* **<https://www.testgorilla.com/blog/power-bi-interview-questions/>**

**Beginner-Level Questions**

1. **What is Power BI and how is it used?**  
   Power BI is a Microsoft data visualization tool that allows users to create interactive reports and dashboards. Interviewers may ask for a general explanation of its components (Power BI Desktop, Service, and Mobile).
2. **Explain the purpose of DAX in Power BI.**  
   DAX (Data Analysis Expressions) is the formula language in Power BI used to create calculated columns and measures, helping in complex calculations and aggregations.
3. **Describe the process of importing data in Power BI.**  
   Power BI’s “Get Data” feature allows connections to various sources like Excel, SQL databases, and cloud services. Explain the different modes (Import, DirectQuery, Live Connection) and their use cases.

**Intermediate-Level Questions**

1. **What are the most common DAX functions used in Power BI?**  
   Essential DAX functions include SUM, AVERAGE, CALCULATE, IF, and FILTER. Interviewers often ask for examples of how you use these functions in business scenarios, such as calculating yearly growth or filtering data for specific conditions.
2. **How does Power BI handle security?**  
   Power BI provides Row-Level Security (RLS), which restricts data access based on user roles. Candidates should explain how RLS is set up and discuss scenarios like limiting data visibility by department or region.
3. **What are the benefits of using Power Query?**  
   Power Query enables ETL (Extract, Transform, Load) operations, allowing data manipulation before analysis. It’s used for data cleansing, merging, filtering, and transforming data from multiple sources, making it crucial for data preparation.

**Advanced-Level Questions**

1. **Explain Query Folding in Power Query.**  
   Query Folding is the process by which Power Query optimizes data transformations by translating them into native SQL queries at the source. This enhances performance, especially when dealing with large datasets.
2. **What is DirectQuery, and when should it be used?**  
   DirectQuery enables real-time data querying directly from the source, suitable for large datasets. However, it has limitations like query performance issues, especially with complex visuals.
3. **How do you optimize Power BI report performance?**  
   Discussing performance optimization techniques like reducing visuals, using aggregations, limiting visuals with filters, and leveraging DAX efficiently can showcase advanced expertise.
4. **What is a Power BI Content Pack?**  
   A content pack is a package of dashboards, datasets, and reports designed for easy sharing within an organization. It enables standardization and consistency of data insights across teams.

**Basic Power BI Questions**

1. **What is Power BI?**
   * **Answer: Power BI is a business analytics tool from Microsoft that allows users to visualize and share insights from their data. It connects to various data sources and helps in transforming raw data into interactive and easy-to-understand reports and dashboards.**
2. **What are the different components of Power BI?**
   * **Answer: Power BI consists of:**
     + **Power BI Desktop (for designing reports)**
     + **Power BI Service (cloud-based for sharing reports)**
     + **Power BI Mobile (for mobile device access)**
     + **Power BI Gateway (for data refreshes from on-premises data sources)**
3. **What is the difference between Power BI Desktop and Power BI Service?**
   * **Answer:**
     + **Power BI Desktop: A Windows application for creating reports and visualizations.**
     + **Power BI Service: A cloud-based platform for sharing, collaborating, and accessing reports and dashboards.**
4. **What are the different types of data sources you can connect to Power BI?**
   * **Answer: Power BI can connect to various data sources such as Excel, SQL Server, Web APIs, SharePoint, Azure, Google Analytics, Oracle, and many more.**
5. **What is a Power BI dashboard?**
   * **Answer: A dashboard is a single-page, interactive view of your data in Power BI, made up of various visualizations (charts, tables, graphs) and data insights that can be drilled down or clicked to explore further.**
6. **Explain Power Query in Power BI.**
   * **Answer: Power Query is a data connection technology that enables you to discover, connect, combine, and refine data across a wide variety of sources.**
7. **What is DAX in Power BI?**
   * **Answer: DAX (Data Analysis Expressions) is a formula language used in Power BI for defining custom calculations, aggregations, and data transformations.**
8. **What are the different types of visualizations available in Power BI?**
   * **Answer: Power BI offers a wide range of visualizations including bar charts, line charts, pie charts, scatter plots, maps, tables, matrix, KPIs, and custom visuals.**
9. **What is the difference between a report and a dashboard in Power BI?**
   * **Answer:**
     + **Report: A collection of visualizations (pages of data insights) typically created in Power BI Desktop.**
     + **Dashboard: A single-page view in the Power BI Service, often composed of visualizations from multiple reports and datasets.**
10. **What is the role of slicers in Power BI?**
    * **Answer: Slicers are visual filters in Power BI that allow users to slice and filter data based on certain attributes (e.g., date, region, product) for a more focused analysis.**

