Data Visualization Using Tableau-Sem 4

UNIT – I: Introduction to Tableau

*What is Tableau? Describe its features and benefits in data science.

*Differentiate between Tableau Desktop, Public, Reader, and Server.

*Explain the Tableau Interface: worksheet, dashboard, data pane, shelves, and cards.

*Define dimensions and measures with examples.

*Tableau vs Excel: Which one is better for data visualization and why?

UNIT – II: Data Connection & Preparation

*How do you connect data sources in Tableau (Excel, CSV, Web, SQL)?

*Define Live connection vs Extracts with advantages and disadvantages.

*What are joins and data blending in Tableau? When to use each?

*What is Data Interpreter? Explain its use in cleaning messy data.

*Explain operations like pivot, split, rename, and change data types.

UNIT – III: Creating Visualizations

*How to create basic charts in Tableau (Bar, Line, Pie, Histogram)?

*Explain filters, groups, and hierarchies in Tableau.

*What are calculated fields? How to create one with an example.

*Define trend line, forecasting, and reference line.

*What is a dual-axis chart? How to build one in Tableau?

UNIT – IV: Dashboards & Stories

*What is a dashboard in Tableau? List its key components.

*Difference between worksheet, dashboard, and story.

*Explain how to use parameters and actions in dashboards.

*How to build an interactive dashboard with filters and legends.

*What are story points? Explain how to present a story in Tableau.

UNIT – V: Advanced Concepts & Projects

*What are LOD expressions (Level of Detail)? Types and examples.

*How do you publish a dashboard to Tableau Public or Server?

*Explain best practices for building effective dashboards.

*Mini Project: Create a sales dashboard using Excel data with at least 3 types of visualizations.

*Case Study: Visualize COVID-19 or IPL data using Tableau with filters and parameters.