1. **What is Power BI?**

**Answer: -** Power BI is a Business Intelligence (BI) tool developed by Microsoft that enables users to connect to data, transform it, and create interactive dashboards, reports, and visualizations to make informed business decisions.

**2. What are the main components of Power BI?**

**Answer: -** Power BI includes several components:

* Power BI Desktop – for report creation and data modeling.
* Power BI Service – cloud platform for sharing reports and dashboards.
* Power BI Mobile – mobile app for accessing reports and dashboards.
* Power Query – for data transformation
* Power Pivot – for data modeling and DAX·

**3. Power BI can connect to which data sources?**

**Answer: -** The data source is the point from which the data has been retrieved.

* File Based Sources: - Excel, CSV, PDF, Folder
* Database Sources: - MySQL, SQL Server, Microsoft Access
* Cloud Sources: - OneDrive, Google Analytics
* Power Platform & Azure: - Power BI Datasets, Azure SQL Database and many more

**4. What are the available formats?**

**Answer: -** Power BI is available in various formats:

* Power BI desktop: For the desktop version
* Power BI mobile app: For using the visualizations on mobile OS and share it
* Power BI services: For online SaaS (Software as a Service).

**5. What are the available Views in Power BI?**

**Answer: -** Power BI Desktop provides three main views that help users with different stages of report building:

* Report View: - The report view used for designing and building interactive reports and dashboards.
* Data View: - Used to explore and clean your data after it has been loaded.
* Model View: - Used to define and manage relationships between tables in your data model.

In short, Report View for design, Data View for inspection, and Model View for relationship management

**6. What is DAX in Power BI?**

**Answer: -** DAX (Data Analysis Expressions) is a formula language used in Power BI to perform calculations on data. It includes functions like SUM, CALCULATE, FILTER, RELATED, etc., and is used to create measures and calculated columns.

**7. What is Power BI Desktop and Power BI Service?**

**Answer: -** Power BI Desktop is a free application used for data import, modeling, and visualization creation. Power BI Service is a cloud-based platform where users can publish, share, and collaborate on reports and dashboards.

**8. What is a Dashboard in Power BI?**

**Answer: -** A dashboard is a single-page canvas that contains visualizations from one or more reports.

**9. What is Power Query in Power BI?**

**Answer: -** Power Query is the tool used to extract, transform, and load (ETL) data before creating reports. It is accessible through the Power Query Editor.

**10.Where is Data Stored in Power BI?**

**Answer: -** Power BI stores data in two main places:

* · In Power BI Service (Cloud): - When data is published from Power BI Desktop to the Power BI Service (cloud), it's stored in:
  + Azure Blob Storage: When users upload the data, it gets stored here.
  + Azure SQL Database: All the metadata and system artifacts are stored here.
* In Power BI Desktop: - If you're working locally, the data is stored in .pbix file.

**11.What are the building blocks of Power Bi?**

**Answer: -** The major building blocks of Power BI are: -

* Datasets: - A dataset is a collection of data loaded into Power BI from one or more sources like SQL Server, Text, XML etc.
* Visualizations: - A visual is a graphical representation of data in the form of maps, charts or tables.
* Reports: - A report is a multi-page canvas that contains one or more visualizations based on a dataset.
* Dashboards: - A dashboard is a single-page representation of reports made of various datasets.

**12.When should you use a pie chart vs. a bar chart?**

**Answer:-**

* Use a pie chart to show the percentage or proportion of a whole (max 4–5 slices for clarity).
* Use a bar chart to compare different categories with numerical values.

**13. What is the difference between a stacked and clustered column chart?**

**Answer:-** The difference between Stacked and clustered column :-

* Stacked Column Chart: Shows data in one column split into segments (shows part-to-whole relationships).
* Clustered Column Chart: Groups columns side-by-side for easy comparison.

**14.How is an Area Chart different from a Line Chart?**

**Answer:-** An Area Chart fills the space below the line with color to emphasize volume, while a Line Chart only shows the trend over time with lines.

**15.When should you use a Pie Chart?**

**Answer:-** When you want to show part-to-whole relationships with fewer categories (3–5 slices).

**16.Difference between Pie and Donut Charts?**

**Answer:-** A Pie Chart shows data as a whole circle divided into slices, while a Donut Chart has a hole in the center and is better for readability and adding labels inside.

