Power BI Assignment 1

1.What do you mean by BI? Explain.

Ans- BI refers to Business Intelligence. Business intelligence combines business analytics, data mining, data visualization, data tools and infrastructure, and best practices to help organizations make more data-driven decisions.

Businesses and organizations have questions and goals. To answer these questions and track performance against these goals, they gather the necessary data, analyze it, and determine which actions to take to reach their goals.

On the technical side, raw data is collected from business systems. Data is processed and then stored in data warehouses, the cloud, applications, and files. Once it's stored, users can access the data, starting the analysis process to answer business questions.

BI platforms also offer data visualization tools, which convert data into charts or graphs, as well as presenting to any key stakeholders or decision-makers.

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

Ans- Power BI is a BI and data visualization tool that leverages visual analytics to empower people and organizations in making the most of their data. The engaging visualizations created in Power BI take the excel workflow to the next level and help stakeholders make sense of the massive amounts of data available.

Role of Power BI in helping Analysts

a) To extract data insights without coding
b) Democratize data insights with dashboards
c) Tell data stories with advanced data visualizations
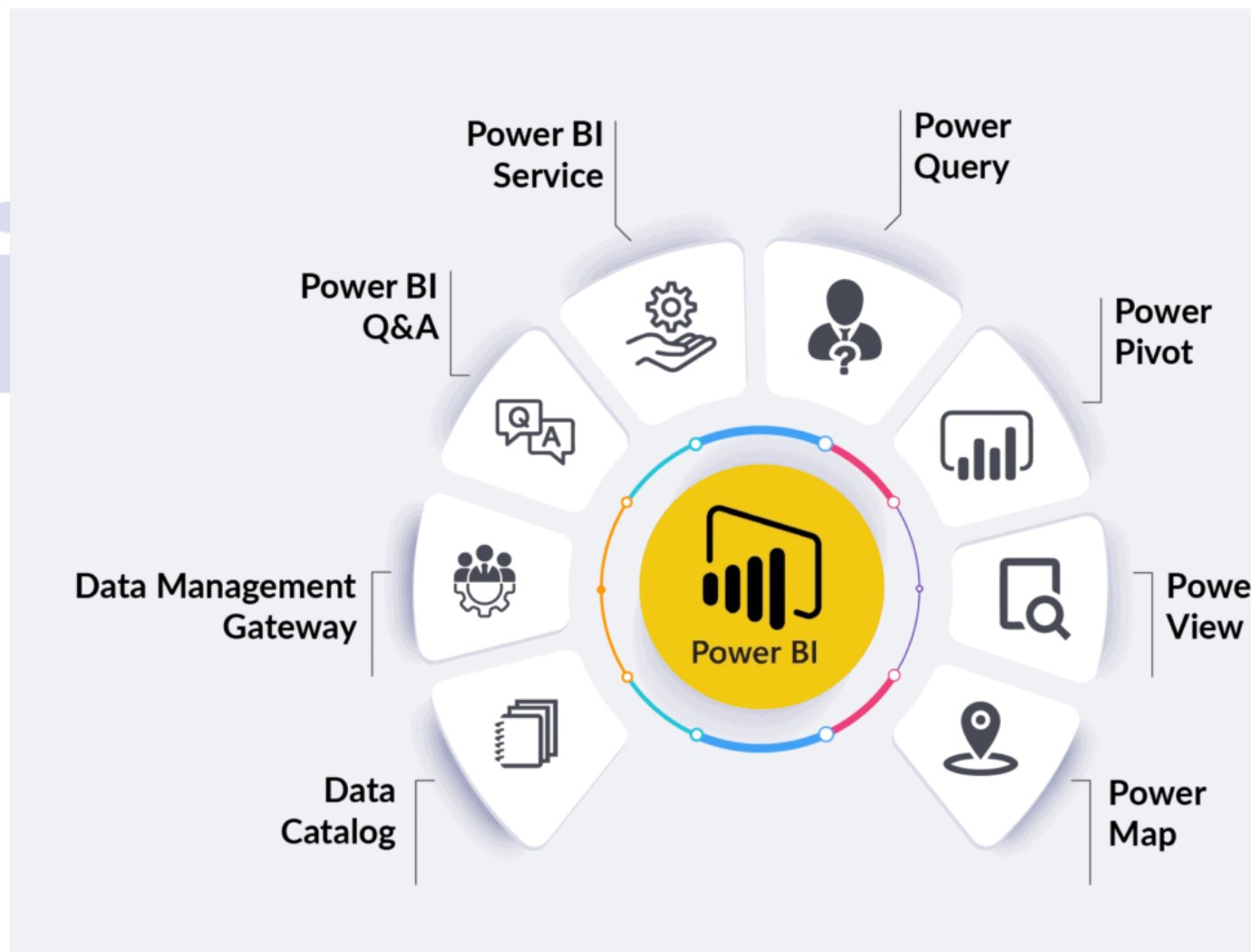
3. Explain Descriptive analytics?