**Intermediate Power BI Questions**

1. **How do you create a relationship between two tables in Power BI?**
   * **Answer: You can create a relationship by going to the "Model" view and dragging and dropping the field from one table onto the corresponding field in the other table. Power BI automatically detects the relationship type (one-to-many, many-to-one).**
2. **What is a calculated column in Power BI?**
   * **Answer: A calculated column is a new column that is created by using DAX expressions to perform calculations on existing data within a table.**
3. **What is a measure in Power BI?**
   * **Answer: A measure is a calculation used to aggregate or summarize data, such as sum, average, or count. It is created using DAX formulas and used in visualizations for real-time analysis.**
4. **Explain the difference between a calculated column and a measure in Power BI.**
   * **Answer:**
     + **Calculated Column: Added to a table, and the value is calculated for each row.**
     + **Measure: Dynamic, calculated on demand based on the filters and context of the report (aggregates data).**
5. **What is the use of the Power BI Query Editor?**
   * **Answer: Power BI Query Editor is used to connect, clean, transform, and shape data before loading it into the Power BI model. It allows data transformations like filtering rows, merging tables, and changing data types.**
6. **What are some of the common Power BI DAX functions?**
   * **Answer: Some common DAX functions are:**
     + **SUM(), AVERAGE(), COUNT() (aggregation functions)**
     + **IF(), SWITCH() (conditional logic)**
     + **CALCULATE(), FILTER() (context and filtering functions)**
7. **Explain the term “Data Model” in Power BI.**
   * **Answer: A data model in Power BI refers to the structure and relationships of the data in Power BI. It includes tables, fields, relationships, and the DAX formulas used to create a meaningful and interactive data analysis environment.**
8. **How would you improve report performance in Power BI?**
   * **Answer: To improve performance:**
     + **Reduce the amount of data loaded into Power BI.**
     + **Avoid complex DAX measures that require heavy computations.**
     + **Use aggregated tables and optimize the data model.**
     + **Disable unnecessary visuals and filters.**
     + **Use query folding in Power Query.**
9. **What is Power BI’s DirectQuery mode?**
   * **Answer: DirectQuery mode allows Power BI to query data in real time from a data source rather than importing the data into Power BI. It is used when dealing with large datasets or when you need the latest data.**
10. **How can you schedule data refresh in Power BI?**
    * **Answer: In Power BI Service, you can schedule data refresh by setting up a refresh schedule in the dataset settings. This can be done on a daily or weekly basis, depending on your needs.**

**Advanced Power BI Questions**

1. **What are row-level security (RLS) and how do you implement it in Power BI?**
   * **Answer: Row-level security (RLS) allows you to restrict data access for certain users based on filters. It can be implemented in Power BI by creating roles and defining DAX-based filters for each role.**
2. **Explain the concept of "Power BI Gateway."**
   * **Answer: A Power BI Gateway acts as a bridge between on-premises data sources and the Power BI Service. It allows for data refresh and live connections to on-premises data.**
3. **What are Power BI Embedded and its use cases?**
   * **Answer: Power BI Embedded allows developers to embed Power BI reports and dashboards into custom applications. It is used when organizations want to provide their users with analytics without accessing the full Power BI interface.**
4. **Explain the difference between “Import” and “DirectQuery” modes in Power BI.**
   * **Answer:**
     + **Import Mode: Data is imported into Power BI for faster analysis.**
     + **DirectQuery Mode: Data remains in the source, and Power BI queries the data in real-time.**
5. **What are bookmarks in Power BI?**
   * **Answer: Bookmarks capture the current state of a report page, including filters, slicers, and visuals. They can be used to create interactive reports and storytelling features.**
6. **What is a Power BI report level filter?**
   * **Answer: A report-level filter applies to all visuals in a report page and is typically used to filter the entire report based on a certain condition or value.**
7. **How do you handle large datasets in Power BI?**
   * **Answer: Strategies for handling large datasets include:**
     + **Using DirectQuery to avoid importing large data sets.**
     + **Aggregating data before importing.**
     + **Implementing incremental data refresh.**
     + **Optimizing data models by removing unnecessary columns.**
8. **What is the difference between a Power BI "workspace" and a "dashboard"?**
   * **Answer:**
     + **Workspace: A container for dashboards, reports, datasets, and dataflows in Power BI Service, allowing collaboration.**
     + **Dashboard: A single-page, interactive view of insights from one or more reports.**
9. **What is the purpose of “What-If Analysis” in Power BI?**
   * **Answer: What-If Analysis helps in modeling scenarios and making decisions based on different assumptions. It allows users to input variables to see how changes in one or more factors impact results.**
10. **How can you add custom visuals in Power BI?**
    * **Answer: Custom visuals can be imported from the Power BI marketplace or developed using the Power BI Visuals SDK and added to reports as additional visualizations.**

