Code: 2939 M.Sc. (I.T.) Semester -2

Paper No. 7: Database Management System

Time: 2:30 Hours Oct : 2017 Total Marks: 70

Q.1 (a) Write a brief note on B-tree. [7]

(b) Explain primary and foreign key constraints. Explain an example to build a relationship between master and detail tables. [7]

OR

Q.1 (a) Explain in detail: Data Modeling using ER Diagram. [7]

(b) What do you mean by virtual table? Explain in detail. [7]

Q.2 (a) Explain the concept of Normalization. [7]

(b) Write a note on TCL commands. [7]

OR

Q.2 (a) Explain following commands with example: [7]

Create Table, Alter Table, Insert

(b) What is an Index? Explain types of Index. [7]

Q.3 (a) Explain in detail: (i) DBMS (ii) Data Abstraction (iii) DBTG (iv) Proposal [7]

(b) Write a note on DML. [7]

OR

Q.3 (a) What is singular function? Explain any three conversion functions. [7]

(b) Write a brief note on Sequence. [7]

Q.4 (a) Explain in detail: Relational Algebra in DBMS. [7]

(b) What do you mean by privilege? Explain commands used for privileges. [7]

OR

Q.4 (a) Explain following constraints with suitable example: [7]

Not Null, Check, Default

(b) List and explain any five Arithmetic Functions. [7]

Q.5 Write queries for the following questions based on **Employee** table.

Table: Employee

Column Name	Datatype/Size	Remarks
Emp_No	Varcahr2(10)	Primary Key, Emp_No must starts with letter 'E'
Name	Varchar2(25)	Not Null
DOB	Date	
DOJ	Date	
Mob_No	Number(10)	Not Null
City	Varchar2(25)	

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(a) Write a query to create above table. [4]

(b) Display all employee details whose age is more than 30 years. [3]

(c) Delete all employee information whose experience is less than five years. [3]

(d) List out all employees who belong to city 'Bhavnagar' or 'Ahmedabad'. [2]

(e) Display employee details whose name starts with letter 'R', 'A' or 'C'. [2]

OR

Q.5 (a) Write a note on Physical and Logical Data Organizations. [7]

(b) Explain in detail: BCNF and PJ/NF. [7]
