

Roll No. ....

Total Pages : 03

BCA/M-18

1919

RELATIONAL DATABASE MANAGEMENT  
SYSTEM  
BCA-244

Time : Three Hours]

[Maximum Marks : 80

**Note :** Attempt *Five* questions in all. Q. No. 1 is compulsory. In addition to compulsory question, attempt *four* more questions selecting *one* question from each Unit. All questions carry equal marks.

**(Compulsory Question)**

1. (a) Define the basic term of Relational Model.
- (b) Differentiate between Relation algebra and Relational Calculus.
- (c) What are Anomalies ? Write insertion and deletion anomaly.
- (d) What do you mean by de-normalization ?
- (e) What are aggregate functions in SQL ?
- (f) What do you mean by Indexes in SQL ? How is it created ?
- (g) Differentiate between SQL and SQL \* Plus.
- (h) What do you mean by % type in PL/SQL ?

8×2=16

## Unit I

2. What do you mean by relational algebra ? Discuss the different operations performed in relational algebra with suitable example. 16
3. (a) What do you mean by Domain relational calculus ? Discuss. 16
- (b) Write and explain 14 rules being provided by Dr. E.F. Codd for relational model. 8+8=16

## Unit II

4. What do you mean by Normalization ? Why we normalize our database ? Discuss normal forms based on **primary** key with illustration. 16
5. Write notes on the following with supportive examples :
- (a) Trivial and non-trivial functional dependencies
- (b) Transitive and multivalued dependencies
- (c) Closure of functional dependencies. 5+5+6=16

## Unit III

6. (a) What are the data types we use in SQL ? Discuss different clauses. 16
- (b) How views are created and destroyed in SQL ? Explain. 8+8=16

7. Write the meaning, syntax and example of the following SQL statements : 16
- (a) Create Statement with Primary Key and Null Constraint
  - (b) To Update a specific tuple in the table
  - (c) To Truncate table in the database
  - (d) To select distinct tuples from table.

#### Unit IV

8. What are the advantages of PL/SQL ? How control statements are used in PL/SQL ? Give an example in support to your answer. 16
9. What do you mean by Cursors in PL/SQL ? Why we need cursors ? How cursors are created and replaced ? Write specimen syntax for cursor. 16

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