CS - 702

B.E. VII Semester

Examination, December 2012

Distributed System

Time : Three Hours

Maximum Marks : 100   **Minimum Pass Marks :35**

Note: Attempt *One* question from each unit
All questions carry equal marks.

UNIT I

1. (a) Differentiate among the following types of operating system by defining their essential properties.   10

    i) Time sharing
    ii) Parallel Processing
    iii) Distributed

    (b) What are the main difference between a network operating system and a distributed operating system.   10

OR

2. (a) Write the difference between loosely coupled and tightly coupled systems.   10

    (b) What is groupware ? Why is it considered to be a promising technology for software development.   10

UNIT II

3. (a) Explain desirable features of good naming system.   10

    (b) What are the main similarites and difference between the RPC model and the ordinary procedure call model.   10

OR

4. (a) Explain various consistency models in detail.   10

    (b) What is false sharing ? When it is likely to occur? Can this problem lead to any other problem in a DSM system? Give reasons for your answer.   10

UNIT III

5. (a) What are the three main approaches for designing a DSM system.   10

    (b) Describe the Ring Election algorithm with example. Discuss the complexity of Bully and Ring election algorithm in terms of message.   10

OR

6. Explain the following algorithm of clock synchronization.
    i) Berkeley Algorithm
    ii) Averaging Algorithm   20

UNIT IV

7. (a) What is processor thrashing? Give examples of two global scheduling algorithms that may lead to processor thrashing.   10

(b) Differentiate between internal synchronization and external synchronization of clocks in distributed system.

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OR

8. Explain the concept of logical clocks and their importance in distributed systems. A clock of a computer system must never run backward. Explain how this issue can be handled in an implementing of logical clocks concept.

20

UNIT V

9. (a) Explain distributed database. Write the advantages and disadvantages of distributed database.

10

(b) What is multimedia database. Explain in detail.

10

OR

10. Write short note on (any two)

20

i) V-system

ii) Distributed shared memory

iii) Bully algorithm

iv) Load distributing algorithms.