Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER–VIII • Remedial EXAMINATION – WINTER 2013

Subject Code: 180701   **Date: 18/09/2013**

Subject Name: Distributed Systems

Time: 03:00 pm – 05:30 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   **14**
    (1) Differentiate monolithic kernel model and micro kernel model   (4)
    (2) Explain virtual uniprocessor.   (2)
    (3) Compare processor pool model and workstation server model   (4)
    (4) What is non idempotent routine? How such routine creates problem with message passing? Also explain its solution with example.   (4)

Q.2 **(a)** Why traditional network protocols are not suitable for distributed systems? **07**
Explain VMTP protocol used for distributed system.
    (b) Differentiate LAN and WAN. Also compare Bridge, Router and gateway.   **07**
OR
    (b) What is failure in IPC? How can we handle them?   **07**

Q.3 **(a)** List various issues in message passing system. Explain any one.   **07**
    (b) List various consistency models used in DSM? Explain any one.   **07**
OR
Q.3 **(a)** Draw and explain RPC architecture.   **07**
    (b) Define thrashing in DSM. Also explain methods for solving thrashing   **07**
problem in DSM.

Q.4 **(a)** How computer clocks are implemented? Also explain drifting of clock.   **07**
    (b) What are the various issues while designing load balancing algorithm?   **07**
Explain any one in detail.
OR
Q.4 **(a)** What is process migration? List the steps for it. What is the advantage of   **07**
process migration?
    (b) With the help of diagram explain distributed algorithm for mutual   **07**
exclusion.

Q.5   Write a note on following (any 4)   **14**

    (1) Name Space
    (2) Name resolution
    (3) Name Server
    (4) Context binding
    (5) Broadcast and converge cast on spanning tree.

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