

B.Tech Degree VIII Semester Examination May 2003

CS 804 DISTRIBUTED COMPUTING (1999 Admissions)

Time: 3 Hours

Maximum Marks: 100

- I. (a) Define Distributed computing. Discuss the key characteristics of distributed systems. (10)
 (b) What are the different user requirements to be considered in the design of distributed systems? (10)
- OR
- II. (a) Explain group communication. (10)
 (b) Explain the failure model. (10)
- III. (a) Explain how virtual memory is implemented in distributed systems. (5)
 (b) Discuss LRPC. (5)
 (c) Name spaces. (10)
- OR
- IV. Explain :
 (a) Thread synchronization. (10)
 (b) Invocation over the network. (10)
- V. (a) Discuss distributed mutual exclusion. (10)
 (b) How distributed mutual exclusion algorithms differ from that of centralized ones ? (10)
- OR
- VI. Explain :
 (a) Cristian's method for synchronizing clocks. (10)
 (b) Logical clocks. (10)
- VII. (a) What is time stamp ordering rule ? Discuss. Write and read rules for time stamping. (10)
 (b) Discuss ACID properties of transactions. (10)
- OR
- VIII. (a) Explain Distributed transaction. (10)
 (b) Write notes on :
 (i) Phantom deadlock
 (ii) Edge chasing method. (10)
- IX. Define Fault Tolerance. Describe various approaches to masking faults. (20)
- OR
- X. Write notes on :
 (i) Cryptography.
 (ii) Digital signatures. (20)

