Power BI Assignment 1

1. What do you mean by BI? Explain.

Ans: - BI is Business Intelligence. Business Intelligence refers to a set of processes and technologies that convert raw data into usable and meaningful information to make profitable business decisions. It is an umbrella term that combines data mining, data tools, business analytics, data visualization, infrastructure, and best practices to offer quick-to-digest data summaries and aid an organization in making more data-driven decisions. BI serves enterprises to unlock sales and marketing potential, and innovate new business capabilities.

BI is used to drive change with an organization, and help eliminate its inefficiencies by swiftly adapting to changing market dynamics. Business Intelligence systems are primarily data-driven Decision Support Systems or DSS.

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

Ans: - Power BI is a business analytics service provided by Microsoft that lets you visualize your data and share insights. It converts data from different sources to build interactive dashboards and Business Intelligence reports.

Because business intelligence tools speed up information analysis and performance evaluation, they're valuable in helping companies reduce inefficiencies, flag potential problems, find new revenue streams, and identify areas of future growth.
Some of the specific benefits that businesses experience when using BI include:

- Increased efficiency of operational processes.
- Insight into customer behaviour and shopping patterns.
- Accurate tracking of sales, marketing, and financial performance.
- Clear benchmarks based on historical and current data.
- Instant alerts about data anomalies and customer issues.
- Analyses that can be shared in real-time across departments.

Following are the reasons why Power BI is so popular and below are the reasons how it help Analysts:

1. Access to Volumes of Data from Multiple Sources

Power BI can access vast volumes of data from multiple sources. It allows you to view, analyze, and visualize vast quantities of data that cannot be opened in Excel. Some of the

important data sources available for Power BI are Excel, CSV, XML, JSON, pdf, etc. Power BI uses powerful compression algorithms to import and cache the data within the .PBIX file.

2. Interactive UI/UX Features

Power BI makes things visually appealing. It has an easy drag and drops functionality, with features that allow you to copy all formatting across similar visualizations.

3. Exceptional Excel Integration

Power BI helps to gather, analyze, publish, and share Excel business data. Anyone familiar with Office 365 can easily connect Excel queries, data models, and reports to Power BI Dashboards.

4. Accelerate Big Data Preparation with Azure

Using Power BI with Azure allows you to analyze and share massive volumes of data. An azure data lake can reduce the time it takes to get insights and increase collaboration between business analysts, data engineers, and data scientists.

5. Turn Insights into Action

Power BI allows you to gain insights from data and turn those insights into actions to make data-driven business decisions.

6. Real-time Stream Analytics

Power BI will enable you to perform real-time stream analytics. It helps you fetch data from multiple sensors and social media sources to get access to real-time analytics, so you are always ready to make business decisions.

3. Explain Descriptive analytics?

Ans: - Descriptive analytics is the interpretation of historical data to better understand changes that have occurred in a business. Descriptive analytics describes the use of a range of historic data to draw comparisons. Most commonly reported financial metrics are a product of descriptive analytics, for example, year-over-year pricing changes, month-over-month sales growth, the number of users, or the total revenue per subscriber. These measures all describe what has occurred in a business during a set period.

4. Explain Predictive analytics?

Ans: - The term predictive analytics refers to the use of statistics and modeling techniques to make predictions about future outcomes and performance. Predictive analytics looks at

current and historical data patterns to determine if those patterns are likely to emerge again. This allows businesses and investors to adjust where they use their resources to take advantage of possible future events. Predictive analysis can also be used to improve operational efficiencies and reduce risk.

5. Explain perspective analytics?

Ans: - Prescriptive analytics is a type of data analytics that attempts to answer the question "What do we need to do to achieve this?" It involves the use of technology to help businesses make better decisions through the analysis of raw data. Prescriptive analytics specifically factors information about possible situations or scenarios, available resources, past performance, and current performance, and suggests a course of action or strategy. It can be used to make decisions on any time horizon, from immediate to long-term. It is the opposite of descriptive analytics, which examines decisions and outcomes after the fact.

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

Ans: - Following are the points or questions which can be solve by Power BI :-

- **Customer experience**
  Access all your customer information in one place, so you can direct resources to key areas that will positively impact customer engagement and support.
- **Sales and marketing**
  Gain visibility into sales and marketing performance, consumer behaviour, and buying trends which ensures future marketing initiatives are effective and drive revenue.
- **Finance**
  Use custom dashboards to get a holistic view of the company's financial health, study historical data, calculate risk, and predict trends.
- **Inventory control**
  Automate data analysis and reporting to improve inventory management, accelerate fulfilment, and help anticipate buying trends.
- **Security and compliance**
  Centralize data to improve accuracy and transparency, making it easier to uncover errors, security issues, and reduce compliance risks.