**1. Basics:**

1. What is the difference between Discrete and Continuous Data?

**Ans . Discrete Data**

* Data are Individually separate and distinct.
* Discrete fields are Blue in colour.
* Discrete fields are considered finite in range.
* They usually add headers to the view.
* We can not perform aggregate operaion on this.

**Continuous Data**

* Data are in series or unbroken.
* Continuous fields is Green in colour.
* Continuous fields are mostly considered as infinite in range.
* They add axes to the view.
* We can perform aggregate operations on this.

1. What is the criteria for data to land into dimensions and measures?

**Ans.**  It is basically categorical and quantitative data.

Measures is Quantitative Numbers e.g: Sales, Profit, etc.

Dimesion is Categorical Text e.g: Name, product, etc.

Tableau identifies it the same way by breaking out the data like this.

Dimensions are essentially self-explanatory but measures are not. For example: You can’t just view profit, you will be like - profit of what? And I will be like - profit of shampoos!

So, you need a dimension to attribute measures.

1. What is Metadata, where is it present in the workbook?

**Ans.** The Metadata API enables you to see relationships between the content and asset that you are evaluating with other items on your Tableau Cloud site or Tableau server. These items

include the following: Upstream and downstream content- including data sources, workbooks,

sheets, fields, metrics, flows, and owners.

1. What happens when you aggregate or disaggregate the Data?

**Ans**. As tableau automatically aggregates its value using predefined aggregate functions. The current aggregation appear as a part of the measures name in the view. i.e when we put Sales in view it appears as SUM (Sales) or MAX (Sales). Every measure has a default aggregation which is predefined by Tableau itself.

To disaggregate data is to break down aggregated data into component parts or smaller units of data

1. You are working on a dataset, the client adds in more data to the dataset. What happens to the Visualization that you had created? Give the explanation for both Live and Extracted data.

**Ans.** If new fields or rows are added, data values or field names are changed, or data is deleted, Tableau will reflect those changes the next time you connect to the data source.

**Live and Extracted data**

Live and extracts are two ways you can make the data connection to the tableau. Live allows you real-time data while extracts are kind of batch which needs to be refreshed from time to time to get the updated data. In the case of live connection whatever changes will be done at the Datasource end that will be directly available to the tableau desktop.While in case of extracting any changes made in the data source won't reflect in the report immediately. It will be reflected when the extract will be refreshed.

1. What are the file extensions in Tableau and how each one is different?

Ans. 1) .twb - Tableau workbook

It contains information on each sheet and dashboard that is present in a workbook.

2) .twbx - Packeged tableau workbook

This file format contains the details of a workbook as well as the local data that is used in the analysis.

3) .tds - Tableau datasource

The details of the connection used to create the tableau report are stored in this file. In the connection details, it stores the source type (excel/relational/sap, etc.) as well as the data types of the columns.

4) .tdsx - packaged tableau datasource

This file is similar to the .tds file with the addition of data along with the connection details.

5) .tde / .hyper - Tableau data extract

This file contains the data used in a .twb file in a highly compressed columnar data format. This helps in storage optimization. It also saves the aggregated calculations that are applied in the analysis.

6) .tbm - Tableau bookmark

These files contain a single worksheet that is shared easily to be pasted into other workbooks.

7) .tps - Tableau preferences

This file stores the color preference used across all the workbooks. It is mainly used for consistent look and feel across the users.

**2. Text Table, Highlight Tables, Heat Maps, Tree Map:**

1. Create a text table for the Avg (Sales) for each subcategory using Sample Superstore? List which Sub Category is got Avg (Sale) more than $1000? - **Sample Superstore**
2. Create a Heat Table for the order date and Region against the Sub Category based in Count of Sales with two colours diverging that is distinguished by Sum of Profit - **Sample Superstore**
3. Create a Highlight table for the States for the Order Date Year whose highlighting is done based on Sum of profits - **Sample Superstore**
4. Which customer is having maximum of sales in the year 2012? - **Global Superstore**
5. How much is profit share less in Pennsylvania when compared to New York? - **Sample Superstore**
6. Check for the pane wise percentages of sales with Category, Sub- Category and quarter wise order date, also check for the Row wise grand totals and Column wise grand totals. - **Sample Superstore**

**3. Filled Maps, Symbol Maps:**

1. Use Global Superstore. Check Which Western Country in EMEA region has least profit percentage.
2. Use **“Sample Superstore. Xls”,** which state shares boarders only profit for tables
3. Use **“Sample Superstore. Xls”,** which state has no data for Profits for Office Supplies

**4. Bar Charts, Stacked, Side by Side:**

1. Which Customer name & Year is having all the Product Categories sum of profit less than over-all Average profit? - **Sample Superstore**
2. What is the Maximum of Life Expectancy Female for the region Africa & year 2012? - **World Indicators**
3. What is the share of the top 20 customers based on the sales amount compared to the customers based on profit amounts - **Sample Superstore**

**5. Line Graphs, Dual Line, dual axis:**

1. How can you show two different graphs in one view? - **Global Superstore**
2. Which Region is having Sum of Energy Usage>1000000 and sum of Population 65+>10? - **World Indicators**

**6. Trendlines, Cluster, scatter Plot, boxplot, Word Cloud (Packed Bubbles), Histogram:**

1. Draw a trend line for profit as a linear function of sales only for product technology? - **Sample Superstore**
2. Create a histogram showing the number of Sales using Sales Bins of $1000. Which bins have profit ratios of more than 25%? - **Global Superstore**
3. Using “**Sample Superstore”**, use order sheet create a histogram showing the number of orders using sales bins of $1000.
4. Using **“Global Superstore**”, use the orders sheet, build a scatter plot showing the sum of sales on the x-axis and sum of profits on the y axis for all products (Product name). What is the equation for linear regression for products in Technology?
5. Use **“World Indicators”.**  Take Health Exp% GDP, Health Exp/Capita, Life Expectancy Male, Female. What are the variables that are considered to create the clusters by default?

