

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code:3170719****Date:29/12/2021****Subject Name:Distributed System****Time:10:30 AM TO 01:00 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) What is a distributed system? How a distributed system does projects a single system image?	03
	(b) Briefly discuss the issues related to distributed system design.	04
	(c) What is main motivation of distributed system? Explain advantages and disadvantages of distributed systems.	07
Q.2	(a) List out the various characteristics of distributed system.	03
	(b) What is the need for code migration? Explain the code migration issues in detail?	04
	(c) Discuss and compare various election algorithms.	07
	OR	
Q.3	(c) List out the types of System Architectures in distributed system and explain it.	07
	(a) Compare: Network Operating System and Distributed Operating System.	03
	(b) What is distributed commit and recovery in distributed systems?	04
	(c) Compare and contrast any 3 consistency models.	07
	OR	
Q.3	(a) What is flat naming and structured naming?	03
	(b) Enumerate various issues in clock synchronization.	04
	(c) Why mutual exclusion is more complex in distributed systems? Categorize and compare mutual exclusion algorithms.	07
Q.4	(a) Define IPC. What are the characteristics of IPC?	03
	(b) List the differences between RMI and RPC.	04
	(c) What is a logical clock? Explain how logical clocks are implemented in distributed system.	07
	OR	
Q.4	(a) What is cryptography? What is the use of cryptography?	03
	(b) What is Replication? Write about motivations for replication.	04
	(c) What is RPC? Discuss the design issues for RPC.	07
Q.5	(a) What is multicasting? List the characteristics of multicasting.	03
	(b) What is CORBA's common Data Representation? Explain.	04
	(c) Explain the common approaches to user authentication. What problems are associated with these approaches?	07
	OR	
Q.5	(a) Difference between Authorization and Authentication.	03
	(b) What is DFS? Also write the features of DFS.	04
	(c) Explain the DNS name service and bind implementation of DNS.	07
