**1. Basics:**

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

ANS: Discrete data is a numerical type of data that includes whole, concrete numbers with specific and fixed data values determined by counting. Continuous data includes complex numbers and varying data values measured over a particular time interval.

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

ANS:

* Dimensions contain qualitative values (such as names, dates, or geographical data). You can use dimensions to categorize, segment, and reveal the details in your data. Dimensions affect the level of detail in the view.
* Measures contain numeric, quantitative values that you can measure. Measures can be aggregated. When you drag a measure into the view, Tableau applies an aggregation to that measure

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

ANS: The Metadata discovers, tracks, stores, and then surfaces information about Tableau content. It is present on the data source page of a workbook

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

Ans: Aggregate functions allow you to summarize or change the granularity of your data

When you disaggregate, you no longer are looking at the average or sum for the values in the rows in the data source. Instead, the view shows a mark for every row in the data source

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 the data is live then it will change the visualizations otherwise no changes. 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. So in the case of live connection whatever changes will be done at the Data source 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:

* **Workbooks (.twb)** – Tableau workbook files have the .twb file extension. Workbooks hold one or more worksheets, plus zero or more dashboards and stories.
* **Bookmarks (.tbm)** – Tableau bookmark files have the .tbm file extension. Bookmarks contain a single worksheet and are an easy way to quickly share your work.
* **Packaged Workbooks (.twbx)** – Tableau packaged workbooks have the .twbx file extension. A packaged workbook is a single zip file that contains a workbook along with any supporting local file data and background images. This format is the best way to package your work for sharing with others who don’t have access to the original data.
* **Extract (.hyper or .tde)** – Depending on the version the extract was created in, Tableau extract files can have either the .hyper or .tde file extension. Extract files are a local copy of a subset or entire data set that you can use to share data with others, when you need to work offline, and improve performance.
* **Data Source (.tds)** – Tableau data source files have the .tds file extension. Data source files are shortcuts for quickly connecting to the original data that you use often. Data source files do not contain the actual data but rather the information necessary to connect to the actual data as well as any modifications you've made on top of the actual data such as changing default properties, creating calculated fields, adding groups, and so on.
* **Packaged Data Source (.tdsx)** – Tableau packaged data source files have the .tdsx file extension. A packaged data source is a zip file that contains the data source file (.tds) described above as well as any local file data such as extract files (.hyper or .tde), text files, Excel files, Access files, and local cube files. Use this format to create a single file that you can then share with others who may not have access to the original data stored locally on your computer.

**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?
2. Global Superstore data set; Region wise year wise sales are ranked. What is the rank of some country when compared to last year?
3. What percent of total profits do the top 10 customers by Sales represent? - **Sample Superstore**
4. Find the customer with the lowest overall profit. What is his/her profit ratio? - **Sample Superstore**
5. Ranking States based on Sales what is the rank of state which has sales crossed $20000. - **Sample Superstore**
6. What is the percent of orders which took more than 7 days on an average to deliver.
7. 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:**

Dimension Filters: These filters are used to limit the data based on a specific dimension. For example, a dimension filter can be used to limit the data to a specific date range or to a specific category. Dimension filters are applied first in the order of filtering.

Measure Filters: These filters are used to limit the data based on a specific measure. For example, a measure filter can be used to limit the data to only those rows where the sales are greater than a certain value. Measure filters are applied second in the order of filtering.

Context Filters: These filters are used to limit the data based on a specific context. For example, a context filter can be used to limit the data to only those rows that are related to a specific category. Context filters are applied third in the order of filtering.

Top N Filters: These filters are used to limit the data to the top or bottom N values of a specific dimension or measure. For example, a top N filter can be used to limit the data to only the top 10 salespeople. Top N filters are applied fourth in the order of filtering.

Relative Date Filters: These filters are used to limit the data based on a relative date range. For example, a relative date filter can be used to limit the data to only the last 30 days. Relative date filters are applied fifth in the order of filtering.

Data Source Filters: These filters are used to limit the data at the data source level. For example, a data source filter can be used to exclude certain rows of data from the data source. Data source filters are applied last in the order of filtering.

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:**

Desktop: This preview is optimized for larger screens, such as a computer monitor or a laptop. It allows for more detailed visualizations and more screen real estate to display data.

Tablet: This preview is optimized for tablets and other devices with a similar screen size. It allows for a more condensed view of the data and a layout that is optimized for touch-based navigation.

Phone: This preview is optimized for smartphones and other devices with smaller screens. It allows for a condensed view of the data and a layout that is optimized for touch-based navigation.

Print: This preview is optimized for printing the dashboard. It allows for adjustments to the layout and font size to ensure that the data is legible when printed.

Web: This preview is optimized for web browsers, and it allows you to adjust the layout and font size to ensure that the data is legible when viewed online.

Custom: This preview allows you to set custom dimensions for the dashboard, such as the width and height, and make adjustments to the layout and font size to ensure that the data is legible when viewed online or in a specific device.

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:**

Filtering data: Parameters can be used to filter data based on user input. For example, a parameter can be used to limit the data to a specific date range.

Calculations: Parameters can be used in calculations to create dynamic formulas based on user input. For example, a parameter can be used to change the weight of a measure in a calculation.

Formatting: Parameters can be used to change the appearance of a visualization based on user input. For example, a parameter can be used to change the color palette of a chart.

Dynamic reference lines: Parameters can be used to create dynamic reference lines on a chart based on user input. For example, a parameter can be used to change the value of a benchmark line on a bar chart.

Dynamic groups: Parameters can be used to group data dynamically based on user input. For example, a parameter can be used to group data by different ranges of values.

Dynamic parameter actions: Parameters can be used to create dynamic actions, such as filters, that change based on user input. For example, a parameter can be used to change the data source used in a visualization.

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

**ANS:**

From the Data pane: Right-click on an empty space in the Data pane and select "Create Parameter." This will open the "Create Parameter" dialog box where you can define the parameter's name, data type, allowable values, and current value.

From the Calculation Editor: When creating a calculation, you can use the "Create Parameter" button in the Calculation Editor to create a parameter that can be used in the calculation.

From the Worksheet: You can create a parameter by right-clicking on a field in the Worksheet and selecting "Create Parameter." This will create a parameter using the selected field's data type and allowable values.

From the Parameters Dialog Box: You can access the Parameters dialog box by going to the Data pane, right-clicking on an empty space and selecting "Manage Parameters" from the drop-down menu. You can then create a new parameter by clicking on the "+" button.

From the Data menu: You can also create a parameter by going to the Data menu and selecting "New Parameter" from the drop-down menu. This will open the "Create Parameter" dialog box where you can define the parameter's name, data type, allowable values, and current value.

From the Context menu: When you right-click on a field or a measure in a visualization, you'll find the option "Create Parameter" in the context menu.

**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**