

- Q. 1** **Attempt any four of the following** **16**
- What do you mean by the integrity rule? Explain with examples.
 - Explain data model with its Importance.
 - Explain 1NF and 2NF in detail.
 - What is the ER model and write various symbols and their meaning used to draw an ER diagram.
 - Define :
1) Primary Key 2) Foreign Key
Give suitable examples of each.
 - Explain Entity integrity and referential integrity in detail.
 - Explain DDL and DML.
 - Describe features of a good relational database design
- Q. 2** **Attempt any four of the following** **16**
- Describe Aggregate Function
 - Describe relational algebra operations
 - Explain Data Independence in detail.
 - Explain views with its advantages .
 - Describe Joined relations in SQL with an example.
 - Explain views with its advantages .
 - Write comparison between tables and Views.
 - What are Null values ? Explain
- Q. 3** **Attempt any four of the following** **16**
- Explain Serializability.
 - What is Transaction in DBMS?
 - List and explain different states through which a transaction goes during its execution.
 - Describe ACID properties for transactions.
 - Describe Two phase locking protocol.
 - Explain Deadlock Detection and Deadlock prevention.
 - What is PL/SQL? State its features
 - Describe collections and composite data types
- Q. 4** **Attempt any Three of the following** **12**
- Explain any Codd's rule.
 - Describe the join operator in Relational Algebra.
 - Explain Procedures and functions in PL/SQL.
 - Explain Degree of Data Abstraction.
 - Explain Tuple relational calculus.
 - Explain ACID properties.