**Real-World Power BI Scenario Questions**

1. **How would you handle and transform data from multiple sources in Power BI?**
   * **Answer: You would use Power Query to connect to multiple sources (e.g., SQL Server, Excel), transform the data (e.g., cleaning, filtering, merging), and load it into Power BI’s data model for analysis.**
2. **You need to create a sales performance dashboard that shows sales figures by region and time period. How would you do this in Power BI?**
   * **Answer: You would connect to the sales data, create measures like total sales, and use slicers for time periods and regions. Then, create visuals like bar charts, line graphs, and KPI indicators for an interactive dashboard.**
3. **How would you calculate year-over-year growth in Power BI?**
   * **Answer: You can calculate YoY growth by using DAX measures to compare sales in the current period with the same period from the previous year:**

**YoYGrowth = (SUM(Sales[Amount]) - CALCULATE(SUM(Sales[Amount]), SAMEPERIODLASTYEAR(Sales[Date]))) / CALCULATE(SUM(Sales[Amount]), SAMEPERIODLASTYEAR(Sales[Date]))**

1. **How would you deal with missing data in Power BI?**
   * **Answer: You can handle missing data in Power BI by using Power Query to filter or replace null values with appropriate default values, like zero or the average of other rows.**
2. **How do you handle real-time data streaming in Power BI?**
   * **Answer: Power BI supports real-time data streaming by using Azure Stream Analytics or directly connecting to real-time data sources, allowing dashboards to update live data in real-time.**
3. **You have to create a financial report showing total revenue, expenses, and profit by month. How would you do this in Power BI?**
   * **Answer: You would create measures for total revenue, total expenses, and profit (revenue - expenses) using DAX. Then, use a line chart or a table with month-wise breakdown and visualizations like KPI indicators for profit status.**
4. **What is your approach when sharing Power BI reports with different stakeholders having different access levels?**
   * **Answer: You can create different roles with Row-Level Security (RLS) to restrict data access, and share specific reports or dashboards with each stakeholder based on their access requirements.**
5. **You need to create a report comparing actual vs. target performance for different departments. How would you do this in Power BI?**
   * **Answer: You would import the actual and target performance data into Power BI, create measures for both actual and target values, and visualize the comparison using bar charts, line graphs, and KPI indicators.**
6. **How would you perform data analysis to identify key trends in customer behavior using Power BI?**
   * **Answer: By analyzing customer data (e.g., purchase history, frequency, region), you would use DAX measures to identify key metrics, apply visualizations like scatter plots and trendlines, and segment data using slicers to uncover trends.**

**Advanced Performance and Optimization Questions**

1. **What are some strategies to improve the performance of a Power BI report with a large dataset?**
   * **Answer:**
     + **Use aggregations.**
     + **Limit the data loaded (apply filters).**
     + **Optimize DAX queries.**
     + **Use DirectQuery when appropriate.**
2. **How do you create an incremental data refresh in Power BI?**
   * **Answer: Incremental data refresh is set up in Power BI Service, where only the data that has changed is refreshed, reducing load time and improving performance for large datasets.**
3. **What is Power BI’s dataflow feature?**
   * **Answer: Dataflows in Power BI allow you to create reusable data transformation pipelines in Power BI Service, making it easier to manage and share datasets across multiple reports.**
4. **How do you deploy a Power BI solution in an enterprise environment?**
   * **Answer: This involves using Power BI Service, creating workspaces, publishing reports, configuring security (RLS), and setting up scheduled refresh for data and user access controls.**
5. **Explain how Power BI integrates with other Microsoft tools like Excel, SharePoint, and Teams.**
   * **Answer: Power BI integrates with Excel for importing data, SharePoint for storing reports and dashboards, and Teams for collaboration and sharing Power BI reports within team chats or channels.**
6. **What is Power BI’s integration with Azure?**
   * **Answer: Power BI integrates with Azure for various cloud services, such as using Azure SQL Database for data storage, Azure Machine Learning for predictive analytics, and Azure Data Lake for big data processing.**
7. **What is Query Folding in Power BI, and why is it important?**
   * **Answer: Query Folding refers to the ability of Power BI to push transformations to the data source (e.g., SQL Server), reducing the amount of data transferred to Power BI and improving performance.**
8. **Explain Power BI’s use of the “star schema” for creating data models.**
   * **Answer: A star schema is a database design technique where fact tables are connected to dimension tables. It is commonly used in Power BI for efficient and scalable data modeling.**
9. **What is the role of aggregation tables in Power BI?**
   * **Answer: Aggregation tables are used to store summarized or pre-aggregated data to optimize query performance by reducing the complexity and size of the data being queried.**
10. **How can you secure data in Power BI?**
    * **Answer: You can secure data in Power BI by implementing Row-Level Security (RLS), using encryption, and controlling access through Power BI Service’s security settings and permissions.**

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<https://youtu.be/u7yAypveDRo?si=cL8t83Dnbc35Qx8j> **Live Interview of a Fresher | Power BI😲**

**Power BI Mock Interview Answers**

**<https://www.youtube.com/watch?v=yFKg2aF6L-E>**

**Power bi case study asked**

**<https://youtu.be/yhm7mvJKPMg?si=_p5B361fbMcDTFng>**