

## **Unit – I**

1. What is DBMS? Explain features of DBMS.
2. Differentiate database and DBMS.
3. Explain advantages and disadvantages of DBMS.
4. Explain objective and importance of DBMS.
5. List and explain application of DBMS.
6. Differentiate traditional flat file system and database.

## **Unit –II**

1. What do you mean by database design? Explain overall database designing process in detail.
2. What is abstraction? List and explain different levels of abstraction.
3. Explain structure of DBMS.
4. What do you mean by Data Independence? Explain physical and logical data independence in detail.
5. What is database architecture? Explain 1 tier, 2 tier and 3 tier database architecture.
6. Differentiate DDL and DML with examples.
7. What do you mean by data model? Explain different data models in detail.
8. What is QBE? Explain working and advantages of QBE.
9. Define entity and attributes. Differentiate strong and weak entity set.
10. Explain aggregation and generalization with examples.
11. Explain the process of converting ER Diagrams to Tables.
12. Construct an E-R diagram for a car insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. Each insurance policy covers one or more cars, and has one or more premium payments associated with it. Each payment is for a particular period of time, and has an associated due date, and the date when the payment was received.
13. Design a database for an automobile company to provide to its dealers to assist them in maintaining customer records and dealer inventory and to assist sales staff in ordering cars. Each vehicle is identified by a vehicle identification number(VIN). Each individual vehicle is a particular model of a particular brand offered by the company (e.g., the XF is a model of the car brand Jaguar of Tata Motors). Each model can be offered with a variety of options, but an individual car may have only some (or none) of the available options. The database needs to store information about models, brands, and options, as well as information about individual dealers, customers, and cars. Your design should include an E-R diagram, a set of relational schemas, and a list of constraints, including primary-key and foreign-key constraints.
14. Design a database for an airline. The database must keep track of customers and their reservations, flights and their status, seat assignments on individual flights, and the schedule and routing of future flights. Your design should include an E-R diagram, a set of relational schemas, and a list of constraints, including primary-key and foreign-key constraints.
15. Design an E-R diagram for keeping track of the exploits of your favourite sports team. You should store the matches played, the scores in each match, the players in each match, and individual player statistics for each match. Summary statistics should be modeled as derived attributes.