Ans- Descriptive analytics refers to the interpretation of historical data to better understand changes that occur in a business. Descriptive analytics describes the use of a range of historic data to draw comparisons with other reporting periods for the same company (i.e. quarterly or annually) or with others within the same industry.

It involves the exploration, interpretation, and presentation of data to describe what has happened in a given timeframe or situation. Descriptive analytics aims to answer questions such as "What happened?" and "What is the current state?"
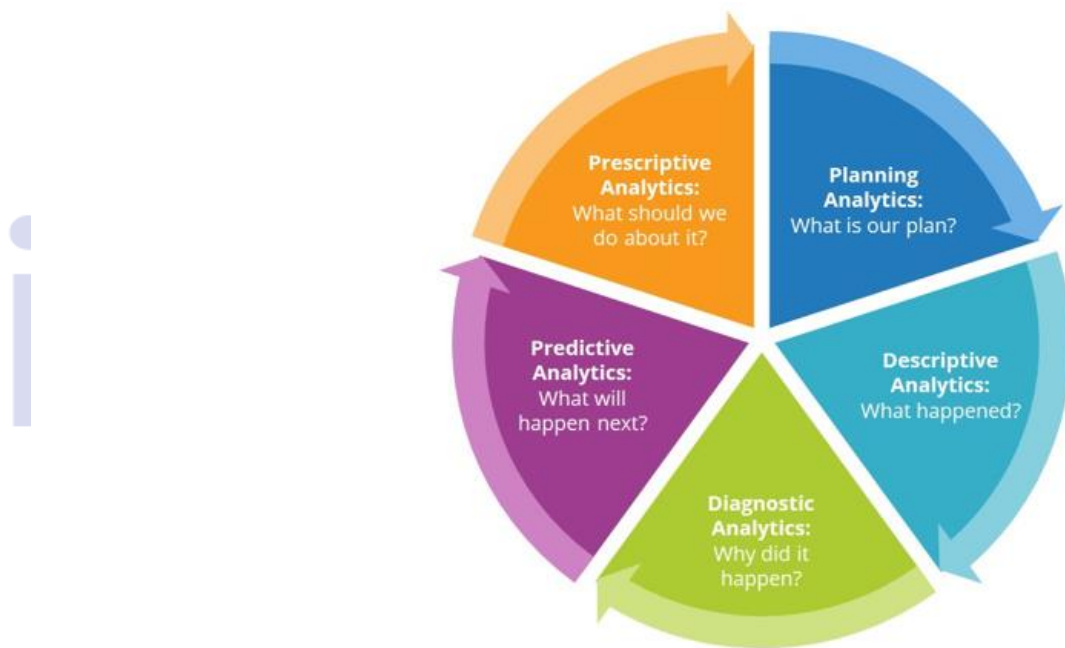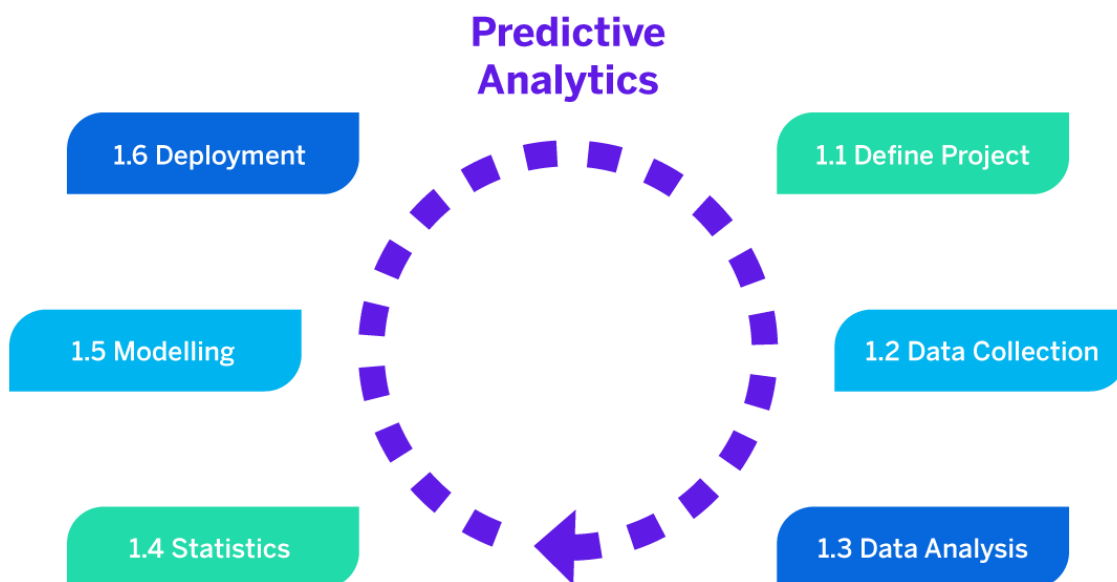
4.Explain Predictive analytics?

