Database Management System

Q1. What is the full form of DBMS?

A) Data Backup Management System
B) Database Management System
C) Digital Base Management Software
D) Data Binary Management System

Q2. Which condition selects students scoring 90 marks or above?

A) >90
B) <90
C) >=90
D) =90

Q3. A row in a database table is called:

A) Field
B) Record
C) Column
D) Attribute

Q4. A column in a database table is called:

A) Record
B) Field
C) Tuple
D) Table

Q5. Which of the following uniquely identifies each record in a table?

A) Foreign Key
B) Primary Key
C) Data Type
D) Field Name

Q6. What is the default file extension of a LibreOffice Base database?

A) .ods
B) .odt
C) .odb
D) .odp

Q7. Which wizard is used to create a table step by step?

A) Form Wizard
B) Table Wizard
C) Query Wizard
D) Report Wizard

Q8. Which database object stores data in rows and columns?

A) Query
B) Form
C) Table
D) Report

Q9. Which option is used to access a previously saved database?

A) Create New Database
B) Open an Existing Database File
C) Create Table
D) Report Wizard

Q10. Which view is used to define field names and data types?

A) Design View
B) Form View
C) Report View
D) Print View

Q11. Which data type stores a student's date of birth?

A) Text
B) Date
C) Integer
D) Boolean

Q12. Which data type stores TRUE or FALSE values?

A) Text
B) Date
C) Boolean
D) Decimal

Q13. Can a primary key contain NULL values?

A) Yes
B) No
C) Sometimes
D) Only in queries

Q14. Arranging records from A to Z is called:

A) Descending Sort
B) Ascending Sort
C) Filtering
D) Deleting

Q15. Which key establishes a link to a key in another table?

A) Primary Key
B) Foreign Key
C) Candidate Key
D) Sort Key

Q16. Which relationship allows one record in a table to be related to many records in another table?

A) One-to-One
B) One-to-Many
C) Many-to-Many
D) None

Q17. A student table has 10 columns and 50 rows. How many fields and records does it contain?

A) 50 fields, 10 records
B) 10 fields, 50 records
C) 60 fields, 50 records
D) 10 fields, 60 records

Q18. Which database object retrieves specific records based on conditions?

A) Form
B) Report
C) Query
D) Table Wizard

Q19. Which criterion selects marks greater than 80?

A) <80
B) >80
C) =80
D) <>80

Q20. Which operator is used when both conditions must be satisfied?

A) OR
B) NOT
C) AND
D) LIKE

Q21. Which operator is used to match a text pattern in SQL?

A) LIKE
B) BETWEEN
C) AND
D) ORDER

Q22. Which database object makes entering and editing records easier?

A) Query
B) Form
C) Report
D) Relationship

Q23. Which wizard helps create reports?

A) Form Wizard
B) Report Wizard
C) Table Wizard
D) Query Wizard

Q24. Which feature helps organize report records into categories?

A) Grouping B) Deleting
C) Renaming D) Closing

Q25. Which data type is suitable for storing monetary values in LibreOffice Base?

A) Text **B) Currency**
C) Boolean D) Date

Q26. A student table has 10 columns and 50 rows. How many fields and records does it contain?

A) 50 fields, 10 records **B) 10 fields, 50 records**
C) 60 fields, 50 records D) 10 fields, 60 records

Short Questions

Q1. Differentiate between a field and a record.

Answer:

- **Field:** A column in a table that stores a particular type of information.
- **Record:** A row in a table containing complete information about one entity.

Q2. What is a primary key? Give an example.

Answer: A primary key is a field or combination of fields that uniquely identifies each record in a table. For example, Student_ID in a Student table.

Q3. What is Design View in LibreOffice Base?

Answer: Design View is used to create or modify the structure of a table. It allows users to define field names, data types and field properties.

Q4. Differentiate between Text and Number data types.

Answer:

- **Text**: Stores letters, numbers and special characters as text.
- **Number:** Stores numeric values that can be used in calculations.

Q5. What is a foreign key?

Answer: A foreign key is a field or combination of fields in one table that refers to a key in another table. It helps establish relationships between tables.

Q6. What is referential integrity?

Answer: Referential integrity is a database rule that maintains consistency between related tables by preventing invalid references to records.

Q7. What is a query? Write any one use.

Answer: A query is a database object used to retrieve specific information from one or more tables.
Use: It helps display records that satisfy given conditions.

