Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER –I-(New) EXAMINATION – SUMMER 2019

Subject Code: 3710213 **Date: 13/05/2019**

Subject Name: Distributed Systems

Time: 02:30 PM TO 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)**	What is a distributed System? What are the advantages of it?	**07**
	(b)	What are threads? Differentiate between threads and processes.	**07**
Q.2	**(a)**	What is ordered message delivery? Discus different types of message ordering.	**07**
	(b)	Why mutual exclusion is more complex in distributed systems? Categorize and compare mutual exclusion algorithms.	**07**
		OR	
	(b)	What is an IPC? Explain IPC message format. Also list out issues to be consider for the design of IPC protocol based message passing system.	**07**
Q.3	**(a)**	Explain construction a DFS spanning tree for a specified root.	**07**
	(b)	What is the function of ORB? Explain inter- ORB Protocol in detail.	**07**
		OR	
Q.3	**(a)**	Explain RPC implementation. Also explain various methods of generating stubs.	**07**
	(b)	Explain Berkley clock Synchronization algorithm with an example.	**07**
Q.4	**(a)**	What is process migration? Explain address transport mechanism with freezing technique	**07**
	(b)	Explain the issues in designing load sharing algorithms	**07**
		OR	
Q.4	**(a)**	Explain the technique to avoid the faults in distributed systems	**07**
	(b)	Write the advantages of distributed shared memory. Define HDSM and explain Ring based multi-processor	**07**
Q.5	**(a)**	Explain Simple object access protocol in brief.	**07**
	(b)	Explain the DSM system architecture. How does granularity affect DSM system performance?	**07**
		OR	
Q.5	**(a)**	Explain various file sharing semantics.	**07**
	(b)	Define Thrashing in DSM. Explain methods for solving thrashing in DSM.	**07**

****