Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME SEMESTER – I EXAMINATION – SUMMER 2017

Subject Code: 2710213 **Date:11/05/2017**

Subject Name: Distributed Operating System

Time:02:30 p.m. to 05:00 p.m. **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)**	Explain types of transparency in DOS.	**07**
	(b)	Explain RPC compilation and execution Process.	**07**
Q.2	**(a)**	What are the issues that are needed to be considered while designing IPC protocol? Justify your answer with reference to IPC Message Format.	**07**
	(b)	Explain IPC Synchronization.	**07**
		OR	
	(b)	Message passing V/S Distributed Shared Memory.	**07**
Q.3	**(a)**	Compare Processor Consistency Model and PRAM Consistency Model for Distributed Shared memory.	**07**
	(b)	A server is to be shared by multiple clients. Describe a scheme for designing the remote procedures offered by server so that interleaved or concurrent requests from the different clients do not interfere with each other.	**07**
		OR	
Q.3	**(a)**	What is the role of "binding agent" in client server binding? Explain types of binding.	**07**
	(b)	What is granularity in Distributed Shared Memory? Enlist and explain DSM Structure.	**07**
Q.4	**(a)**	Explain 4-message IPC Protocol. How to handle faults in 2 – message IPC protocol?	**07**
	(b)	Compare casual and weak consistency model for Distributed Shared Memory.	**07**
		OR	
Q.4	**(a)**	What will happen in a bully algorithm for electing a coordinator when two or more process almost simultaneously discover that the coordinator has crashed? Suggest some suitable mechanism.	**07**
	(b)	Explain Clock Synchronization Algorithm.	**07**
Q.5	**(a)**	How reporting of best node to source node is carried out in election algorithm for wireless Network?	**07**
	(b)	Explain SNTP with suitable example.	**07**
		OR	
Q.5	**(a)**	What is Active Time Server? How is it implemented in Berkeley UNIX System?	**07**
	(b)	Explain Process Migration Mechanism.	**07**

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