

INTRODUCTION TO DBMS

Question and Answers

1. From the above table, identify the primary key. Justify your choice.

- **Answer:** Item No.. **Justification:** It uniquely identifies each row in the table and cannot contain duplicate values or be left blank.

2. How many fields and how many records does the table have?

- **Answer:** The table has **5 fields** (Item No., Name, Price, Quantity, Discount (in%)) and **3 records**.

Section A: Multiple Choice Questions

1. Which of the following can be considered as an example of a database?

- **Answer:** Telephone directory.

2. Which of the following is NOT a DBMS?

- **Answer:** MS Excel.

3. DBMS stands for _____.

- **Answer:** Database Management System.

4. Which of the following data models sets a relation between the two or more tables?

- **Answer:** Relational Data Model.

5. The details associated with an entity are called _____.

- **Answer:** Attributes.

6. A _____ is represented as rows in a table.

- **Answer:** Record.

7. In which of the following forms can a data value be represented?

- **Answer:** All of the above (Numeric, Character, Alphanumeric).

8. Which of the following uniquely identifies a row in a table?

- **Answer:** Primary key.

9. A _____ is a feature of a database using which we can enter data in a table in an easy and user friendly manner.

- **Answer:** Form.

10. A _____ is a question asked from a database.

- **Answer:** Query.

Section B: True or False

1. A database cannot be organised.

- **Answer:** False. A database is a collection of logically related data items stored in an organized manner.

2. Data is the collection of raw facts.

- **Answer:** True.

3. A table can be created without a primary key.

- **Answer:** True.

4. Two tables can be related in a network data model.

- **Answer:** True.

5. MS Access is an example of a database.

- **Answer:** True.

Section C: Fill in the Blanks

1. The raw facts constitutes _____.

- **Answer:** Data.

2. An _____ is a real world object about which information is to be stored in a database.

- **Answer:** Entity.

3. The output of a query may be displayed in the form of _____.

- **Answer:** Reports.

4. The data values for all the fields related to a person or object is called a _____.

- **Answer: Record.**

5. All the field values that are eligible to be the primary key are the _____ keys for that table.

- **Answer: Candidate.**

Section D: Answer the Following Questions

1. Define the terms:

- **(a) Database:** A collection of logically related data items stored in an organized manner.
- **(b) Data redundancy:** The duplication or repetition of the same data field across multiple tables.
- **(c) Report:** A database object used to display retrieved data from a query in a formal, formatted, and user-friendly layout.

2. Give one point of difference between:

- **(a) Data and Information:** **Data** refers to unorganized raw facts (e.g., student marks), whereas **Information** is processed data that provides meaningful context (e.g., a report card).
- **(b) Form and Query:** A **Form** provides a user-friendly interface for entering and editing data into database tables, whereas a **Query** is used to search and retrieve specific data from the database based on criteria.
- **(c) Network and Hierarchical data model:** In a **Hierarchical Data Model**, data is organized into a tree-like structure where records are linked hierarchically, whereas in a **Network Data Model**, multiple records can link to master records like an inverted tree.

3. Give any four advantages of a DBMS.

- **Organised Storage:** Data is stored systematically for fast and accurate retrieval.
- **Minimal Data Redundancy:** Reduces duplicate data fields across tables.
- **Data Consistency:** Minimizes inconsistent data entries across related tables.
- **Security:** Protects unauthorized access using passwords and encryption.

4. Consider the table given below and answer the questions that follow:

Table: Library

Book_Id	Book Name	Author Name	Price	Publisher
F001	Pride and Prejudice	Jane Austen	550	ABC
S004	Amazing Astronomy	E. Shane	1050	ABC
C005	IT and Mankind	MHA Diwaan	2500	HYM

- **(a) Name the fields in the given table.**
 - **Answer: Book_Id, Book Name, Author Name, Price, and Publisher.**
- **(b) Which field should be made the primary key?**
 - **Answer: Book_Id**, because it holds unique identification values for each book.
- **(c) Is there any alternate key in the table?**
 - **Answer: No**, because none of the remaining fields guarantee unique values for every record.
- **(d) How is primary key different from foreign key? Explain with example.**
 - **Answer: A Primary Key** uniquely identifies each row in its own table and cannot contain null or duplicate values (e.g., `Enrolment_Number` in the Student Registration Table or `Book_Id` in the Library Table). A **Foreign Key** is a field in one table that points to the Primary Key of another table to set up a relationship between them (e.g., `Enrolment_Number` in the Student Marks Table).