Seat No: _____   Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2021 - 22 Examination

Semester: 8   Date: 30/03/2022
Subject Code: 203105485   Time: 10:30 AM to 1:00 PM
Subject Name: Advance Database System   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 Objective Type Questions - (Fill in the blanks, one-word answer, MCQ-not more than Five in case of   (15)
MCQ) (All are compulsory) (Each of one mark)

1. Some of the columns of a relation are at different sites is which of the following?
  a) Data Replication   b) Horizontal Partitioning
  c) Vertical Partitioning   d) Horizontal and Vertical Partitioning

2. A RDBMS is a collection of
  a) Tables   b) Fields
  c) Records   d) Keys

3. Which of the following is a feature of DBMS?

  a) Minimum Duplication
  b) High Level of Security
  c) Single-user Access only
  d) Support ACID Property

4. Which one of the following is a procedural language?

  a) Domain relational calculus
  b) Inner join
  c) Natural join
  d) Relational algebra

5. Which of the following is not a type of database?

  a. Hierarchical   b. Network   c. Distributed   d. Decentralized

6. DBMS stands for _____.

7. The relation with the attribute which is the primary key is referenced in another relation. The relation which has the attribute as a primary key is called _____

8. An attribute in a relation is a foreign key if the _____ key from one relation is used as an attribute in that relation.

9. ORDBMS stands for_____

10. OODBMS stands for_____

11. Transaction servers which are widely used in _____ database systems

12. Throughput --- the number of tasks that can be completed in a given _____ interval

13. Shared nothing -- processors share neither a common _____ nor common _____

14. What "D" stands for in ACID properties of transaction?

15. Key word for Alternative key is_____

Q.2 Answer the following questions. (Attempt any three)   (15)
A) What is SQL? What are the SQL commands?

B) Explain Transactional workflow with an example.

C) What is the difference between File system and DBMS?

D) Explain Distributed Query processing.

Q.3 A) Explain Different Transaction Processing Monitor Architectures.   (07)

B) Difference between DBMS and IR Systems   (08)

OR
B) Explain Real Time Transaction System and Long Duration Transactions.   (08)

Q.4 A) Explain Data Model for XML, Storage of XML Data, Document Schema and Querying XML   (07)
Data.

OR
                                                                                            (07)
(A). Features of distributed databases vs centralized databases and explain Distributed DBMS
architecture.

B) Design a framework for query optimization.   (08)