

Roll No.

Exam Code : J-21

Subject Code—54009

B. Sc. (III) EXAMINATION

(Batch 2017) (Re-appear)

(Sixth Semester)

COMPUTER SCIENCE

Paper I

Relational Data Base Management System

Time : 3 Hours

Maximum Marks : 40

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) Define Tuple and Domain.
- (b) Explain selection operation in Relational Algebra.
- (c) List various Data Manipulation Commands.
- (d) Write four advantages of PL/SQL. $4 \times 2 = 8$

Unit I

2. Explain Hierarchical Model by taking suitable example. Compare it with relational Model. 8
3. (a) What are the different types of characteristics and capabilities of a relational model defined by Codd ?
(b) List various set operations of relational algebra and explain with the help of suitable example. 2×4=8

Unit II

4. Explain different types of Normal forms with example. 8
5. What do you mean by functional dependency ? Explain various inference rules for functional dependency. 8

Unit III

6. (a) Explain various data definition commands of SQL.

- (b) Explain various data types available in SQL. 2×4=8

7. Explain various constraint which can be applied on a column or set of columns in a table. 8

Unit IV

8. (a) Explain the structure of PL/SQL Block.
(b) Write a program in PL/SQL to find sum of first n natural numbers. 2×4=8
9. Explain various condition structures available in PL/SQL by writing a program to find greatest out of three numbers. 8