INDIAN SCHOOL AL WADI AL KABIR

Class: X	Department: Computer Science
WORKSHEET 4 PART B UNIT 3	**INFORMATION TECHNOLOGY (402)** **Database Management System Using LibreOffice Base** **Chapter 11 Queries in Base**

Multiple Choice Questions (MCQ)

1. 1. In the Query Wizard, which button is clicked to move *all* fields simultaneously from the 'Available Fields' list box to the 'Fields in the Query' list box?
    (a) >   **(b) >>**   (c) ^   (d) ∨

2. When creating a query in Design View, what is the default setting for the Visible check box for a field added to the design grid?
    (a) Deselected   (b) Hidden   **(c) Selected**   (d) Optional

3. Which of the following describes the key purpose of creating queries in a DBMS?
    (a) Organizing data in tables (b) Creating user-friendly input screens **(c) Retrieving data easily and accurately from the database** (d) Generating formatted printouts

4. In the Query Design window, where tables are added and displayed, this area is referred to as the:
    (a) Query Details Area **(b) Tables Pane** (c) Objects Area (d) Design Grid

5. When editing a query created through the Query Wizard, which radio button option, found in the final step, ensures the query opens in Design View immediately upon finishing?
    (a) Display Query **(b) Modify Query** (c) Complete detail of the query (d) Run Query

6. Which of the following is referred to as asking questions from the database?
    (a) Report (b) Table **(c) Query** (d) Database

7. Which of the following describes the ways to design a query in LibreOffice Base?
    (a) Using a Wizard (b) In Design View (c) In SQL view **(d) All of the above**

8. Which is considered a more flexible way to create a query?
    (a) Wizard **(b) Design View** (c) Both (a) and (b) (d) Neither (a) nor (b)

9. Into how many sections is the Query Design window broadly divided?
    (a) One **(b) Two** (c) Three (d) Four

10. Which of the following is the shortcut key used to run a query?
    (a) F3 (b) F4 **(c) F5** (d) F6

11. Which of the following functions can be performed on numerical data while designing a query?
    (a) Sum (b) Minimum (c) Maximum **(d) All of the above**

12. In the Query Wizard, which step is generally *not* performed if there is no numerical data to be worked upon in a query?
    (a) Selection of fields (b) Giving Aliases **(c) Summarizing** (d) Selection of tables

13. Which dialog box is displayed when the Query Design window is opened for the first time?
    (a) Add Table (b) Add Query **(c) Add Table or Query** (d) None of the above

B .**State whether the following statements are True or False**

14. When grouping data in the Query Design grid (e.g., finding an average per category), the Group option is selected in the Function row for the field used for categorization. **True**

15. The relational operator != (not equal to) cannot be used when setting search conditions in the Criterion row of a query. **False**

16. The purpose of assigning an Alias name is to change the name of the table used when running the query. **False** (It changes the column header name)

17. If you do not want the data values for a particular field to be displayed in the query result, you must click to deselect the corresponding Visible check box in the Design grid. **True**

18. Information retrieved using a query can only come from a single table in the database. **False** (It may be retrieved from a single table or from **multiple tables**)

C. Fill in the Blanks

19. When specifying search conditions in the Query Wizard, a user can provide at the most **three** conditions.

20. In the Query Design grid, the row used to arrange the query results in ascending or descending order is called the **Sort** row.
21. When a query is designed, the data output, by default, is displayed in **tabular** form.
22. In the Query Design grid, the row used for writing an alternative column heading instead of the field name is the **Alias** row.
23. To edit an existing query, you must right-click on the query name in the Objects Area and select the **Edit** option

D. Subjective Questions

24. Define a query? What is the need of creating a query in a database?
    A **query** is essentially a sort of question asked from a database. It serves to retrieve and display specific data from one or more tables within the database.
    The **need for creating a query** in a database stems from the requirement to retrieve data easily and accurately:
    Retrieval of Desired Data: Queries are necessary to search for specific records and retrieve the desired data by giving specifications to the Database Management System (DBMS).
    Filtering and Specificity: They allow users to specify the fields they wish to display and set the criterion based on which records should be filtered. This ensures you only view the exact information you want.
    Efficiency: Queries enable the retrieval of information without having to go individually through each record in single or multiple tables, which becomes increasingly difficult as the number of records grows.
    Display Format: The result of the query is displayed in a standardized **tabular form**, showing field names in columns and the retrieved records in rows

