# POWER BI INTERVIEW QUESTIONS

Note:- Asked In @EY

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BUSINESS & DATA ANALYST

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**EASY TO LEARN**

- **Self Introduction**
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- **What were the major challenges in your project, and how did you overcome them?**
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- **Explain the difference between a Star Schema and a Snowflake Schema.**
- **What is a many-to-many relationship? How do you resolve it in Power BI?**
- **Explain the concept of a calculated column and a measure.**
- **What is the difference between a table and a matrix visual?**
- **How would you handle performance issues in Power BI?**
- **What are the different types of filters available in Power BI, and how do they impact data?**

**1. Self Introduction**

I am a Power BI Developer with [X years] of experience working on data visualization, data modeling, and DAX measures. I have worked in domains such as [Finance, Healthcare, etc.], building interactive dashboards, optimizing data models, and ensuring data-driven decision-making through compelling visuals and insights.

**2. Discussion on my past project, followed by specific questions:**

- What was the size of your data model?
In my previous project, the data model consisted of over 20 tables, with the largest fact table containing more than 10 million records. We used a star schema to ensure efficiency and performance.
- What were the major challenges in your project, and how did you overcome them?
One major challenge was slow report performance due to complex DAX and a large dataset. I optimized this by using summarized tables, reducing the use of calculated columns, and implementing incremental refresh.

**3. Which visuals did you use and why?**

I used bar charts and line charts for trend analysis, cards for KPIs, slicers for filtering, and matrix visuals for detailed breakdowns. Each visual was chosen based on its ability to present insights clearly to stakeholders.

**4. How did you optimize the performance of your reports?**

I optimized performance by reducing visuals per page, using DAX measures instead of calculated columns, leveraging aggregation tables, and ensuring relationships followed a star schema for faster query execution.

**5. Explain the CALCULATE function in Power BI.**

The CALCULATE() function changes the filter context of a measure or expression. It's often used to create dynamic KPIs, like calculating sales for the current year or filtered by region.

**6. Difference between SUMX and SUM in Power BI.**

YSUM() simply totals the values in a column. SUMX() iterates row by row, evaluating an expression for each row—useful when summing a calculated value like price * quantity.

**7. Explain the difference between Merge and Append with examples.**

Merge joins two tables side by side based on matching columns, like SQL joins. Append stacks data vertically—useful when combining data from different time periods or regions.

**8. Difference between DATERPERIOD and DATEADD functions in Power BI.**

DATEADD() shifts dates by a specified interval (e.g., -1 year). DATESBETWEEN() returns a range between two given dates. DATEADD is best for time intelligence; DATESBETWEEN is ideal for range-based filtering.

**9. What are Pivot and Unpivot? Provide examples.**

Pivot transforms row values into columns (e.g., months as headers). Unpivot turns columns into row values—great for converting wide data into a normalized format for better analysis.

**10. Difference between a view and a stored procedure, with examples.**

A view is a virtual table based on a SELECT query, used mainly for reporting. A stored procedure is a precompiled set of SQL statements used to perform operations like insert/update with logic.

**11. SQL Scenario: Write a query involving LEFT join and handling NULL values.**

```
SELECT e.Name, ISNULL(d.DeptName, 'Not Assigned') AS DeptName
FROM Employee e
LEFT JOIN Department d ON e.DeptID = d.DeptID;
```

This ensures unassigned employees are still listed.

**13. Explain the difference between a Star Schema and a Snowflake Schema.**

A Star Schema has denormalized dimension tables with a single join to the fact table—faster and better for Power BI. A Snowflake Schema normalizes dimensions into sub-tables—adds complexity and joins.

**14. What is a many-to-many relationship? How do you resolve it in Power BI?**

Occurs when both related tables have duplicates. Resolved using a bridge (intermediate) table with unique values and setting correct relationships with bi-directional filtering.

**15. Explain the concept of a calculated column and a measure.**

Calculated columns are evaluated row by row and stored in the model. Measures are dynamic, calculated based on filters and slicers—ideal for aggregations and KPIs.

**16. What is the difference between a table and a matrix visual?**

Table is flat with no grouping. Matrix supports row/column grouping and drill-down—ideal for hierarchies like Region → Country → Sales.

**17. How would you handle performance issues in Power BI?**

Use efficient DAX, reduce visuals, apply filters at the query level, implement incremental refresh, avoid bi-directional relationships unless necessary, and use aggregation or summarized tables.

**18. What are the different types of filters available in Power BI, and how do they impact data?**

Visual-Level Filters: Apply to one visual only
Page-Level Filters: Apply to all visuals on a report page
Report-Level Filters: Apply to the entire report
Slicers: Interactive filters for users
Each filter changes the context and affects the calculated results in visuals.

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