Power BI interview questions and there Professional answers

1. **What is Power BI, and what are its main components?**

Answer: Power BI is a business intelligence tool that provides interactive visualizations and analytics capabilities. Its main components include Power BI Desktop, Power BI Service, Power BI Mobile, Power Query, and Power BI Gateway.

2. **How does Power BI differ from other BI tools like Tableau?**

Answer: Power BI integrates seamlessly with Microsoft products, is cost-effective, and focuses on data modeling with DAX and Power Query. Tableau excels in advanced visualizations and user interface design but is often more expensive and requires additional tools for data modeling.

3. **What are the different connectivity modes available in Power BI?**

Answer:

Import: Data is imported into Power BI for processing.

DirectQuery: Data remains in the source; queries are sent in real time.

Live Connection: Similar to DirectQuery but specific to SSAS (SQL Server Analysis Services).

Composite Mode: Combines Import and DirectQuery for flexibility.

4. **Explain the purpose of DAX (Data Analysis Expressions) in Power BI.**

Answer: DAX is a formula language used in Power BI to create custom calculations, measures, and columns, enabling complex data analysis and aggregation.

5. **What is Power Query, and how is it used in Power BI?**

Answer: Power Query is a data transformation tool within Power BI. It allows users to clean, transform, and load data from various sources into a structured format for analysis.

6. **Describe the process of creating a calculated column and a measure in Power BI.**

Answer:

Calculated Column: Created using DAX, adds a new column in a table, calculated row by row.

Measure: A dynamic calculation based on aggregation or user interaction.

Example:

Calculated Column: Profit = Sales – Cost

Measure: Total Sales = SUM(Sales)

7. **What are the various types of filters available in Power BI?**

Answer: Visual Filters

Page Filters

Report Filters

Drillthrough Filters

Cross Filters

8. **How can you implement row-level security in Power BI?**

Answer: Use roles in Power BI Desktop to define security rules. Then, publish the report to the Power BI Service and assign roles to users.

9. **What are content packs, and how are they used in Power BI?**

Answer: Content packs are pre-packaged collections of dashboards, reports, and datasets that can be shared with users or groups, allowing quick access to key insights.

10. **Explain the difference between Import and DirectQuery modes.**

Answer:

Import: Data is stored in Power BI; faster but uses memory.

DirectQuery: Queries the data source in real time; slower but ideal for large datasets.

11. What is a Power BI dashboard, and how does it differ from a report?

Answer: A dashboard is a single-page view of key metrics and visuals, typically created by pinning elements from multiple reports. A report, on the other hand, is multi-page and provides detailed insights.

12. How do you handle performance optimization in Power BI reports?

Answer: Optimize DAX queries and relationships.

Reduce the size of datasets.

Use appropriate aggregations.

Minimize the use of visuals with complex calculations.

13. What are custom visuals, and how can you add them to your Power BI reports?

Answer: Custom visuals are user-developed visualizations not included by default. They can be imported from the Power BI Marketplace.

14. Describe the steps to publish and share a Power BI report.

Answer: Publish the report from Power BI Desktop to the Power BI Service.

Configure sharing permissions in the Power BI Service.

Share via links, email, or embedding in applications.

15. What is the Power BI service, and how does it integrate with Power BI Desktop?

Answer: The Power BI Service is a cloud-based platform for sharing, collaborating, and managing Power BI reports and dashboards. Reports created in Power BI Desktop are published to the service for broader access and collaboration.