Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– I (New course)• REMEDIAL EXAMINATION – SUMMER 2015

Subject Code: 2710213 **Date:15/05/2015**

Subject Name: Distributed Operating System

Time: 10:30 am to 1:00 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)**	List out the issues related to designing of distributed operating system and explain fault detection and recovery in detail.	**07**
	(b)	Draw and explain ATM protocol reference model.	**07**
Q.2	**(a)**	Explain Consistent ordering and Casual ordering in detail in message passing.	**07**
	(b)	What are the differences between remote procedure call and local procedure call ? Explain light weight RPC in detail.	**07**
		OR	
	(b)	What are the main advantages of an RPC system that allows the binding between a client and a server to change dynamically? What are the main issues involved in providing the flexibility.	**07**
Q.3	**(a)**	What is thrashing? Which methods are used to solve the thrashing problems in DSM?	**07**
	(b)	Explain data locating techniques in NRMB strategy with block table.	**07**
		OR	
Q.3	**(a)**	Explain mutual exclusion in centralized approach and decentralized approach.	**07**
	(b)	Explain the Bully algorithm with example.	**07**
Q.4	**(a)**	Explain the following deadlock prevention techniques: (1) Collective requests (2) Ordered requests	**07**
	(b)	Discuss the issues in designing load sharing algorithms.	**07**
		OR	
Q.4	**(a)**	What is process migration? Explain process migration in heterogeneous systems.	**07**
	(b)	Discuss the relative advantages of and disadvantages of using full-file Caching and block caching mechanism of a distributed file systems.	**07**
Q.5	**(a)**	Draw and explain System architecture of Amoeba system.	**07**
	(b)	Explain WFG-Based distributed algorithm for deadlock detection.	**07**
		OR	
Q.5	**(a)**	Compare the features of Amoeba, Mach and Chorus System.	**07**
	(b)	What is File caching? Differentiate caching and replication. Give advantages of replication in distribute file systems.	**07**

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