Chapter-5
DataBase Concepts

Q1. What do you mean by a Database Management System?

Ans:- DBMS is a collection of programs and files that allows a user to define structure of database, store data into it, modify the structure and manipulate data. Apart from this it also provide security, transaction management and concurrency control.

Q2. What are the advantages of using a DBMS?

Ans: Advantages of DBMS are:

1) Reduce data redundancy (duplication of data)

2) Control data inconsistency to a large extent

3) Database facilitate sharing of data

4) Enforce standards

5) Centralized databases can ensure data security.

Q.3. What do you mean by Relational Data Model?

Ans In this model data is organized into tabular structures called relations. A database may contain many relations providing a better classification of data based on its nature and use. Multiple relations are then linked/ associated together on some common key data values (foreign key).

Q.4. What is a relation in Relational Model?

Ans A tabular structure containing data. To be a relation is must satisfy following four conditions:

- Atomicity : At every row-column intersection (Cell) there must be an atomic value i.e. a value that can not be further subdivided.

- No duplicity: No two rows of relation will be identical i.e. in any two rows value in at least one column must be different.
- Ordering of rows is immaterial.
- Ordering of columns is immaterial.

Q.5. What is the foreign key?

Ans: A column or a combination of columns whose values are derived from primary key of some other table is called the foreign key of the table in which it is contained.

Q.6. What do you mean by referential integrity? How is it enforced in databases?

Ans The property of a relational database which ensures that no entry in a foreign key column of a table can be made unless it matches a primary key value in the corresponding column of the related table. It is enforced in the database with the help of foreign key constraint.