

Code: 17CSCS1T2

I M.Tech-I Semester-Regular Examinations-February 2018

**DISTRIBUTED COMPUTING
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max Marks: 60

Answer the following questions.

1. a) What are motivations for distributed system? Explain interconnection topologies for multiprocessors. 8 M
b) Discuss classification of primitives. 7 M
(OR)
2. a) Discuss Synchronous vs. Asynchronous Executions. 7 M
b) Explain any three design issues and challenges. 8 M
3. a) What is distributed program? Explain Logical vs. Physical Concurrency. 8 M
b) Discuss global state of a distributed system. 7 M
(OR)
4. a) Explain 'm' different models of process communications. 7 M
b) Explain a model of distributed executions. 8 M

5. a) Draw and explain hierarchy of message ordering paradigms. 7 M
- b) Explain Asynchronous execution with synchronous communication. 8 M
- (OR)
6. a) What is group communication? Explain with neat diagrams. 7 M
- b) Explain Raynal-Schiper-Toueg Algorithm to implement casual ordering of messages. 8 M
7. a) What are consistency models? Explain Synchronization-based Consistency Models. 8 M
- b) Explain Shared Memory Mutual Exclusion using Bakery Algorithm. 7 M
- (OR)
8. a) What are Distributed Shared Memory Abstractions? Explain Advantages and Disadvantages of DSM. 8 M
- b) Discuss Lamport's WRWR mechanism and fast mutual exclusion. 7 M