Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII (NEW) EXAMINATION – SUMMER 2022

Subject Code:3170719 Date:10/06/2022

Subject Name:Distributed System

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.**
4. **Simple and non-programmable scientific calculators are allowed.**

			MARKS
Q.1	**(a)**	Explain how simple client-server communication is done.	**03**
	(b)	Explain advantages and disadvantages of distributed systems.	**04**
	(c)	Explain distribution of transparency in distributed system.	**07**
Q.2	**(a)**	Briefly explain scalability in distributed system.	**03**
	(b)	Discuss flat and structured naming with example.	**04**
	(c)	Explain connection-oriented message communication with the help of diagram.	**07**
		OR	
	(c)	Define virtualization. Explain architecture of virtual machine.	**07**
Q.3	**(a)**	Discuss cryptography in brief.	**03**
	(b)	Give some examples of true identifiers.	**04**
	(c)	Explain two phase commit protocol.	**07**
		OR	
Q.3	**(a)**	List down requirements for distributed file system.	**03**
	(b)	Explain berkley clock synchronization algorithm.	**04**
	(c)	Explain iterative name resolution technique in detail.	**07**
Q.4	**(a)**	Explain the term availability and reliability.	**03**
	(b)	Write a short note on digital signature.	**04**
	(c)	Explain bully election algorithms. And compare it with ring election algorithm	**07**
		OR	
Q.4	**(a)**	Define failure? List down various reasons for the occurrence of failure.	**03**
	(b)	Discuss persistent and non-persistent HTTP connection.	**04**
	(c)	Explain vector clock timestamp using suitable example.	**07**
Q.5	**(a)**	Define happened before relation.	**03**
	(b)	Explain causal consistency.	**04**
	(c)	Describe kerberos authentication with neat diagram.	**07**
		OR	
Q.5	**(a)**	Define names, identifiers and addresses.	**03**
	(b)	Discuss different alternatives of client-server organization.	**04**
	(c)	Write a short note on: Distributed object-based system.	**07**

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