Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE -SEMESTER– VIII OLD • EXAMINATION – SUMMER 2020

Subject Code: 180701 **Date:26.10.2020**

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)**	Discuss the design issues of distributed system.	**07**
	(b)	Explain VMTP protocol.	**07**
Q.2	**(a)**	Compare and contrast the IPC synchronization techniques in distributed systems.	**07**
	(b)	Explain how RPC works using a program of calling `int add(int no1, int no2)` method.	**07**
		OR	
	(b)	Explain RMI architecture and a sample program to call `int add(int no1, int no2)` method.	**07**
Q.3	**(a)**	Explain construction a DFS spanning tree for a specified root.	**07**
	(b)	Which is the best election algorithm, in distributed systems? Explain how.	**07**
		OR	
Q.3	**(a)**	Explain Lamport's logical clock using example.	**07**
	(b)	Explain with example the significance of exactly-once semantics to handle duplicate request messages.	**07**
Q.4	**(a)**	Explain distributed algorithm for mutual exclusion using diagram(s).	**07**
	(b)	Compare and contrast process migration techniques.	**07**
		OR	
Q.4	**(a)**	Explain MRMW protocol.	**07**
	(b)	What is consistency? Discuss the various consistency models used in DSM system.	**07**
Q.5	**(a)**	What are the differences between sender-initiated and receiver-initiated load sharing algorithms?	**07**
	(b)	Write the advantages of distributed shared memory. Define HDSM and explain Ring based multi processor.	**07**
		OR	
Q.5	**(a)**	Explain object naming algorithms in distributed systems.	**07**
	(b)	What is Thrashing? Explain all algorithms use for data location and DSM consistency management.	**07**

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