**iNeuron- PowerBI Assignment 1**

**1.What do you mean by BI? Explain.**

**Ans-** Business intelligence, or BI. It describes the tools, procedures, and methods that businesses employ to gather, examine, and display information or data related to their operations. By offering insights into operations, performance, and trends, BI primarily aims to assist businesses in making wise decisions.

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

**Ans**- Microsoft created the well-known business intelligence (BI) product known as Power BI. It is intended to assist businesses and analysts in gathering, analyzing, and visualizing data to help them make wise business decisions. Here are some ways that Power BI supports BI and benefits analysts:

**Data Integration:** Power BI allows analysts to connect to various data sources, such as databases, spreadsheets, cloud services, and more.

**Data Modeling**: Analysts can create data models within Power BI, defining relationships between different data tables.

**Data Visualization**: Power BI provides a wide range of interactive data visualization options, including charts, graphs, tables, and maps.

**Report Generation:** Power BI enables analysts to generate detailed reports and presentations based on their analyses.

**Ad-Hoc Analysis:** Power BI supports ad-hoc analysis, allowing analysts to explore data interactively. They can drill down into data, apply filters, and ask questions of the data on the fly.

**Integration with Other Tools:** Power BI integrates seamlessly with other Microsoft tools like Excel, Azure, and SharePoint, as well as with various third-party applications and data sources.

**3.Explain Descriptive analytics?**

**Ans-** To obtain understanding of earlier events or trends, historical data must be summarized. The goal of descriptive analytics is to provide an explanation for events and describe the existing situation. Without making forecasts about the future or attempting to explain why something occurred, it offers a direct and impartial assessment of historical data.

**4.Explain Predictive analytics?**

**Ans-** Predictive analytics is a branch of advanced analytics that uses historical and current data to make predictions about future events or outcomes. It involves the application of statistical algorithms, machine learning, and data mining techniques to identify patterns and trends within data and use them to forecast what is likely to happen next.

It allows them to anticipate future trends and events, allocate resources more efficiently, and take proactive measures to achieve their goals.

**5.Explain perspective analytics?**

**Ans-** Prescriptive analytics is a statistical method that focuses on finding the ideal way forward or action necessary for a particular scenario, based on data. Prescriptive analytics uses both descriptive and predictive analytics but the focus here remains on actionable insights rather than data monitoring.

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

**Ans-** Power BI can help solve:

**1.Sales Performance Analysis:**

"What were our best-selling products last quarter, and which regions contributed the most to our sales?"

"Can you show me a trend analysis of our sales data over the past year, and are there any seasonal patterns?"

**2.Customer Segmentation and Retention:**

"Who are our most valuable customers, and what are their buying behaviors?"

"How can we identify at-risk customers and implement strategies to retain them?"

**3.Inventory and Supply Chain Optimization:**

"What is our current inventory level, and do we have any overstocked or understocked items?"

"Can you provide insights into supplier performance and lead times to improve our procurement process?"

**4.Financial Reporting and Forecasting:**

"What is our current financial performance, and how does it compare to our budget and previous years?"

"Can you help us create a financial forecast for the next quarter or year based on historical data and market trends?"

**5.Employee Productivity and HR Analytics:**

"What are the key drivers of employee turnover, and can we identify patterns that lead to attrition?"

"How can we track and visualize employee performance metrics and identify areas for improvement?"