Q8. What is a form? Write one advantage.

Answer: A form is a database object that provides a user-friendly interface for entering and editing records.
Advantage: It makes data entry easier.

Q9. What is a report in LibreOffice Base?

Answer: A report is a database object used to present data in an organized and printable format.

Q10. A Student table contains Roll_No, Name, Class and Marks. Which field should be the primary key and why?

Answer: Roll_No should be the primary key because it uniquely identifies each student and cannot contain duplicate or NULL values.

Q11. A library has two tables: Books and Issue_Details. Which type of key can link these tables? Explain.

Answer: A foreign key can link the tables. For example, Book_ID in Issue_Details can refer to Book_ID in the Books table.

Q12. A teacher wants a printable list of students grouped by class. Which database object should be used? Give one reason.

Answer: A Report should be used because it can organize records into groups and present them in a printable format.

Q13. Differentiate between Primary Key and Foreign Key.

Answer:

Primary Key	Foreign Key
Uniquely identifies each record in a table.	Establishes a relationship with another table.
Cannot contain NULL values.	May contain NULL values if allowed.
Must have unique values.	May contain duplicate values.

Q14. Explain any three data types used in LibreOffice Base with examples.

Answer:

1. Text: Stores characters, such as Student_Name.
2. Integer: Stores whole numbers, such as Age.
3. Date: Stores dates, such as Date_of_Birth.

Q15. What is sorting? Explain ascending and descending sorting with examples.

Answer: Sorting is the process of arranging records in a specific order.

1. Ascending order: Arranges data from A to Z or smallest to largest.
2. Descending order: Arranges data from Z to A or largest to smallest.
3. Example: Marks 40, 60, 90 are in ascending order; 90, 60, 40 are in descending order.

Q16. Differentiate between AND, OR and NOT operators in queries.

Answer:

1. AND: Returns records when all specified conditions are true.
2. OR: Returns records when at least one condition is true.
3. NOT: Reverses a condition and excludes matching records.

Q17. Differentiate between a Form and a Report.

Answer:

Form	Report
Used to enter and edit records.	Used to present records in an organized format.
Provides an interactive interface.	Provides a formatted output for viewing or printing.
Supports data entry and modification.	Mainly used for presenting and printing information.

Long Questions

Q1. Explain the five main advantages of using a DBMS.
Answer:

1. Reduces data redundancy: Minimizes unnecessary duplication of data.
2. Improves data consistency: Helps maintain accurate and uniform information.
3. Provides data security: Allows controlled access to sensitive data.
4. Supports data sharing: Multiple authorized users can access information.
5. Provides backup and recovery: Helps restore data after certain failures.

Q2. What is a relationship in a database? Explain its three types with examples.

Answer: A relationship is an association between two database tables through related fields.
1. One-to-One Relationship: One record in the first table corresponds to one record in the second table.
Example: One employee has one employee ID card.
2. One-to-Many Relationship: One record in the first table corresponds to multiple records in the second table.
Example: One class contains many students.
3. Many-to-Many Relationship: Multiple records in one table correspond to multiple records in another table.
Example: One student can enroll in many courses, and one course can have many students.
4. Primary Key: Uniquely identifies a record in a table.
5. Foreign Key: Connects related tables and helps maintain referential integrity.

Q3. A school stores student details in two tables: Student and Marks. Explain how these tables can be connected.

Answer:
1. Create a Student table with Student_ID as the primary key.
2. Create a Marks table containing Student_ID as a foreign key.
3. Establish a one-to-many relationship between Student and Marks using Student_ID, assuming each student can have multiple marks records.

Q4. A library wants to store book details, track issued books and generate printed summaries. Explain which database objects should be used and why. (5 Marks)

Answer:
1. Tables: Store information about books, members and issued books.
2. Primary Keys: Uniquely identify each book and member record.
3. Relationships: Connect book and member details with issue records.
4. Queries: Retrieve information about issued or overdue books.
5. Reports: Generate organized and printable summaries of library records.

Q5. A teacher wants to display students who scored more than 75 marks, arrange their names alphabetically and print the results. Explain the steps. (5 Marks)

Answer:
1. Open the Student database in LibreOffice Base.
2. Create a query using Query Design View.
3. Add the required fields, such as Name and Marks.
4. Enter >75 in the Criteria row of the Marks field and set Name to Ascending sort order.
5. Run and save the query, then create a report based on it for printing.