1. **Define the following key terms related to databases:**
2. Database - A database is a structured collection of data that is organized in a way that enables efficient storage, retrieval, and manipulation of information.
3. Table – These are the basic structures where data is stored in rows and columns.
4. Record – a record is a complete set of fields or attributes that represents a single instance of data within a table
5. Field – also known as a column or attribute, is a component of a table that represents a specific piece of information or data about the entities stored in that table.
6. Primary key – a primary key is a special column or combination of columns that uniquely identifies each record in a table.
7. SQL – is a domain-specific programming language used for managing and manipulating relational databases.
8. Query – These are commands or statements used to retrieve, manipulate, and manage data stored in a database
9. Index – Indexes are data structures used to optimize the retrieval of data from a database.
10. Normalization – is the process of organizing data in a database efficiently.
11. Database management system – A DBMS is software that enables users to interact with a database.
12. Describe the purpose of a primary key in a database table and provide an example.
13. **Uniquely Identifying Records:** The primary key uniquely identifies each record row within the table.
14. **Ensuring Data Integrity:** By enforcing uniqueness, the primary key helps maintain data integrity by preventing duplicate or inconsistent data from being inserted into the table.
15. **Supporting Relationships:** In relational database systems, the primary key is often used to establish relationships between tables.
16. **Optimizing Data Retrieval:** Indexes are typically automatically created on primary key columns which improves the performance of queries that involve searching sorting or joining data based on the primary key
17. Explain the difference between a database management system (DBMS) and a database
18. A database is an organized collection of structured data stored electronically in a computer system
19. A DBMS is a software system that provides an interface for users to interact with the database.
20. Discuss in short, the importance of normalization in database design and provide an example of how it can improve data integrity.

Normalization is crucial in database design because it helps to minimize redundancy and dependency within the data, thereby enhancing data integrity and reducing the risk of anomalies.