1. What is normalization?
Normalization is the process of organizing data in a database to reduce redundancy and improve data integrity. It divides large tables into smaller ones and defines relationships between them.

2. Explain primary vs foreign key.
- Primary Key: A unique identifier for each record in a table (no duplicates, no nulls). - Foreign Key: A field in one table that refers to the primary key of another table to maintain relationships.

3. What are constraints?
Constraints are rules applied to columns in a table to maintain accuracy and integrity of data. Examples: NOT NULL, UNIQUE, PRIMARY KEY, FOREIGN KEY, CHECK, DEFAULT.

4. What is a surrogate key?
A surrogate key is an artificial/auto-generated key (like an ID number) used as a unique identifier when no natural primary key exists.

5. How do you avoid data redundancy?
We avoid redundancy by applying normalization, creating relationships using keys, and following database design principles like avoiding duplicate data in multiple tables.

6. What is ER diagram?
Entity-Relationship (ER) diagram is a visual representation of database structure showing entities (tables), their attributes (columns), and relationships between them.

7. What are the types of relationships in DBMS?
- One-to-One - One-to-Many (or Many-to-One) - Many-to-Many

8. Explain the purpose of AUTO_INCREMENT.
AUTO_INCREMENT in MySQL automatically generates a unique number for a column (usually primary key) whenever a new row is inserted.

9. What is the default storage engine in MySQL?
The default storage engine is InnoDB, which supports transactions, foreign keys, and better reliability.

10. What is a composite key?
A composite key is a primary key made up of two or more columns that together uniquely identify a record.