

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2023

Subject Code:3170719**Date:19-12-2023****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) Define distributed system. List advantages and disadvantages of distributed system.	03
(b) Explain various designing issues in distributed system.	04
(c) Explain different types of distributed system.	07
Q.2 (a) Discuss desirable features of a good naming system.	03
(b) Discuss flat name space and hierarchical names with example.	04
(c) Briefly explain different architectural styles of distributed system.	07
OR	
(c) What is flat naming? Explain broadcasting, multicasting, and forward pointer techniques to resolve flat naming.	07
Q.3 (a) The TCP/IP connection between client and server is stateful. State True or False. Justify your answer.	03
(b) Discuss different types of security threats in distributed system.	04
(c) Explain how lamport's logical clock is implemented in distributed systems.	07
OR	
Q.3 (a) Explain architecture of traditional web-based system.	03
(b) Discuss different alternatives of client-server organization.	04
(c) Discuss various mutual exclusion algorithms in detail.	07
Q.4 (a) Differentiate Authorization and Authentication.	03
(b) Explain Bully Election algorithm in brief.	04
(c) Define failure? Explain different failure models in distributed system.	07
OR	
Q.4 (a) Define Privacy, Authenticity, Integrity	03
(b) Discuss persistent and non-persistent HTTP connection.	04
(c) Write short note on data – centric consistency models.	07
Q.5 (a) Enumerate various issues in clock synchronization.	03
(b) Explain Backward and Forward recovery strategies.	04
(c) Write a short note on Distributed Object-based System.	07
OR	
Q.5 (a) Enlist various reasons for replication.	03
(b) Explain byzantine agreement problem.	04
(c) Explain diffe - hellman key exchange algorithm with a suitable example.	07