**17.What is a Waterfall Chart used for?**

**Answer:-** A Waterfall Chart is used to show how sequential positive or negative values affect a starting value, helping visualize the cumulative impact on totals (e.g., profit breakdown).

**18. What does a Funnel Chart represent?**

**Answer:-**  Used to represent stages in a process (like a sales pipeline), showing how data decreases across steps.

**19. What does a Ribbon Chart represent?**

**Answer:-** A Ribbon Chart shows rank and changes in rank over time across categories, with ribbons flowing to highlight which category leads or trails at each point.

**20.What are the main steps in Power Query?**

**Answer:-** 1. Connect to data source.

2. Transform data (cleaning, filtering, merging, etc.)

3. Load transformed data into Power BI model.

**21.What is the difference between Power Query and DAX?**

**Answer:-**

* Power Query: Used for data transformation (ETL) before loading into the model
* DAX: Used for calculations and measures after data is loaded into the model.

**22.How do you remove duplicate rows in Power Query?**

**Answer:-** Use the "Remove Duplicates" option in the "Home" tab after selecting one or more columns.

**23. What is the difference between “Close & Load” and “Close & Apply”?**

**Answer:-** Power BI: “Close & Apply” applies the changes to the model.

Excel Power Query: “Close & Load” loads data into Excel.

**24.How do you handle null values in Power Query?**

**Answer:-**  Use options like:

* Replace null with a value
* Remove rows with nulls
* Fill up/down null values

**25.What is the use of the “Fill Down” or “Fill Up” feature?**

**Answer:-** Used to fill null values in a column with the value above or below it — often used in hierarchical data.

**26 Stacked Bar Chart?**

**Answer:-** What? - Horizontal bars showing category values

When?- Comparing values across categories

Why?- Easy to compare multiple long-named categories

What do we know?- We can identify:

• Total value for each category

• How much each sub-category contributes

• Relative comparison across categories

**27 Stacked Column Chart?**

**Answer:-** What? - Vertically bars showing category values

When?- To show the total value along with a breakdown into sub-groups

across categories (like time periods).

Why?- Helps visualize both overall trends and category-wise

contribution in one view.

What do we know?- We can see the total for each category, how each

sub-category contributes to that total, and how the

distribution changes across the axis (e.g., months, products).

**28 Clustered Column Chart and Clustered Bar Chart?**

**Answer:-**

**Clustered Column Chart**

What? - A vertical chart that shows values grouped by categories and sub-categories side by side.

When?- When comparing multiple series (e.g., products, regions) across

a common category (e.g., months).

Why?- Easy to compare values across multiple categories and see

Patterns.

What do we know?- Shows how each category performs in different

groups, making comparison across time or

segments clear.

**Cluster Bar Chart:**

What? -A horizontal version of the clustered column chart.

When?- When category names are long or there are many items to compare.

Why?- Easier to read category names and compare side-by-side value in horizontal layout.

What do we know?- Ideal for comparing large or textual categories more

clearly than a column chart.

**29 100% Stacked Bar/Column Chart?**

**Answer:-**

**100% Stacked Bar Chart:**

What?- A horizontal version that shows the

percentages contribution of each value to a total across categories.

When?- When category names are long or you want to display comparison in a

horizontal layout.

Why?- Better readability for longer category labels and good for comparing

proportions.

What do we know?- Focus is on the relative share of each sub-category, not the

total size or value.

**100% Stacked Column Chart:**

What?- A vertical chart that shows the percentage contribution of each value to a total (100%) across categories.

When?- When you want to compare relative proportions (not actual values) across

categories.

Why?- Useful to analyze part-to-whole relationships over time or groups.

What do we know?- It helps visualize percentage distribution, not absolute values,

of sub-categories across main categories.

**30 Line Chart?**

**Answer:-**  What?- A chart that connects data points with a continuous line to show

trends over a period of time.

When? - When tracking changes, trends, or patterns over time (days, months, years).

Why?- It clearly shows movement or progression of values and helps identify rising or falling trends.

What do we know? -Useful for time series analysis

**31 Area Chart?**

**Answer:-** What?- Line chart with area fill

When? -When you want to show trends over time along with the

volume (quantity) visually.

Why? -Highlights both the trend and total value over time

What do we know?-It helps visualize both the direction of change and the volume or total over a period.

