

### Assignment-3

#### 1. What is DAX, and how is it used in Power BI?

Ans: DAX stands for Data Analysis Expressions and it is a formula language used in Power BI to create custom calculations and data analysis. It's used in Power Bi for:

- Measures
- Calculated columns
- Calculated tables

#### 2. Explain the difference between calculated columns and measures in DAX.

Ans: Calculated columns add new fields to your data while Measures perform calculations like sums or averages, based on filters and slicers in reports.

#### 3. What is row context and filter context in DAX?

Ans: Row Context: In row context, DAX looks at one row at a time. It is mostly used in calculated columns.

Filter Context: In filter context DAX is calculated based on the filters applied. It is mostly used in measures.

#### 4. How does the RELATED function work in DAX?

Ans: The RELATED function in DAX is used to fetch a value from another table that is related through a relationship.

#### 5. What is the purpose of the CALCULATE function in DAX?

Ans: The purpose of the Calculate function in DAX is to perform a calculation with custom filters.

#### 6. Describe the difference between ALL and ALLEXCEPT functions in DAX.

Ans: ALL removes all filters from one or more columns/tables while ALLEXCEPT removes all filters except those on specified columns.

**7. Explain the difference between VALUES and DISTINCT functions in DAX.**

Ans:VALUES returns a table of unique values with blank existing while DISTINCT returns a table of unique values only.

**8. What is the role of the SUMMARIZE function in DAX?**

Ans: The role of summarize function is used to group data and create summary tables.

**9. How do you handle date and time calculations in DAX?**

Ans: Handling date and time calculations in DAX involves using built-in time intelligence functions and date/time functions to analyze data over periods.

**10. How do you use the IF function in DAX? Provide an example.**

Ans: The IF function in DAX works like a simple conditional statement.  
For example: ProfitCategory = IF(Sales[Profit] > 1000, "High", "Low")

**11.Difference between the SUM and SUMX functions in DAX?**

Ans: SUM adds up all values in a single column directly while SUMX goes through each row in a table, does a calculation on that row, and then adds up all those results.

**12. Difference between the SUMMARIZE and ADDCOLUMNS functions in DAX?**

Ans: SUMMARIZE groups data by specified columns and creates aggregations while ADDCOLUMNS adds new calculated columns to an existing table without grouping.

**13. How do you calculate the number of days between two dates using DAX?**

Ans: To calculate the number of days between two dates in DAX, we can use the DATEDIFF function.

**14. How do you add or subtract a specific number of days from a date using DAX?**

Ans: We can add or subtract days from a date in DAX by using the DATEADD function.

**15. How do you format a date value using DAX?**

Ans: To format a date value in DAX, we can use the FORMAT function.

**16. How do you remove leading or trailing spaces from a text string using DAX?**

Ans: To remove leading and trailing spaces from a text string in DAX, we can use the TRIM function.

**17. How can you apply multiple filters to a table using DAX?**

Ans: We can apply multiple filters to a table in DAX using functions like CALCULATE or FILTER functions.