BT-5/D-24   45169
DATABASE MANAGEMENT SYSTEMS
PC-CS-301A

Time : Three Hours]   [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. What do you mean by data abstraction ? Also explain physical data independence and logical data independence with the help of example and strcuture.   15

2. What do you mean by keys ? Explain Unique key, primary key, candidate key and foreign key. Also explain Mapping constraint in dbms.   15

Unit II

3. What is tuple relational calculus(TRC) and domain relational calculus(DRC) ? What are uses of TRC and DRC ? Explain the difference with the help of an example.

    15

4. What do you mean by aggregate function ? Also explain DDL, DML and DCL with the help of an example. 15

Unit III

5. What do you mean by functional dependency and also explain 3rd Normal form and BCNF form with the help of example table data ? 15

6. What is Query optimization ? Explain join algorithem, statistics and cost based optimization with the help of an example. 15

Unit IV

7. What are different types of failure in detail ? Also explain timestamp concurrency control and validation in detail with the help of example. 15

8. What is dead lock and explain ACID property of Data-base management systems ? Explain commit and lock in distributed data-bases. 15

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