**32 Ribbon Chart?**

**Answer:-** What?- It shows ranking and changes in rank of values across

categories over time.

When? -Showing changes in rankings over time

Why?-To track the movement or shift of top or bottom performers.

What do we know? -How rankings shift from one period to another.

**33 Funnel Chart?**

**Answer:-** What?- It is a type of chart that displays data in progressive stages,

usually showing decreasing values at each stage, shaped like a funnel.

When?-When you want to track how data moves through stages in a

process.

Why?-To analyze conversion or drop-off at each stage.

What do we know?-The number of items or people at each stage.

**34 Waterfall Chart?**

**Answer:-** What? -A waterfall chart displays how an initial value is changed by a

series of positive and negative values to reach a final total.

Why? -To clearly show the individual contributions to a total and how

values add or subtract step-by-step.

When?- When you need to explain the cumulative effect of changes,

such as in financial results or sales analysis.

What do we know? -It helps understand the impact of each component

on the overall outcome in a simple, visual way.

**35 Pie Chart and Donut Chart?**

**Answer:-**

**Pie Chart:-** What?-A pie chart shows data as slices representing

parts of a whole.

When?- Use when comparing a small number of

categories within a total.

Why?-To visualize proportion and highlight category

contributions.

What do we know?- It helps quickly see which

categories dominate or contribute

Least.

**Donut Chart:-** What?-A donut chart is a circular chart like a pie chart but with a blank center.

When?- Use when you want to show part-to-whole relationships with space for labels or totals in the center.

Why?-To visualize proportions while improving readability and allowing space for additional info.

What do we know?-It functions like a pie chart but offersbetter design flexibility and centra labeling.

**36 Map Chart , Filled Map , Tree Map?**

**Answer:- Map Chart:-** What?-A map chart displays data geographically using

countries, states, or regions.

When?-Use when data is location-based and you want to

compare values across regions.

Why?-To visualize geographical trends and regional

differences effectively.

What do we know?-It helps identify patterns, hotspots, or

outliers across locations at a glance.

**Filled Map Chart:-** What?-A filled map colors geographic regions based

on data values.

When?-Use when showing intensity or distribution of

values across locations.

Why?-To highlight regional differences and patterns

clearly on a map.

What do we know?-It visually emphasizes which areas

have higher or lower values using

color shading.

**Tree Map Chart:-** What?-A tree map displays hierarchical data as nested

rectangles sized and colored by value.

When?-Use when you want to show part-to-whole

relationships within categories and

subcategories.

Why?-To compare proportions within a hierarchy in a

compact, space-efficient way.

What do we know?-It helps quickly identify largest or

smallest segments and their

structure within the data.

**37 Gauge Chart?**

**Answer:-** What?- A gauge chart shows progress or performance against a target using a dial or needle.

When?-Use when you need to display a single value within a range.

Why?-To quickly show how close a value is to a set target or limit.

What do we know?- How a single value performs against a target or

range at a glance

**38 What is a Card?**

**Answer:-** A Card in Power BI is a visual used to display a single data point, such as a total, average, or KPI value, in a clear and focused way**.**

**39 What is a multi-card?**

**Answer:-** In Power BI, a Multi-Card visual is a type of visual that displays multiple single values (cards) in one visual each representing a different measure or field.

**40 What is a Table?**

**Answer:-** A table in Power BI is a visual that displays data in rows and columns, just like an Excel sheet, allowing you to see detailed, raw data from your dataset.

**41 What is matrix?**

**Answer:-** Matrix in Power BI is a visual that shows data in a table format with rows, columns, and values, similar to a pivot table in Excel. It helps you summarize and compare data using totals, groups, and hierarchies.

**42 What is a RANK Function?**

**Answer:-** The RANK function in Power BI gives a number to each value to show its position, like 1st, 2nd, 3rd, based on size.

**43 What is a RANKX Function?**

**Answer:-** The RANKX function in Power BI (DAX) is used to rank items in a table based on a specific value or measure, like sales or score.

**44 What is a CALCULATE Function?**

**Answer:-** The CALCULATE function in DAX is used to modify or apply filters to a measure or expression.

**45 What is ALL Function?**

**Answer:-** The ALL function removes filters from a column or table, so you can see or calculate the total value without filters.