25. Rearrange the steps given below so as to create a query using a wizard.
    - Give Alias
    - Select the fields
    - Set the criterion
    - Set the sorting order
    - Give table name

    When creating a query using the Query Wizard, the typical sequence of the steps listed is:
    1. **Give table name** (The table containing the fields must be selected first).
    2. **Select the fields** (Fields are selected from the chosen table and moved into the query).
    3. **Set the sorting order** (The result can be displayed in ascending or descending order of a field).
    4. **Set the criterion** (Search conditions are set to filter the records).
    5. **Give Alias** (Alternative, user-friendly column header names are assigned)

26. What all information is seen in the overview (last step) of the Query wizard?
    The last step of the Query Wizard displays the entire **overview of the query**. This overview includes the following key information:
    Name of the Query: By default, a name like `Query_Events` is assigned, but a new name can be typed in the text box.
    The action to be performed after the wizard finishes: Users can select either **Display Query** (default option) or **Modify Query** (to edit the query in Design view).
    Complete detail of the query: This section provides a summary about the query that has been created.

27. What is the use of Alias row in the Design grid of the Query Design window?
    The primary use of the **Alias row** in the Query Design grid is to **display meaningful names** or alternative column headings in the query output.
    If the original field names are not user-friendly, an **alias name** (a more readable name) is chosen to be displayed as the column header instead of the technical field name.
    For example, instead of the field name `Winner`, the alias row can be used to display the more user-friendly column heading `Winner Name`.

28. Name any four mathematical functions that can be applied to numerical data in a query.
While designing a query, various mathematical functions can be applied to numerical data to summarize information (e.g., using the `Function` row in Design view). Four such functions are:
   1. **Sum**.
   2. **Minimum**.
   3. **Maximum**.
   4. **Average**.
   *(Note: **Count** can also be used, making a total of five functions mentioned in the sources)*

29. Name the three ways of creating a query in LibreOffice Base?
   A query in LibreOffice Base can be created in three distinct ways:
   1. Using a Wizard.
   2. In Design View.
   3. In SQL view

30. Scenario

Ruhi is managing the **"Sports Day"** database in LibreOffice Base. The database contains two key tables:
   1. **Events:** Stores details about individual events and winners (fields include `Event Name`, `Winner 1 Name`, `Winner 1 Points`, and `CategoryID`).
   2. **EventCategory:** Stores category details (fields include `CategoryID` and `Category Name`).
   Ruhi needs to design a query that calculates the **Average Points** scored by winners, specifically displaying this average for each unique `Category Name` in the database.
   Based on this requirement, answer the following questions:

Q. No.	Question	Marks
1.	Ruhi is deciding between creating the query using the Query Wizard or the Design View. Which method would be more suitable for this requirement (calculating an average and grouping data), and why?	1
2.	Which specific row/feature in the Query Design grid must Ruhi use to ensure that the calculation (Average) is performed for *each unique* category separately?	1
3.	If Ruhi wants to rename the calculated field output column from the default "AVG" to "Category Average Score", in which row of the Design grid should she type this new name?	1
4.	After setting up the necessary fields, functions, and criteria in the Design View, what is the keyboard shortcut Ruhi must press to immediately display the query results?	1

Ans: 1. Which method would be more suitable for this requirement, and why? (1 Mark)
The Design View is the more suitable method.
The Design View is considered a more flexible way to create a query compared to the Wizard. When the requirement involves performing complex numerical analysis like calculating the Average of data values and grouping results by a category (as outlined in the question), the functionalities found in the Design View, such as the Function row, are necessary to achieve the desired output.

2. Which specific row/feature in the Query Design grid must Ruhi use to ensure that the calculation (Average) is performed for each unique category separately? (1 Mark)
Ruhi must use the Function row (or Function option).
For the Category Name field (the non-numerical field used for grouping), Ruhi must select the Group option in the Function row. For the Winner 1 Points field (the numerical data), she must select the Average function from the drop-down list in the corresponding Function row. This grouping ensures the average is calculated separately for each category.

3. In which row of the Design grid should she type this new name? (1 Mark)
Ruhi should type the new column heading, "Category Average Score," in the Alias row.

The Alias row is specifically used to set an alternative name (or meaningful name) for a field, which will be displayed as the column header in the query output instead of the default field name.

4. What is the keyboard shortcut Ruhi must press to immediately display the query results? (1 Mark)
The shortcut key to run the query is F5

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