

Distributed Computing

2006 November

Technology BCA

Semester 5

University Exam

Mangalore University

shaalaa.com

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Fifth Semester BCA Degree Examination
October / November 2006

DISTRIBUTED COMPUTING (NEW SCHEME)

9.

Max. Marks: 60

Time : 3 Hours

Note : Answer all questions from PART-A and any FIVE full questions from PART-B..

PART-A

1x10=10

1. a) What is Distributed Scheduling?
- b) What is Distributed databases?
- c) Define a Global Schema.
- d) Name any two locking schema to implement Concurrency control in a Distributed System.
- e) Define the term Synchronization delay.
- f) State True or False.
Distributed systems share common memory
- g) What is meant by Deadlock?
- h) List the two types of messages used by processors in reaching an agreement.
- i) Malicious faults are also referred to as
- j) State TRUE or FALSE
Commit protocol implement well defined behaviour in the event of failure.

PART-B

2. a) Explain briefly the following issues in distributed operating system.
i) Security ii) Global knowledge iii) Resource Management
- b) Explain the three categories of distributed system. (6+4)
3. a) What are the advantages of the distributed database over centralize database.
- b) Explain Majority site locking scheme for concurrency control in DDBMS. (6+4)
4. a) What are the requirements of mutual exclusion algorithm?
- b) What are the two classes of mutual exclusion algorithm? Make a comparison between them.
- c) How does single computer system and distributed system look at of mutual exclusion. (4+4+2)

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5. a) With respect to Lamport's logical clock, explain the following.
i) Happened before relation ii) Casually related events
iii) Concurrent events iv) Casual effect
b) Explain the limitations of the Lamport's logical clock. (6+4)
6. a) Explain the issues in deadlock detection and resolution in distributed System.
b) Explain the Ho-Rammoorth's two-phase algorithm for centralized deadlock detection. (5+5)
7. a) What are the different ways in the design fault tolerant in distributed system?
b) Explain the Static Voting protocol scheme. (4+6)
8. a) Explain the system model of agreement among sites in distributed system.
b) State the solution to Byzantine agreement problem?
c) What are agreement problem? (4+4+2)
9. a) Explain the life cycle of a servlet with a neat diagram.
b) What are the steps involved to complete a request and response in web application. (6+4)

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