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**B. Voc. (Software Technologies) (Sem – VI)**  
**EXAMINATION MAY 2023**  
**Relational Database Management System (RDBMS)**

[Time: 2 Hours]

[Max. Marks: 60]

- Instructions:** 1) All Questions are Compulsory  
2) Figures to the right indicate maximum marks.  
3) Draw a neat diagram wherever necessary

**Q1** Answer Any FIVE from the following.

(5×2=10)

- Briefly explain Data Dictionary.
- State Functions of DBMS.
- Differentiate between Primary Key and Foreign Key.
- Briefly explain Data Abstraction.
- Explain Cardinality Ratio in brief.
- Explain with example derived and single valued attributes.
- Write the syntax of SQL query to delete all the data from a table.

**Q2** Answer Any FIVE from the following.

(5×2=10)

- Write the syntax of SQL query to create a table and set up primary key for an attribute.
- Differentiate between Grant and Revoke privileges.
- How to join multiple tables? explain with example.
- Explain Locks in SQL.
- Write syntax for FORMAT scalar function.
- Write command to execute stored procedures.
- What is the importance of Transaction Logs?

**Q3** A) With the help of diagram explain Three-level database architecture.

(5)

**OR**

A) Explain Database Development Life Cycle in detail.

(5)

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- B) Construct an ER Diagram for a bank with following description: (5)
- Bank have Customer.
  - Banks are identified by a name, code, address of main office.
  - Banks have branches.
  - Branches are identified by a branch\_no., branch\_name, address.
  - Customers are identified by name, cust-id, phone number, address.
  - Customer can have one or more accounts.
  - Accounts are identified by account\_no., acc\_type, balance.
  - Customer can avail loans.
  - Loans are identified by loan\_id, loan\_type and amount.
  - Account and loans are related to bank's branch.

- Q4 A) Give example of Third Normal Form (3NF) and explain. (5)

OR

- A) How are views different from Table? Write the syntax to create a view in SQL (5)
- B) Explain the ALTER TABLE commands with examples (5)

- Q5 A) Answer any two SQL queries with respect to TABLE:TRANSACT (5)

TABLE: TRANSACT

TRNO	ANO	AMOUNT	TYPE	DOT
T001	101	2500	Withdraw	2017-12-21
T002	103	3000	Deposit	2017-06-01
T003	102	2000	Withdraw	2017-05-12
T004	103	1000	Deposit	2017-10-22
T005	102	12000	Deposit	2017-11-06

- i. To display details of all transactions of TYPE Withdraw from TRANSACT table.
- ii. To display ANO and AMOUNT of all Deposit AND Withdrawals done in month of "May 2017" from table TRANSACT.
- iii. To display first date of transaction (DOT) from table TRANSACT for Account having ANO as 102.

OR

- A) Explain with examples SQL queries using Logical Operator clause. (5)
- B) Write syntax to Modify Stored Procedures and to list all procedures. (5)

Q6 A) Explain Intent Lock and its types in Detail. (5)

OR

A) State advantages and disadvantages of Triggers. (5)

B) List and Explain database Failure Classification. (5)