Unit 1 - Introduction to DBMS

1. Describe the terms – Data, Information, Database, Database Management System.
2. Compare Database System with File System
   What is the purpose of Database System?
3. Give advantages and disadvantages of DBMS.
4. Explain the view of data.
   What are the different levels of data abstraction?
5. Describe the terms – instance and schema.
6. Describe different data models – relational, object-oriented, object-relational, semi-structured, network, hierarchical
   What is data model? Explain different data models.
7. What are the different notations used in ER diagram?
8. What are the different types of attributes? Give the notations used in E-R model for different types of attributes.
   Describe simple, composite, Single valued, Multivalued, Derived Attributes.
9. Compare – strong entity set and weak entity set
10. What is participation in relationship? Explain different types of participation with example.
11. Explain different mapping cardinalities with example
12. Describe the terms – super key, candidate key, primary keyand foreign key with example.
13. Explain – generalization, specialization, aggregation with example.
14. How to reduce E-R schema into tables?
15. Describe Database System Structure.
16. What are the different users of database?

17. Draw E-R diagram for college database, with following assumptions.

A college contains many departments. Each department can offer any number of courses. Many instructors can work in a department. An instructor can work only in one department. For each department there is a Head. An instructor can be head of only one department. Each instructor can take any number of courses. A course can be taken by only one instructor. A student can enrol for any number of courses. Each course can have any number of students

18. Draw E-R diagram for banking application, with following assumptions.

There are multiple banks and each bank has many branches. Each branch has multiple customers. Customers have various types of accounts. Some Customers also had taken different types of loans from these bank branches. One customer can have multiple accounts and Loans

19. Draw E-R diagram for National Hockey League (NHL), with following assumptions.

The NHL has many teams, each team has a name, a city, a coach, a captain, and a set of players, each player belongs to only one team, each player has a name, a position (such as left wing or goalie), a skill level, and a set of injury records, a team captain is also a player, a game is played between two teams (referred to as host_team and guest_team) and has a date and a score.