**7. Calculate Fields, Quick table calculations, LOD:**

1. How do you create a profit ratio using the Calculated fields?

**Ans.** We need it to sum all the sales and all the profit and then take the ratio of that. To sum all of the profit figures as well as sum all of the sales figures and then divide by the totals, the

calculation on Tableau calculated field looks like:

**Sum([Profit])/Sum([Sales])**

1. Global Superstore data set; Region wise year wise sales are ranked. What is the rank of some country when compared to last year?
2. What percent of total profits do the top 10 customers by Sales represent? - **Sample Superstore**
3. Find the customer with the lowest overall profit. What is his/her profit ratio? - **Sample Superstore**
4. Ranking States based on Sales what is the rank of state which has sales crossed $20000. - **Sample Superstore**
5. What is the percent of orders which took more than 7 days on an average to deliver.
6. Use **“World Indicators”.** Without using table calculations what is the proper syntax to build a calculated field which will display overall total GDP on this view?

**8. Filters:**

1. What are the different types of filters and give their working order?

**Ans.** **Different types of filters**

**Extract filter-** Extract filter is used to filter the extracted data from the data source. This

filter is utilized if the user extracts the data from the data source. After connecting the text file to Tableau, you can see the two options, Live and Extract in the top right corner of the data source tab.

**Data source filters** – Data source filters can be useful for restricting the data users can

see when you publish a workbook or data source. When you publish a data source to

Tableau Server, the data source and any associated files or extracts are transported in

entirely to the server.

**Context filters** – To create a context filter, select Add to Context from the context menu

of an existing categorical filter. The context is computed once to generate the view. All

other filters are then computed relative to the context.

**Dimension filter** – Dimension filters are those Tableau Filters that are applied to

dimensional data. It’s a non-aggregated filter that allows you to add a dimension, group,

sets, and bins. The top or bottom conditions, wildcard match ,and formula can all be

used to apply a dimension filter.

**Measure filter** – Measure filter in Tableau allows for various operations and aggregate

functions such as sum, median, average, standard deviation, etc. Aggregated filters are

always applied after non-aggregated filters, no matter what the order is on the Filters

pane. The filters are applied to Measure fields consisting of quantitative data.

**Filter table calculations**- To create a table calculation filter , create a calculated field,

and then place that field on the Filters shelf. Filters based on table calculations do not

filter out underlying data in the data set, because table calculation filters are applied last

in the order of operations.

1. Create a list of Top 10 Products based on Profits whose sale value is more than $5000? - **Global Superstore**
2. Create a Chart with Customer Name and Profit and check for the Sale Value for top 15 Customers? - **Global Superstore**
3. Apply filter to all the worksheet, filter by year 2011, then find the sum(sales) for the highest subcategory.- **Global Superstore**
4. What is the name of 375th top most customer by sum of profits - **Sample Superstore**

**9. Dashboards & story:**

1. What are the different device type preview that Dashboards can use?

**Ans.** 1. Phone layouts preview

2. Desktop layouts preview

3. Table layouts preview

1. Create a dashboard using World Indicators showing the all the Actions that can be performed in Tableau.

**10. Time Series:**

1. Use Order date and drill down the information for Quarter and Month level separately and show the line Chart in a Continuous Form- **Global Superstore**

**11. Sets, Parameters, Groups:**

1. Parameters can be used in?

**Ans.** Parameters give you a way to dynamically modify values in a Top N filter. Rather than manually setting the number of values you want to show in the filter, you can use a parameter. Then when you want to change the value, you open the parameter control and the filter updates.

1. What are the different ways to create a Parameter?

**Ans.** **Top N parameter**- Using the Top N or Bottom N chart in Tableau gives us more

interactivity when we choose to visualize our KPIs. Adding new parameters to chart, we

have the opportunity to choose in the same visualization the first N or last N clients

depending on the measure or the indicator followed.

**Data field parameter**- A parameter is a workbook variable such as a number, date, or

string that can replace a constant value in a calculation, filter, or reference line . For

example, you may create a calculated field that returns True if Sales is greater than

$500,000 and otherwise returns False.

**Dynamic parameter-** Dynamic parameters allows you to create actions that are different

every time they are performed. Dynamic parameters can be passed as arguments to

most vizact actions. The value of these parameters is determined when the action is

performed, and you can setup these parameters to change value every time.

**Dynamic Dimensions**- A dynamic dimensions is an information field that has been

promoted to a dimension in order to make it diveable. If prodiver uses geographical

keys, dynamic dimensions can be used for map data.

**12. Forecast:**

1. You are provided with the dataset for the past 10yrs. How can you forecast the data for next 4 years, Quarter wise.
2. Use **“Sample Superstore”.** What is the Sales Forecast Estimate for the month of September 2018?

**13. Pie Chart:**

1. Create a Pie Chart using regions and sum of sales, sort the pie in ascending order, increase the size in the view and label them with Count of Quantity and Sum of Profits- **Sample superstore**