UNIT – I

1. Illustrate the advantages of Databases over traditional file systems.
2. Explain the various constraints on relational model.
3. Illustrate the various steps in mapping of Entity Relationship to relational model.
4. Discuss the importance of attribute/relationship inheritance with examples.
5. Discuss about user-defined and attribute-defined specializations. Identify the differences between the two.
6. Discuss the two main types of constraints on specializations and generalizations.
7. Differentiate between a specialization hierarchy and a specialization lattice?
8. What is the difference between specialization and generalization? Why do we not display this difference in schema diagrams?

UNIT – II

1. Discuss insertion, deletion, and modification anomalies. Why are they considered bad? Illustrate with examples.
2. State the informal guidelines for relation schema design that we discussed. Illustrate how violation of these guidelines may be harmful.
3. What is a functional dependency? What are the possible sources of the information that defines the functional dependencies that hold among the attributes of a relation schema?
4. Define first, second, and third normal forms when only primary keys are considered. How do the general definitions of 2NF and 3NF, which consider all keys of a relation, differ from those that consider only primary keys?
5. Define Boyce-Codd normal form. How does it differ from 3NF? Why is it considered a stronger form of 3NF?
6. What is multivalued dependency and when does it arise? Does a relation with two or more columns always have an MVD? Show with an example.
7. Define fourth normal form. When is it violated? When is it typically applicable?
8. Define join dependency and explain the concept of fifth normal form with example.

UNIT – III

1. Explain the two products of Oracle 9i
2. Explain the capabilities and syntax of SQL select statement with all clauses with examples
3. Explain the following comparison operator with example
   a. BETWEEN... AND....
   b. IN(set)
   c. LIKE
   d. IS NULL
4. Explain different character functions with example
5. Explain different number and explicit data type conversion functions with example
6. Explain different date functions with example
7. Explain different general functions and methods to build conditional expressions with example
8. Explain various data types supported by oracle 9i

UNIT – IV

1. Explain different types of joins with example and write the full syntax of joining tables using SQL 1999 syntax
2. Explain different types of group functions with example
3. Explain different types of subqueries with example and explain the comparison operators used in single row and multi row subqueries?
4. With example explain various DML statements
5. With example explain various DDL statements
6. With example explain various DCL and TCL statements
7. What is constraint? Explain various data integrity constraints that can be enforced on oracle database
8. With example explain different ways of creating, defining and managing constrains.

UNIT – V

1. What is database transaction? When does a transaction start and end?
2. What is privilege and role? what kind of privileges required for database users and explain the process of creating new user with required privilege with example
3. What is view and what are the advantages and rules for performing DML operations on view?
4. Explain with example the syntax of creating view with all options
5. What is sequence? Explain with example the syntax of creating sequence and how to use it
6. What is an index? Explain how to create index with example and what are the types of indexes
7. Illustrate GROUP BY Clause with ROLLUP and CUBE operators with an example
8. With an example illustrate the working of hierarchical retrieval.