

Roll No.

Total Pages : 03

BCA/M-24

1873

**RELATIONAL DATABASE
MANAGEMENT SYSTEM
BCA-244**

Time : Three Hours]

[Maximum Marks : 80

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

(Compulsory Question)

1. (a) Define Relation.
- (b) What is the major difference between relational algebra and calculus ?
- (c) Define Fully functional dependency.
- (d) Define Normalization.
- (e) Set Operations on relations.
- (f) How view is different from a table ?
- (g) Difference between char and Varchar datatype in SQL.
- (h) State the purpose of reverse keyword in for loop.

8×2=16

Unit I

2. State and explain the Codd's rule for relational model along with their utility. 16
3. (a) Explain SELECT, PROJECT, JOIN operations in relational algebra using suitable examples. 8
(b) Explain tuple relational calculus using suitable examples. 8

Unit II

4. Provide a full-scale example for discussing various normal forms in detail. 16
5. (a) Prove that if a relation is in BCNF then it is also in 3rd normal form. 8
(b) Write short note on data redundancy and transitive dependencies. 8

Unit III

6. (a) Describe Select statement in SQL using any four clauses with suitable examples. 16
(b) Write and explain any five numeric functions and five character functions in SQL. 8
7. (a) Explain the following commands with examples : 16
(i) CREATE
(ii) SELECT

- (iii) GRANT
 - (iv) VIEW
 - (v) UPDATE.
- (b) Explain various logical operators in SQL using appropriate examples. 8

Unit IV

8. (a) Describe the various features and advantages of PL/SQL. 8
- (b) Explain the structure of PL/SQL program using suitable example. 8
9. What is a cursor ? Explain various types of cursors by giving example for each types of cursor. 16