Ans- Predictive analytics is a field of analytics that utilizes historical data, statistical algorithms, and machine learning techniques to make predictions or forecasts about future events or outcomes. It involves analyzing patterns and relationships in past data to identify trends and create models that can be used to predict future behavior or events.

- Predictive analytics uses statistics and modeling techniques to determine future performance.
- Industries and disciplines, such as insurance and marketing, use predictive techniques to make important decisions.
- Predictive models help make weather forecasts, develop video games, translate voice-to-text messages, customer service decisions, and develop investment portfolios.
- People often confuse predictive analytics with machine learning even though the two are different disciplines.
- Types of predictive models include decision trees, regression, and neural networks.

Predictive Analytics Process

Predictive Analytics

- 1.6 Deployment
- 1.5 Modelling
- 1.4 Statistics
- 1.1 Define Project
- 1.2 Data Collection
- 1.3 Data Analysis

5.Explain perspective analytics?

Ans- Prescriptive analytics is a branch of analytics that goes beyond descriptive and predictive analytics. While descriptive analytics explains what has happened in the past, and predictive analytics forecasts what is likely to happen in the future, prescriptive analytics focuses on providing recommendations or prescribing actions to achieve desired outcomes.

Prescriptive analytics leverages advanced techniques such as optimization, simulation, machine learning, and mathematical modeling to analyze data, identify patterns, and make informed decisions. It takes into account various constraints, objectives, and possible actions to determine the best course of action or decision.
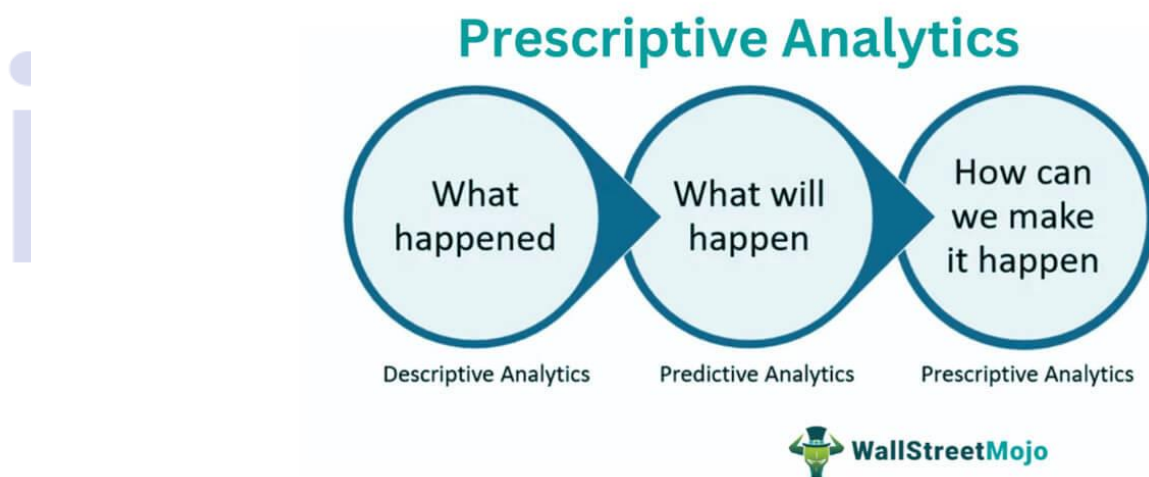
6. Write five real-life questions that PowerBi can solve.

Ans- Power BI can help in solving numerous real life questions with its powerful tools and features. 5 problems that can be solved are

a)Identify Sales Trend of different products

b)To identify efficacy of marketing campaigns run to sell products

c)Variation in employee productivity trend across departments

d)Inventory turnover difference across products

e)Customer churn prediction