

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEM-VIII Examination May 2012

Subject code: 180701

Subject Name: Distributed Systems

Date: 10/05/2012

Time: 10.30 am – 01.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (A) How does a distributed operating system differ from a network operating system? (7)

(B) Explain synchronization with respect to distributed systems (7)

Q.2 (A) Explain group communication mechanism. (7)

(B) What is ordered message delivery? Compare the various ordering semantics for message-passing. Explain how each of these semantics is implemented. (7)

OR

(B) How does VMTP protocol handle lost messages, flow control, group communication and maintain transparency. (7)

Q.3 (A) What is the significance of client-server binding? How are various issues handled in changing client-server binding? (7)

(B) Discuss and compare various election algorithms. (7)

OR

Q.3 (A) Compare RPC and RMI with respect to implementation. (7)

(B) Explain how logical clocks are implemented in a distributed system. (7)

Q.4 (A) Write and explain the algorithm of constructing a DFS spanning tree with a specified root. (7)

(B) Discuss load estimation policy and Process transfer policy in load balancing algorithms. (7)

OR

Q.4 (A) What are various issues in designing Load-Sharing algorithms? (7)

(B) How does process migration takes place in heterogeneous systems? (7)

Q.5 (A) What are various types of Hardware DSM. Explain them. (7)

(B) What are desirable features of a good naming system. (7)

OR

Q.5 (A) Discuss various issues in implementing DSM systems. (7)

(B) Describe the method of object locating mechanism. (7)

