

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (OLD) EXAMINATION – WINTER 2023****Subject Code:2170714****Date:19-12-2023****Subject Name: Distributed DBMS****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 database with its type.	03
	(b) Explain parallel and Distributed Database Management System.	04
	(c) Explain client server architecture and peer to peer architecture for Distributed DBMS.	07
Q.2	(a) Explain advantages of Data replication.	03
	(b) Explain layers of Transparency in DDBMS.	04
	(c) Explain Normalization in database with proper example.	07
	OR	
	(c) Explain different types of Fragmentation in detail.	07
Q.3	(a) Explain Data independence.	03
	(b) Explain database Authentication and OS Authentication.	04
	(c) Explain Semantic Integrity Control.	07
	OR	
Q.3	(a) Explain search strategy in Query Optimization.	03
	(b) Explain Layers of Query Processing.	04
	(c) Explain Distributed Query Processing Architecture.	07
Q.4	(a) Explain ACID property in Transaction.	03
	(b) Explain different transaction state.	04
	(c) Explain Distributed Two-Phase Locking Algorithm.	07
	OR	
Q.4	(a) What is Transaction Log in database?	03
	(b) Define Lock Granting.	04
	(c) Explain Two-Phase commit protocol.	07
Q.5	(a) Explain different types of failure in DDBMS.	03
	(b) Explain Fuzzy Checkpoint in detail.	04
	(c) Explain Write-Ahead Logging protocol.	07
	OR	
Q.5	(a) Explain different challenges in Distributed DBMS.	03
	(b) Explain shadow paging.	04
	(c) Explain Deadlock Avoidance techniques.	07
