

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER- VII (New) EXAMINATION – WINTER 2019****Subject Code: 2170714****Date: 05/12/2019****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.

MARKS

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|------------|---|-----------|
| Q.1 | (a) Explain Complicating factors in distributed Database. | 03 |
| | (b) Define Normalization. How anomalies can be eliminated with Normalization? | 04 |
| | (c) Explain Client/Server Database architecture. | 07 |
| Q.2 | (a) Explain Horizontal Fragmentation. | 03 |
| | (b) Explain pull-only, push-only and hybrid Data Delivery Modes. | 04 |
| | (c) Explain Top Down Design Process for Distributed Database. | 07 |
| | OR | |
| | (c) Define Distributed Database System. What is transparency in DDBMS? Explain Layers of transparency in DDBMS. | 07 |
| Q.3 | (a) Explain Characterization of Query Processors. | 03 |
| | (b) Explain Discretionary Access Control. | 04 |
| | (c) Explain View management. How it is carried out in centralized and distributed DBMS? | 07 |
| | OR | |
| Q.3 | (a) Explain Cost Function of Query Optimization. | 03 |
| | (b) Explain layers of Query processing. | 04 |
| | (c) What is authorization control? How to imply authorization control in centralized and distributed environment. | 07 |
| Q.4 | (a) Explain ACID Property of Transaction. | 03 |
| | (b) Explain Type of Transactions. | 04 |
| | (c) Explain Centralized 2PL for distributed DBMS environment. | 07 |
| | OR | |
| Q.4 | (a) Explain Multiple Granularities. | 03 |
| | (b) Explain classification of concurrency control algorithm in distributed database. | 04 |
| | (c) Explain optimistic concurrency control algorithms. | 07 |
| Q.5 | (a) Explain Transaction Failures in Distributed DBMS. | 03 |
| | (b) Define Reliability and Availability. | 04 |
| | (c) Explain Deadlock Avoidance Techniques. | 07 |
| | OR | |
| Q.5 | (a) Explain Fuzzy Check Points. | 03 |
| | (b) Explain terms: Cascading Abort, Dirty Read, Fuzzy Read, and Conflict Equivalence. | 04 |
| | (c) Write a Short note on: Shadow Paging. | 07 |

