

B.Sc. Second Year (Data Science) NEP Semester-IV  
**BSCDS045 - Data Analytics and Visualization**

P. Pages : 1

Time : Two Hours



**GUG/S/25/16832**

Max. Marks : 40

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1. a) Define Elements, Variable and Data Categorization with examples. 4  
b) What is Statistical Hypothesis Testing? Explain with an example. 4

**OR**

- c) Explain Chi-Square Test and T-Test in detail. 4  
d) Explain Analysis of Variance (ANOVA) and its application in decision-making. 4
2. a) What are the basic parameters in Tableau? Explain their importance. 4  
b) What is the use of Waterfall Chart and Motion Chart in business analytics? 4

**OR**

- c) Explain the concept of Cumulative Histogram and Pareto Chart with its example. 4  
d) Demonstrate how to create Groups and Sets in Tableau with an example. 4
3. a) Explain the significance of SQL in Tableau and how to convert custom SQL queries. 4  
b) How do Reference Lines, Bands and Distributions enhance data visualization? 4

**OR**

- c) How do Ranking Calculations and Running Totals help in data reporting? 4  
d) What are Dual Axis Reports and how are they used in Tableau? 4
4. a) Explain the steps to Create and Format a Tableau Dashboard. 4  
b) What are Site Roles, Groups and Schedules in Tableau Server UI? 4

**OR**

- c) Explain the concept of Interactivity in Tableau Dashboards using filters. 4  
d) Explain Best Practices for Designing Effective Dashboards in Tableau. 4
5. a) Define clustering in data analysis. 2  
b) What is the difference between a Bar Chart and a Stacked Bar Chart? 2  
c) What is the role of Extract Filters in Tableau? 2  
d) Define a Tableau Content Display Option. 2

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