

Duration :- 2.30 hrs

G114ODB19

Maximum Marks : 75

**Note: - All Questions are Compulsory****Q.1 Attempt the following questions (Any Three) (15)**

- What are the different database users?
- Explain the levels of obstruction in database?
- Define Data Model in details.
- Explain the Class diagram with suitable example.
- Define the following Term
  - Domain
  - Tuples
  - Attribute
  - Relation
  - Entity.
- What is UML?

**Q.2. Attempt the following questions (Any Three) (15)**

- Explain First Normal Form in detail.
- Explain Referential Integrity and its rules.
- Write short note on Primary Key and Foreign Key?
- What is Relational Calculus?
- Define Selection and Projections with the help of example.
- Write short note on Cartesian Product Operation.

**Q.3. Attempt the following questions (Any Three) (15)**

- What are Null Values in SQL?
- What is view? Explain how to create a View?
- What are constrains? What are the different types of constrain?
- State with Example how subquery can be used with insert, update and delete?
- Explain the join relations with different types of join.
- Consider the following relations.

Employee (empid, empname, manager id, Deptid, Salary)

Dept(Dept id, Deptname)

**Perform the following queries on above table**

- Display the employee name along with their manager name
- List all the employee whose name start with 'S'
- List all the employee whose name end with 'm'
- Add a new Column hiredate in the emp table
- Display the employees details whose salary is greater than 5000.

**Q.4. Attempt the following questions (Any Three) (15)**

- Define Serializability in details.
- Define deadlock and types of lock used for concurrency control.
- Explain Database recovery Management.
- Write short not on properties of transaction.
- Explain control transaction Management.
- Write short note on Schedule?

**Q.5. Attempt the following questions (Any Three) (15)**

- What is PL / SQL? State Advantage of PL / SQL
- Create a Cursor to update salary of all the employees by 20%.
- Explain use of % Type and % Row Type with Example.
- Differentiate between Procedure and Functions?
- Explain how to create package in PL /SQL.
- Explain types of control structure in PL/ SQL.