

**Faculty of Management
Osmania University
Practical Question Bank
BBA (Business Analytics)
Semester VI w.e.f. 2021
COURSE CODE: DSE - 601**

COURSE(A): Business Intelligence and Data Visualization

Total Marks : 35

Record : 10 Marks

Practical's: 15 Marks

Viva Voice: 10Marks

Record Work:

- 1. Input: Students must write the procedure/steps for the given question /problem.**
- 2. Process: Students must write Steps/ Navigations to execute**
- 3. Output: Students must show the Result/Output and interpret the results.**
- 4. Use Tableau**
 1. Write the procedure to install Tableau desktop on your system.
 2. Explain the interface of Tableau.
Use Sample Super Store data set and perform the following:
 3. Connect the Sample Super store data set in Tableau and explore its structure. Create a data extract and explain its benefits.
 4. Create a bar chart to visualize the total sales for each product category.
 5. Create a pie chart showing the percentage of sales from each region.
 6. Create a histogram to display the distribution of profit margins for the product.
 7. Create a stacked bar chart showing sales for each region, segmented by product sub-category.
 8. Create a box plot to display the distribution of sales across different regions. Highlight outliers, if any.
 9. Create a table displaying the total, average and maximum profits for each product sub-category.
 10. Develop a line chart to show the monthly sales trend over the years. Use appropriate date hierarchies.

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11. Create a scatter plot to visualize the relationship between sales and profit. Add a trend line for analysis.
12. Use color palettes to highlight profitable and unprofitable regions in the data set.
13. Create facet charts to show sales trends across different regions for each product and category
14. Create a bullet graph to compare actual sales with target sales for each region. (Assume target sales as 20% more than the current total sales.)
15. Create a dual axes chart showing sales and profit trends for each region over time.
16. Create a heat map to represent profit margins for different timelines for orders.
17. Create a choropleth map showing total sales for each state.
18. Use Tableau's map customization features to display sales data on a US Map. Add demographic overlays for deeper insights.
19. Use geographical data to create a map with polygon shapes indicating regions.
20. Use Tableau to highlight the top 10 performing products based on sales.
Create the following Dashboards in Tableau on Sample Superstore data:
21. Create sales performance dashboard.
22. Profitability analysis dashboard
23. Regional performance dashboard
24. Customer segment analysis dashboard
25. Shipping analysis dashboard
26. Product performance dashboard
27. Time based sales trend dashboard
28. Discount effectiveness dashboard
29. Order fulfilment dashboard
30. Executive summary dashboard.

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31. Create a calculated field to show the percentage of sales for each product category relative to total sales. Display this percentage in a table along with total sales for each category.
32. Create a calculated field using "IF-THEN" logic to categorize products as "High Sales" or "Low Sales" based on the sales amount. High Sales should be products with sales greater than \$10,000, and Low Sales should be products with sales below \$10,000. Display this categorization in a bar chart.
33. Create a calculated field that classifies products as "High Profit" if the profit is greater than \$5,000 and sales are greater than \$15,000. Use the AND logical function. Display this classification in a pie chart showing the distribution of high-profit vs. low-profit products.
34. Create a table showing total sales by product sub-category. In the same table, calculate the percentage contribution of each sub-category to the total sales using calculated fields.
35. Using the Sample Superstore dataset, discretize the Profit field into three categories: "Low Profit" (Profit \leq \$500), "Medium Profit" (Profit $>$ \$500 and \leq \$2,000), and "High Profit" (Profit $>$ \$2,000). Create a bar chart showing the count of products in each profit category.
36. Create a calculated field to extract the first letter of each customer's name from the Customer Name field in the Sample Superstore dataset. Display this information in a table along with the customer name and their total sales.
37. Using the Sample Superstore dataset, create a calculated field to calculate the average order value for each order (Sales / Quantity). Then, display the average order value for each region in a bar chart.
38. Create a calculated field that first checks if the product's sales exceed \$10,000 using an IF-THEN condition. Then, within that condition, create another nested IF-THEN to classify the product as "Top Seller" if

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its profit exceeds \$1,000. Display this classification in a pie chart showing the proportion of "Top Seller" vs. "Non-Top Seller" products.

39. Create a calculated field to categorize sales performance into "Achieved" and "Not Achieved" based on whether the total sales exceed the target of \$50,000 per region. Use an IF-THEN condition for categorization. Display the results in a bar chart for each region.
40. Create a calculated field that shows the running total of sales across regions, using Tableau's window functions. Display this running total on a line chart to observe cumulative sales growth.
41. Create a bar chart showing the sales by product category in the Sample Superstore dataset. Add an appropriate title to the chart and a caption below the chart that explains what the chart represents.
42. Create a line chart displaying monthly sales trends. Customize the font size for the axis labels and the title. Change the color scheme of the lines to make the chart more visually appealing.
43. Create a scatter plot to show the relationship between sales and profit. Customize the marks by changing their shape and size based on the sales volume.
44. Create a bar chart for sales by region and add a reference line at the average sales value to highlight it. Ensure the reference line is clearly visible and labeled.
45. Create a dashboard combining a bar chart for sales by region and a pie chart for sales by product category. Put the dashboard in Presentation Mode and ensure it is clear and visually effective for a presentation.
46. In the line chart showing monthly sales trends, add an annotation to highlight the month with the highest sales. Customize the annotation with relevant details.
47. Create a dashboard with a bar chart showing sales by product category. Add a drop-down selector that allows the user to filter the chart by

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region.

48. Create a dashboard with a pie chart showing sales by product sub-category. Add a search box that allows the user to search for a specific product sub-category and filter the chart accordingly.
49. Create a line chart showing sales over time. Add a slicer to allow the user to select a specific date range and dynamically adjust the chart accordingly.
50. Create a comprehensive dashboard that combines a bar chart (sales by region), a pie chart (sales by product category), and a map (sales by state). Ensure the dashboard is interactive and visually cohesive.
51. Create an animated bar chart showing sales trends for different regions over the past few years. Animate the chart to show changes over time using Tableau's animation feature.
52. Create a scatter plot showing profit vs. sales and customize the tooltip to display additional information like product category and region when hovering over each mark.
53. Create a dashboard that includes a line chart for sales trends and a bar chart for sales by product category. Add an interactive filter that allows users to filter both charts based on region.
54. Create a bar chart showing sales by product sub-category. Customize the background color and add borders to the chart to enhance its visual appeal.
55. Create a dashboard with a pie chart showing sales by region. Add a dynamic title that changes based on the region selected, such as "Sales Distribution for [Region Name]."

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