

employee(emp-no, emp-name, emp-salary,dept-no)
deposit(acc-no, cust-name, branch-name, amount, account-date)
borrow(loan-no, cust-name, branch-name, amount)
department (dept-no, dept-name)

1. Give name of depositors whose branch name starts from 'D'.
2. Give employee name(s) whose salary is between Rs. 20000 to 30000 and department name is Finance.
3. Delete borrower details whose amount is less than 25000.

OR

- Q.3** (a) Discuss aggregate functions with example(s). **03**
(b) Write a note on mapping cardinality in E-R Diagram. **04**
(c) Elaborate Normalization. Explain any three normal forms with suitable example(s). **07**

- Q.4** (a) Define transaction. Explain various states of transaction with suitable diagram. **03**
(b) Write a note on view serializability. **04**
(c) Briefly describe immediate database modification for log based recovery. **07**

OR

- Q.4** (a) Write differences between shared lock and exclusive lock. **03**
(b) Explain ACID properties of transaction. **04**
(c) Discuss various steps of query processing with proper diagram. **07**

- Q.5** (a) Describe GRANT and REVOKE commands. **03**
(b) Define cursor. Briefly describe types of cursor in PL/SQL. **04**
(c) Write a note on stored procedure with suitable example. **07**

OR

- Q.5** (a) State the differences between COMMIT and ROLLBACK commands. **03**
(b) Write a note on two phase locking protocol. **04**
(c) Define PL/SQL. Write PL/SQL block to print sum of even numbers between 1 to 20. **07**
