**POWER BI**

**ASSIGNMENT – 1**

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**What do you mean by BI? Explain.**  
Business Intelligence (BI) refers to the processes, technologies, and tools used to collect, analyse, and present business data to help organizations make informed decisions. It involves transforming raw data into actionable insights, enabling businesses to identify trends, monitor performance, and improve strategies.

**How Power-BI helps in BI, and how does it help Analysts? Explain.**  
Power BI is a powerful BI tool that helps users visualize, analyse, and share data insights through interactive dashboards and reports. It simplifies data connectivity, transformation, and modelling, allowing analysts to quickly extract insights from complex datasets. Power BI also enables data collaboration, which enhances decision-making and helps analysts present data visually, making it easier for stakeholders to understand.

**Explain Descriptive analytics.**  
Descriptive analytics refers to the analysis of historical data to understand past trends and outcomes. It focuses on summarizing and interpreting data patterns through reports, charts, and dashboards. By answering “what happened?”, it helps businesses gain insights into past performance, customer behaviours, and operational efficiency.

**Explain Predictive analytics.**  
Predictive analytics uses statistical algorithms, machine learning techniques, and historical data to forecast future events or trends. By answering “what could happen?”, it enables businesses to anticipate outcomes, optimize strategies, and mitigate risks. Common applications include sales forecasting, risk management, and customer behaviour prediction.

**Explain Prescriptive analytics.**  
Prescriptive analytics goes beyond predicting future outcomes to recommend actions or solutions. By answering “what should we do?”, it uses optimization, simulation, and other advanced techniques to suggest the best course of action based on the analysis. It helps organizations improve decision-making by offering data-driven strategies and outcomes.

**Write five real-life questions that PowerBI can solve.**

* What are the key sales trends for the last quarter, and how do they compare across regions?
* Which marketing campaigns have led to the highest customer engagement and conversions?
* How is employee performance trending over time in terms of key productivity metrics?
* What is the current inventory level, and when should we restock to avoid shortages?
* How does customer satisfaction correlate with service response times, and what improvements can we make?