

Total No. of Questions : 8]

SEAT No. :

P4133

[Total No. of Pages : 2

[4860]-339

M.E. (Computer Engg.) (Semester - II)

DISTRIBUTED SYSTEM

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answers to the two sections should be written in separate answer books.*
- 2) Answer any three questions from each section.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Figures to the right side indicate full marks.*

SECTION - I

- Q1)** a) What is a distributed system? Give some examples of distributed systems. Explain the advantages and disadvantages of distributed systems. [8]
b) Enlist and explain the characteristics and challenges of distributed systems. [8]
- Q2)** a) How do clock synchronization issues differ in centralized and distributed computing systems? [8]
b) Explain the remote method invocation mechanism for communication in distributed systems. [8]
- Q3)** a) Explain the Bully election algorithm in detail. [8]
b) What is deadlock in distributed system? Explain the ostrich algorithm to handle the deadlock. [8]
- Q4)** Write notes on (Any three) : [18]
a) Distributed transactions
b) Java RMI
c) Client-Server Model
d) Mutual Exclusion

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SECTION - II

- Q5)** a) Explain in brief sequential and release consistency models. Give the relative advantages and disadvantages of these models. [8]
b) Explain the working of object-based distributed shared memory. [8]
- Q6)** a) Discuss the relative advantages and disadvantages of using full-file caching and block caching models for the data-caching mechanism of a distributed file system. [8]
b) What are the desirable features of a good naming system? [8]
- Q7)** a) What is a key distribution problem? Explain the centralized approach for key distribution in symmetric cryptosystems. [8]
b) Explain the User login authentication mechanism in detail to provide security in distributed system. [8]
- Q8)** Write detailed notes on ANY THREE : [18]
a) Cryptography
b) XML Security
c) DCE Security service
d) Sun NFS

