1. What do you mean by BI? Explain.

Power BI is a strong business analytical tool collection of software services, apps, and connectors that work together to creates useful insights and reports by collecting data from unrelated sources. This data can be extracted from any source like Microsoft Excel or hybrid data warehouses. Power BI lets you easily connect to your data sources, visualize and discover what's important, and share that with anyone or everyone you want

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

Following are the reasons why Power BI is so popular and needed in the BI domain:

1. Access to Volumes of Data from Multiple Sources with Multiple Formats.
2. Interactive UI/UX Features with drag and drops functionality.
3. Power BI allows real-time dashboard updates.
4. Integrate with other Microsoft solutions, such as Azure data services.
5. It allows data exploration using a natural language query.
6. It provides features for dashboard visualization regularly updated with the community.
7. It provides pre-built dashboards and reports for SaaS solutions.
8. Alerts can be set up on key performance indicators (KPIs) to update the users on different metrics and measurements.

3. Explain Descriptive analytics?

It answers the question, **"What happened?".**

Descriptive analytics is the process of using current and historical data to identify trends and relationships. It's sometimes called the simplest form of data analysis because it describes trends and relationships but doesn't dig deeper.

Example:

a. **Traffic and Engagement Reports** (tracks engagement in the form of social media analytics or web traffic)

b. **Financial Statement Analysis**

c. **Demand Trends** (identify trends in customer preference and behavior and make assumptions about the demand for specific products or services.)

4. Explain Predictive analytics?

It answers the question, **"What might happen in the future?".**

Predictive analytics is the use of data to predict future trends and events. It uses historical data to forecast potential scenarios that can help drive strategic decisions.

Example:

a. **Finance: Forecasting Future Cash Flow** (Using historical data from previous financial statements, as well as data from the broader industry, you can project sales, revenue, and expenses to craft a picture of the future and make decisions.)

b. **Entertainment & Hospitality: Determining Staffing Needs** (determine venue staffing needs at specific times.)

c. **Marketing: Behavioral Targeting** (forecast sales trends at various times of the year and plan campaigns accordingly.)

5. Explain perspective analytics?

It answers the question, **"What should we do next?".**

Prescriptive analytics is the process of using data to determine an optimal course of action. By considering all relevant factors, this type of analysis yields recommendations for next steps. Because of this, prescriptive analytics is a valuable tool for data-driven decision-making.

Example:

a. **Venture Capital: Investment Decisions.**

b. **Content Curation: Algorithmic Recommendations** (a social media platform or dating app, you've likely experienced prescriptive analytics firsthand through algorithmic content recommendations.)

c. **Product Management: Development and Improvement**

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

a. **Demand Trends:** identify trends in customer preference and behavior and make assumptions about the *"what demand for specific products or services."*

b. A Telephone network organization may look around for a reason for *"why customers shift to other networks?"*

c. **Explaining Customer Behavior:-** For companies that collect customer data, understanding *"why customers do what they do?"*. These insights can be used to improve products and user experience (UX), reposition brand messaging, and ensure product-audience fit.

d. **Lead Scoring(sales) -** Lead scoring is the process of assigning a point value to various actions along the sales funnel, enabling you, or an algorithm, to rank leads based on *"how likely they are to convert into customers?".*

e. **Progress to Goals:-** Reporting on progress toward key performance indicators (KPIs) can help your team understand *"if efforts are on track or if adjustments need to be made".*