

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2018 – 19 Examination

Semester: 1
Subject Code: 203202134
Subject Name: Distributed Systems

Date: 13/12/2018
Time: 10:30 am to 1:00 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 A) Explain following in context of Relational algebra : **(05)**

1. Selection

2. Θ – Join

B) Explain the following terms: **(05)**

(i) Fragmentation transparency

(ii) Replication transparency

C) Explain Types of Transactions. **(05)**

Q.2 Answer the following questions. (Attempt any three) (Each five mark) **(15)**

A) Briefly explain (A0, D0, H0) and (A1, D1, H1) with respect to architectural alternatives of distributed DBMSs.

B) Write short note on: Two Phase Commit Protocol for Distributed Transactions

C) Explain Wait-Die and Wound-Wait rules for deadlock avoidance in distributed system.

D) What is view? How to create view in Distrusted DBMS system?

Q.3 A) Explain layers of Query processing. **(07)**

B) Describe BEA algorithm used in vertical fragmentation. **(08)**

OR

B) Explain types of Parallel Database Architecture. **(08)**

Q.4 A) Describe Different Distribution Design Issues. **(07)**

OR

A) Write short note on: Reliability in Distributed DBMS. **(07)**

B) Draw and explain CORBA architecture. **(08)**