Question Bank

B.Voc.SOFTWARE DEVELOPMENT

Semester II

VSD2S05TB - DBMS/SQL

PART A

(Each Question Carries one mark)

1. What is DBMS?
2. Explain derived attribute with an eg.?
3. What is SQL?
4. Explain Super key?
5. What is Schema ?
6. Explain DBA.
7. What is a DataBase?
8. Define Entity.
9. Define DataModel.
10. Define Attribute
11. Expand DDL, DML
12. What do you mean by domain of Attributes.
13. Define Instance
14. Explain E_R Model ?
15. Define a Primary Key.
16. Explain Relationship
17. Define View.
18. Explain Data Redundancy.
19. What is functional dependency?
20. Give Syntax and Example of JOIN operation in Relational Algebra.

PART B

(Each Question Carries Two marks)

1. Distinguish between strong and weak entities.
2. Write short notes on Data Models.
3. Explain Single Valued and Multi Valued Attribute.
4. Discuss Integrity Constraints.
5. What do you mean by Weak Entity Set.
6. Explain Normalisation.
7. What is a Query?
8. Explain About Different Users of DBMS
9. Explain ACID Properties.
10. Explain SQL
11. What is Data Independence
12. Give Examples for one to one and one to many relationships
13. Differentiate between tuple relational calculus and domain relational calculus.
14. Differentiate between bound variable and free variable with examples.
15. Explain RENAME operation with example.
16. Explain the use of ALTER command of SQL.
17. Differentiate between SELECT and PROJECT operations.
18. State and Explain different levels of Abstraction.
19. What is CARTESIAN PRODUCT ? Explain with examples.
20. Explain Referential Integrity.

PART C

(Each Question Carries Five marks)

1. Explain the advantages of DBMS over traditional file system.
2. Explain in detail mapping cardinalities.
3. What is an attribute ? State different types of Attributes.
4. Consider the following relations :

   EMPLOYEE (E_NO, E_Name, Salary, D_No)
   DEPARTMENT (D_No, D_Name, Assets)

Employee and Department are related with many to one relationship. Create a RDB and solve the following queries in SQL :

(*i*) List all the employees belonging to the 'Production' department.

(*ii*) Give the names and salaries of all employees working in the departments having assets greater than 2,00,000.

(*iii*) Find the names of departments where more than 30 employees are working.

5. List the set operations of SQL.
6. Compare physical and logical database models
7. What do you mean by SQL? Discuss the various components of SQL in detail with suitable examples.
8. Who is DBA ? What are the responsibilities of DBA.
9. Discuss three levels of Data Abstraction
10. With relevant examples discuss the various operations in Relational Algebras
11. Write the difference between
    a. Entity integrity and referential integrity
    b. Primary key and foreign key
12. Consider the following tables:

    Employee (Emp_no, Name, Emp_city)

    Company (Emp_no, Company_name, Salary)

    i. Write a SQL query to display Employee name and company name.
    ii. Write a SQL query to display employee name, employee city ,company name and salary of all the employees whose salary >10000
    iii. Write a query to display all the employees working in "XYZ" company.
13. Discuss any aggregate functions
14. Discuss rules for converting ER diagram to Relational Database?

15. Explain the Features of a DataBase
16. Discuss 3NF with E.g.

PART D

(Each Question Carries Fifteen marks)

1. What is DBMS? Discuss the Architecture of DBMS. What are the components of DBMS? Explain in brief
2. Discuss normalization. Explain first normal form, second normal form, third normal form with suitable examples.
3. What is E-R model? What are the various symbols used to draw E-R diagram? Explain With an Example.
4. Draw an E-R diagram for College Management System.
5. Consider the following relations :TEACHER (ID, Name, Dept_name)

ID	Name	Dept_Name
10101	Srinivasan	Comp.Applications
12121	John	Commerce
15151	Reena	Physics

TEACHES (ID, Course_ID)

ID	Course_ID
10101	CS-101
12121	FIN-201
15151	PHY - 105

Draw Left Outer Join and Full Outer Join of TEACHER and TEACHES

6. Explain different states of transaction with diagram.
7. Explain Relational Algebra Operations.
8. List out different types of DBMS users, and Explain responsibilities of DBA.