

Section A: Objective Questions (20 Marks)

Each question carries 2 marks.

1. Define **Data Analytics**.
 2. What is the role of **DAX** in Power BI?
 3. Which SQL command is used to remove a table from a database?
 4. Name two types of relationships in Power BI data models.
 5. What is a **Primary Key** in SQL?
 6. Which of the following is not a Power BI visualisation?
 - a) Card
 - b) Table
 - c) Stacked Bar
 - d) Watermark
 7. What is the use of the **GROUP BY** clause in SQL?
 8. Mention two advantages of using dashboards in Power BI.
 9. Which type of chart is ideal to show trends over time?
 10. Write the syntax to delete all records from a table named **Customers**.
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Section B: Short Answer Questions (40 Marks)

Answer any FIVE questions. Each question carries 8 marks.

1. Explain the architecture of Power BI with a neat diagram.
2. Differentiate between **INNER JOIN** and **LEFT JOIN** with SQL syntax and an example.
3. Write an SQL query to display the second-highest salary from the **Employee** table.
4. What are **Data Sources** in Power BI? List any four data sources it can connect to.
5. Explain the significance of **Slicers** and **Filters** in Power BI dashboards.

6. Describe the process of publishing a Power BI report to the Power BI Service.
 7. Write an SQL query to display total sales by region from a **Sales** table.
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Section C: Case Study / Application Questions (40 Marks)

Answer any TWO questions. Each question carries 20 marks.

1. Power BI Practical Scenario:

You are provided with a dataset containing **Order_ID**, **Customer_Name**, **Order_Date**, **Product_Category**, and **Sales_Amount**.

- List four types of visualisations you would use in a sales performance dashboard.
 - Explain how you would apply **Data Cleaning** before creating visuals.
 - Describe the steps to create a relationship between two tables in Power BI.
 - Mention two KPIs you would display on the dashboard.
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2. SQL Practical Problem:

Consider a **Student** table:

RollNo	Name	Course	Marks	City
101	Ananya	BCA	75	Bangalore
102	Rohan	BBA	82	Mysore
103	Priya	BCA	68	Hubli

Write SQL queries for the following:

- Display all students from Bangalore.
- Display students whose marks are greater than 70.
- Find the average marks of BCA students.

- Add a new column **Phone_No**, to the Student table.
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3. Data Analytics in Bangalore Case Study:

A Bangalore-based retail store wants to analyse its monthly sales data for decision making.

- Suggest three ways Power BI can help improve their business decision-making.
- Explain how integrating an **SQL database** with Power BI benefits such a business.
- Suggest two types of reports you would recommend for store managers.
- Discuss how predictive analytics features can be implemented in Power BI using historical data.