Q1. What do you mean by BI? Explain.

Business intelligence (BI) is software that ingests business data and presents it in user-friendly views such as reports, dashboards, charts and graphs.

Q2. How Power-BI helps in BI, and how does it help Analysts? Explain.

Power BI is a powerful business intelligence (BI) tool created by Microsoft. It provides a user-friendly interface for data visualization, data analysis, and data reporting. Power BI helps in BI by allowing users to gather data from multiple sources, transform and clean the data, and then create interactive reports and dashboards that can be shared with others. Power BI helps Analysts in several ways, including:

Data gathering and preparation: Power BI allows analysts to gather data from multiple sources, including databases, spreadsheets, and cloud-based services. It also provides tools to clean and transform the data, making it easier to work with.

Data visualization: Power BI allows analysts to create interactive visualizations that can help them understand complex data. They can create charts, graphs, maps, and other visualizations that can be customized to meet their needs.

Data analysis: Power BI provides powerful data analysis tools that allow analysts to perform complex calculations and create advanced data models. They can use these tools to discover patterns, identify trends, and uncover insights that might not be apparent from the raw data.

Collaboration and sharing: Power BI allows analysts to share their reports and dashboards with others, making it easier to collaborate with colleagues and stakeholders. They can also use Power BI to create automated alerts that notify them when data changes or when specific thresholds are met.

Overall, Power BI helps analysts by providing them with a comprehensive set of tools for data gathering, preparation, analysis, and visualization. It allows them to work more efficiently and effectively, which can lead to better insights and better decision-making.

Q3. Explain Descriptive analytics?

Descriptive analytics is a branch of analytics that involves the examination of historical data to understand what has happened in the past. It involves collecting, organizing, summarizing, and presenting data in a way that allows analysts to draw insights and conclusions about a particular phenomenon.

Descriptive analytics is primarily concerned with answering questions such as "What happened?", "When did it happen?", "How often did it happen?" and "What are the key trends and patterns in the data?" It is a fundamental step in the analytics process as it provides a baseline for further analysis and helps analysts understand the current state of affairs.

Descriptive analytics techniques include measures of central tendency such as mean, median and mode, as well as measures of variability such as range, variance and standard deviation. Data visualization tools such as charts, graphs, and heat maps can also be used to help identify patterns and trends in the data.

Descriptive analytics is commonly used in a variety of fields, including business, healthcare, education, and social sciences. In business, for example, descriptive analytics can be used to analyze sales data to understand customer behavior and identify opportunities for growth. In healthcare, descriptive analytics can be used to track disease outbreaks and monitor patient health outcomes.

Overall, descriptive analytics is an important tool for understanding and interpreting historical data. It is often the first step in the analytics process and provides a foundation for more advanced forms of analysis such as predictive and prescriptive analytics.

Q4. Explain Predictive analytics?

Predictive analytics is a branch of analytics that involves using statistical algorithms and machine learning techniques to analyze historical data and make predictions about future events. It uses historical data and data patterns to make predictions about future events and to identify potential opportunities and risks.

Predictive analytics can be used in a variety of fields such as finance, marketing, healthcare, and cybersecurity. For example, in finance, predictive analytics can be used to forecast stock prices, identify potential investment opportunities, and manage risk. In marketing, predictive analytics can be used to forecast customer behavior, personalize marketing messages, and identify new target markets.

To carry out predictive analytics, data is collected from various sources and pre-processed to remove any inconsistencies or errors. The data is then analyzed using statistical models such as regression analysis, decision trees, and neural networks. These models use historical data to identify patterns and relationships in the data and use this information to make predictions about future events.

The accuracy of predictive analytics models can be improved through a process called model training, where the model is tested and refined using new data. This process helps to ensure that the model is accurate and reliable in making predictions.

Overall, predictive analytics helps organizations make better decisions by providing insights into future events and identifying opportunities and risks. It is a valuable tool for organizations that want to stay ahead of the competition and make informed decisions based on data-driven insights.

Q5. Explain perspective analytics?

Perspective analytics is a relatively new branch of analytics that involves analyzing data from various perspectives to gain a comprehensive understanding of a particular phenomenon or problem. It goes beyond traditional analytics approaches that only focus on one or two dimensions of data analysis.

Perspective analytics involves analyzing data from multiple perspectives, including temporal, spatial, demographic, and psychographic perspectives, to identify patterns and trends that may not be apparent when analyzing data from a single perspective. This approach enables analysts to gain a more comprehensive understanding of the factors that influence a particular phenomenon and to identify new opportunities and challenges.

Q6. Write five real-life questions that PowerBi can solve.

The five real-life questions that PowerBi can solve is as follows,

1. How can we improve sales performance across different regions and product lines?
2. Which products are currently underperforming and need to be discontinued or repositioned in the market?
3. What are the top customer complaints and how can we address them to improve customer satisfaction?
4. How can we optimize our supply chain to reduce costs and improve delivery times?
5. Which marketing channels are generating the highest return on investment (ROI) and how can we allocate our marketing budget more effectively?