by Non - Uniform memory Access architecture? Explain. (8)

   b) How will you model a distributed computation? Explain. (8)

OR

4. a) What is a memory consistency model? Explain a particular model. (8)

   b) What are the different types of failures in distributed systems? Explain. (8)

Unit - V

5. a) What is the need of Update propagation in replica data management? Explain. (8)

   b) What do you understand by Byzantine agreement? Explain. (8)

OR

5. Write short notes on (any two) : (2×8)

   a) CORBA RMI

   b) Atomic Multicast

   c) Randomized distributed agreement.