

8E5003

Roll No. _____

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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)

OR

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.