

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014

Subject Code: 180701

Date: 04-12-2014

Subject Name: Distributed System

Time: 02:30 pm - 05:00 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) Why network system protocols are unsuitable for Distributed Systems? Explain any one communication protocol for Distributed System. **07**

(b)

(i) What is the major difference between stateless server and stateful server? Which server is easy to implement? **03**

(ii) Explain the major differences between Network OS and Distributed OS. **04**

Q.2 (a) What are the desirable features of good Message Passing system? Explain each briefly. **07**

(b) In group communication, what are the various message ordering schemes? Explain CBCAST scheme. **07**

OR

(b) List and explain various consistency models in DSM. **07**

Q.3 (a) Explain RPC implementation. Also explain various methods of generating stubs. **07**

(b) Explain Berkley clock Synchronization algorithm with an example. **07**

OR

Q.3 (a) What is thrashing? What are various methods to solve thrashing? **07**

(b) Explain Java RMI. What are the components and processes of Java RMI execution? **07**

Q.4 (a) What is Load Balancing? Explain any one algorithm of load balancing. **07**

(b) What is process migration? List the steps in process migration. Explain any one in detail. **07**

OR

Q.4 (a) What is deadlock? Discuss the necessary and sufficient conditions for a deadlock to occur. **07**

(b) What are threads? What are the different ways of synchronizing threads? Also explain various thread models. **07**

Q.5 (a) What is false sharing? How can it be reduced or eliminated? **07**

(b) Write short note on “ Object Locating Mechanisms” **07**

OR

Q.5 (a) What is Name Cache? What are its types? Explain any one approach to implement it. **07**

(b) Write Short note on : DNS **07**
