Tutorial 1

CSN-351 Database Management Systems

1. Given in Lecture 1 notes (*FILE SYSTEMS VERSUS A DBMS*)

2. Given in Lecture 2 notes (*L2_Data Models_Levels of Abstraction_Relational Model*)

3. Any simple real world example can be used. Below is a sample database schema for a bookstore.

Relation: A "Books" relation that stores information about books available in the bookstore. It contains columns such as "BookID," "Title," "Author," "Genre," and "Price."

Schema: The schema for the "Books" relation: Books(BookID, Title, Author, Genre, Price)

Tuple: A tuple (also known as a row) represents a single record in the "Books" relation. For example: (101, "Wings of fire", "APJ Abdul Kalam", "Autobiography",399)

Attribute: An attribute is a specific data field within a relation. For example, in the "Books" relation: BookID, Title, Author, Genre, and Price are attributes.

Degree of Relation: The degree of a relation refers to the number of attributes (columns) in the relation. In this case, the degree of the "Books" relation is 5 because it has five attributes (BookID, Title, Author, Genre, and Price).

4. Options a and c are correct.

5.

S.NO	Primary Key	Candidate Key
1.	Primary key is a minimal super key. So there is one and only one primary key in a relation.	While in a relation there can be more than one candidate key.
2.	Any attribute of Primary key can not contain NULL value.	While in Candidate key any attribute can contain NULL value.
3.	Primary key can be optional to specify any relation.	But without candidate key there can't be specified any relation.
4.	Primary key specifies the important attribute for the relation.	Candidate specifies the key which can qualify for primary key.
5.	Its confirmed that a primary key is a candidate key.	But Its not confirmed that a candidate key can be a primary key.

Source : Geeksforgeeks

6. Option b. {E,C}

7. Option b. {E,F,H}, Number of candidate keys = 1 Number of super keys = 128