Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 1720201 **Date: 02-12-2014**

Subject Name: Distributed Operating Systems

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)**	Discuss briefly the various issues related to distributed system design.	**07**
	(b)	Discuss the difference between the work station server model and processor pool model in terms of availability.	**07**
Q.2	**(a)**	Discuss the architecture of OSI reference model.	**07**
	(b)	Discuss the issues in designing the DSM system.	**07**
		OR	
	(b)	What are various types of hardware DSM? Explain them.	**07**
Q.3	**(a)**	What is the significance of client-server binding? How various issues is handled in changing client-server binding?	**07**
	(b)	What is callback RPC? How does a server handle callback to the client?	**07**
		OR	
Q.3	**(a)**	What is the role of stub in RPC execution? How do stubs make RPC execution transparent?	**07**
	(b)	Discuss various parameter passing semantics.	**07**
Q.4	**(a)**	Explain how logical clocks are implemented in distributes system.	**07**
	(b)	Discuss load estimation policy and process transfer policy in load balancing algorithm.	**07**
		OR	
Q.4	**(a)**	What are phantom deadlocks? Can they always be detected? Explain.	**07**
	(b)	What are various in designing load sharing algorithms.	**07**
Q.5	**(a)**	Explain distributed file system design.	**07**
	(b)	Explain system architecture of amoeba.	**07**
		OR	
Q.5	**(a)**	Explain memory management in chorus.	**07**
	(b)	Explain replication in distributed file system.	**07**

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