

Q1 is compulsory.

Attempt any three questions out of remaining five questions.

Q1. Attempt All questions 20M

- (a) Explain role of DBA.
- (b) Explain generalization in EER.
- (c) Explain concept of log-based recovery.
- (d) Explain DML commands with example.

Q2.

- (a) Explain Conflict and View Serializability in detail 10M
- (b) Write SQL Queries for the following. Assume data wherever required. 10M
Employee (Eid, Ename, Salary, Experience, Dept_name, Location)
 - I. Find maximum salary of employees Dept_name wise.
 - II. Change department to 'Testing' of employees who experience is less than 5 years.
 - III. Create view from employee table as employee_record containing first 3 columns of employee table.
 - IV. Delete all entries from employee table working in 'production' Department.

Q3

- (a) Draw EER diagram for hospital management system 10M
- (b) Write relational algebra queries for. Assume data wherever required. 10M
 - I. Find names of employees whose location is 'Mumbai'
 - II. Find maximum salary of employee from employee table,
 - III. Find names of the employees whose Eid is greater than 3.

Q4.

- (a) Explain concept of sub queries with example 10M
- (b) Draw and explain DBMS system architecture. 10M

Q5

- (a) Define Normalization. Explain 2NF in detail 10M
- (b) Draw and explain generalization and specialization in detail 10M

Q6. Write short note on 20M

- (a) Binary Relational operation
- (b) Types of attributes
- (c) Foreign key with example
- (d) Recursive Queries
