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Name:

Reg. No:

**SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION JUNE 2009**

CS/IT 2K 606 B—DISTRIBUTED SYSTEMS



Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

- I. (a) Describe the features of work station model.
(b) Compare NOS and DOS.
(c) What is a thread ? Compare threads and multiple processes.
(d) What is the need for time service in distributed system ? Explain the features of DTS.
(e) What are the advantages and disadvantages of Request/Reply communication model ?
(f) What is a Transaction ? What are its properties ? Explain its usage in synchronization.
(g) What are the differences between replication and caching ?
(h) Draw the flowchart of sender initiated load balancing algorithm.

(8 × 5 = 40 marks)

Part B

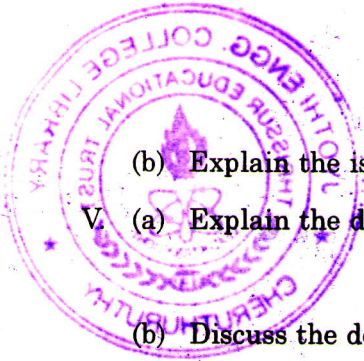
- II. (a) Describe the characteristics of the operating systems used in distributed computing systems.
Or
(b) What is DCE ? What are its goals ? Explain the features of DCE components.
- III. (a) Discuss the design issues of client server model.
Or
(b) Explain the various high-level synchronization mechanisms using examples.
- IV. (a) (i) What is the need for buffering in message passing system ? Explain the various types of buffering strategies.
(ii) Compare the performance of Bully and Ring based election algorithms.

(8 marks)

(7 marks)

Or

Turn over



(b) Explain the issues related to various types of group communication.

V. (a) Explain the design issues of File-caching.

Or

(b) Discuss the design issues of distributed computer security.

(4 × 15 = 60 marks)