Power BI Interview questions based on beginners, intermediates, and advanced levels

Beginner Level:

1. What is Power BI used for in the context of data analysis and visualization?

2. Explain the concept of a "dashboard" in Power BI. How is it different from a report?

3. How do you import data into Power BI from a CSV file?

4. What are the basic types of visualizations available in Power BI, and how would you choose the right one for your data?

5. What is the purpose of the "Transform Data" step in Power BI, and how would you use it?

6. Describe the difference between a measure and a calculated column in Power BI. Provide an example of when you might use each.

7. How do you create a simple line chart to visualize trends over time in Power BI?

8. What is the role of the Power BI Desktop, and how does it relate to the Power BI service?

9. Explain the concept of a slicer in Power BI. How does it enhance interactivity in reports?

10. How can you share a Power BI report with others? What are the options available for distribution?

Intermediate Level:

1. How do you handle data modeling in Power BI, and what considerations should be taken into account?

2. Explain the difference between row-level security and role-level security in Power BI. How are they implemented?

3. How can you use Power Query to clean and transform data efficiently? Provide an example.

4. What are the benefits of using parameters in Power BI, and how do they enhance report flexibility?

5. Describe the concept of drillthrough in Power BI. When and how would you implement it?

6. How can you create a custom hierarchy in Power BI, and why might you need to do so?

7. What is DAX (Data Analysis Expressions), and how is it used in Power BI? Provide a simple DAX formula example.

8. Explain the importance of data profiling in Power BI. How does it impact data quality?

9. How do you integrate external data sources into Power BI, and what considerations should be made during this process?

10. Discuss the role of the Power BI Gateway in connecting on-premises data sources to the Power BI service.

Advanced Level:
1. How would you optimize the performance of a Power BI model with large datasets, considering both data refresh and report rendering?

2. Explain the concept of composite models in Power BI. When and why might you use them?

3. Discuss the limitations and best practices of using Power BI with real-time data.

4. How can you implement advanced analytics and machine learning models within Power BI reports?

5. Describe the process of setting up incremental data refresh in Power BI. What are the benefits?

6. Discuss the options available for row-level security with dynamic filtering based on user roles in Power BI.

7. Explain the differences between Power BI Pro and Power BI Premium licensing models. When would you recommend one over the other?

8. How can you use Power BI REST APIs for automation and integration with other systems?

9. Discuss the considerations and strategies for optimizing Power BI visuals and dashboards for accessibility.

10. In a scenario with multiple data sources and complex transformations, how would you design an efficient and maintainable Power BI solution?

Power BI interview questions and answers

1. Question: What is Power BI?

Answer: Power BI is a business analytics service by Microsoft that provides interactive visualizations and business intelligence capabilities with an interface simple enough for end-users to create their reports and dashboards.

2. Question: Differentiate between Power BI Desktop, Power BI Service, and Power BI Mobile.

Answer: Power BI Desktop is used for creating reports, Power BI Service (or Power BI Online) is the cloud service for sharing and collaborating on reports, and Power BI Mobile allows users to access reports on mobile devices.

3. Question: Explain the role of Power Query in Power BI.

Answer: Power Query is used for data transformation and shaping. It allows users to connect to various data sources, clean and transform data before loading it into Power BI for analysis.

4. Question: What is DAX in Power BI, and why is it important?

Answer: DAX (Data Analysis Expressions) is a formula language used for creating custom calculations in Power BI. It is important as it enables users to create sophisticated measures and calculated columns.

5. Question: How do you create relationships between tables in Power BI?

Answer: In Power BI Desktop, go to the "Model" view, drag and drop fields from one table to another to create relationships based on common keys.

6. Question: What is the difference between a calculated column and a measure in Power BI?

Answer: A calculated column is a column added to a table, computed row by row, while a measure is a formula applied to a set of data, providing a dynamic calculation based on the context.

7. Question: How can you implement row-level security in Power BI?

Answer: Row-level security in Power BI can be implemented by creating roles in Power BI Desktop and defining filters at the row level based on user roles.

8. Question: Explain the purpose of the Power BI Gateway.

Answer: The Power BI Gateway allows for a secure connection between Power BI services and on-premises data sources. It facilitates refreshing datasets and running scheduled refreshes.

9. Question: What is a Power BI dashboard?

Answer: A Power BI dashboard is a single-page, interactive view of your data that provides a consolidated and visualized summary of key metrics. It can include visuals, images, and live data.

10. Question: How can you share a Power BI report with others?

 Answer: Power BI reports can be shared through the Power BI service. Publish the report to the Power BI service, and then share it with specific users or distribute it widely within an organization.