**Q1: What is Tableau?**

Tableau is a Business Intelligence and Analytics software that is used to create visualizations and dashboards to provide actionable insights.

**Q2: What is data visualization?**

Data visualization means representing the information using visuals like charts, maps, colors (to highlight performance), heatmap, etc. This helps the user read and consume information faster. Because we can read and understand the visuals quickly.

**Q3: What is a dashboard?**

A dashboard is a visual representation of information to track and measure KPI (Key Performance Indicator) and metrics to monitor the health of a business.

**Q4: Walk me through a Tableau project that you have completed and delivered.**

To answer this question you need to explain the project end to end. Right from understanding the requirement to final delivery.

**Q5: Explain the end to end process you followed to work on a Tableau project.**

* Understanding customer’s requirement
* Understanding the context, purpose and who the audience is
* Understanding key metrics and KPIs that are important for business
* Understanding data  
  Creating a list of metrics and KPIs that need to be captured in the project
* Using the paper-pencil approach storyboard/sketch initial prototype
* Selection of appropriate visuals that effectively brings the story and answers the business questions
* Select appropriate dimensions as filters to see different cuts of data
* Showcase the visualization to stakeholders, requestor, and customer to seek feedback
* Make necessary changes and review with the requestor
* Test and validate the numbers (for accuracy and relevancy)
* Get signoff from requestor/customer
* Publish and go live

**Q6: What is the difference between a dashboard and a story in Tableau?**

A dashboard is a collection of multiple worksheets having visuals of KPIs and metrics.  
A story is a collection of multiple dashboards and worksheets to convey relevant insights.

**Q7: What is the Show Me feature in Tableau?**

Show Me is a feature in Tableau that has a collection of charts. It automatically disables the irrelevant charts keeps the rest enabled based on fields we select.

**Q8: What is a Dimension?**

All non-numeric fields (including text, date, and geography) are considered as Dimension in Tableau.

**Q9: What is a Measure?**

Tableau treats any field containing numeric information as a measure.

**Q10: What is a heat map?**

A heat map is a visual display of the data using color codes. A heat map is used to display relative performance.

**Q11: What is the difference between a treemap and a heat map?**

A treemap is a chart type that displays hierarchical relationships through nested rectangles. The rectangles in the treemap are ordered according to the size. The size of rectangles is based on the measure (value). The largest rectangle is positioned at the top left corner of the treemap chart and the smallest one at the bottom right corner.

A heat map is a visual display of the data using color codes. A heat map is used to display relative performance.

**Q12: How do you decide which chart to use for visualization?**

It depends upon the purpose of visualization.  
For comparison of data points, bar chart, column chart, treemap chart and bubble chart are more relevant.

To visualize the composition Waterfall, Pie chart, and Donut chart can be used.  
If the data need to be represented alongside time (like a week, month, quarter, etc.) then we can use line chart and area chart  
To visualize relationship we use a scatter chart and to visualize data distribution, histogram.

**Q13: What is dual-axis and when do we use dual axis?**

Dual-axis is the secondary axis in the chart. When there are two measures of different scales to be used for comparison in a single chart then one of the measures can be represented using dual axis.

For example, visualization of Revenue and Margin. In this scenario Revenue can be visualized on the primary axis via bar chart and Margin (which is in percentage) can be represented on dual-axis via line chart.

**Q14: What is the marks card?**

The Marks card is where we drag fields to control mark properties such as type, color, size, shape, label, tooltip, and detail.

**Q15: What are the different ways of connecting data?**

There are two different ways of connecting data in Tableau, Live Connection and Extract connection. Depending upon project requirements we can decide to go with one of these.

**Q16: What is the live and extract connections?**

Live connection:  
When the business needs live data updates to be refreshed in the dashboard then we use live connections to create dashboards. For example, a live connection with the MySQL database.

Extract connection:  
Extract files are the local copy of data downloaded from a database or any other source. It can be a locally stored excel file, notepad, CSV file or a pdf file. When dashboards are created using an extract file then it is an extract connection. For example, loading the data into Tableau by connecting to the locally stored data in an excel file.

**Q17: What are interactive dashboards?**

Interactive dashboards are dashboards with features like filters and parameters that help with slicing and dicing the data to get better insights.

**Q18: What are shelves in Tableau?**

Shelves are areas that are used to build views, filters, etc by placing fields onto them.  
For example, Row shelf, Columns shelf, Filters shelf, and Pages shelf.

**Q19: What are groups?**

Groups basically help us simplify dimension levels into a higher level. We create a group to combine related members in a field.  
  
For example:  
We have a field by the name “Alphabets”. We can create a group of Vowels by combining a, e, i, o, u and rest all as Consonants.

**Q20: What is a Hierarchy?**

A hierarchy is a logical arrangement of related data fields in a level. Tableau hierarchy provides drill-down action to the report. Using hierarchy we can go down to the lower level to see the information and roll-up to a higher level to see aggregated information.

For example, if we have dimensions (fields) like Region, Country, State, and City in our data then we can create a hierarchy called Geography and arrange all these dimensions in levels such as Region –> Country –> State –> City.  
And we can quickly drill-down to any level as per requirement.

**Q21: What are Automatic Hierarchies?**

When we connect to a data source, all the “date” fields are automatically separated into hierarchies. These hierarchies include the year, quarter, month, etc. So we can easily drill-down the view by year, quarter, and month and so on. We can see a plus sign to the left side of the field with hierarchy in the dimension section.

**Q22: What are the sets?**

Sets are custom fields that define a subset of data based on some conditions.  
A set can be created based on a condition. For example, all the customers with sales values over 5k can be a set and rest all can be out of the set.

**Q23: What are the differences between groups and sets?**

Groups are created to combine related members in a field.  
Sets are custom fields that define a subset of data based on some conditions.

**Q24: How Tiled dashboards are different from Floating dashboards in Tableau?**

In a tiled dashboard, objects are arranged in a grid while in a floating dashboard objects can be arranged as required.

**Q25: When do we use Join vs Blend?**

When we need to use data from multiple tables from the same data source then we use Join.  
When we need to use data from multiple tables from different data sources then we Blend data.

**Q26: What Views or Workbooks formats we can download from the server?**

Different views or workbooks format that can be downloaded from server are:

* Image in .png format
* Data as a comma-separated value (.csv) file
* Crosstab as a .csv file
* PDF of selected sheets. Web page objects aren’t included in PDF sheets
* Tableau Workbook (.twb)

**Q27: What are the different file types and extensions in Tableau?**

Some of the different file types in Tableau are:

* Tableau Workbooks (. twb): It is a regular Tableau workbook that includes sheets, dashboards, and stories.
* Packaged Workbooks (.twbx): It is a zip file having a workbook along with supporting files like data sources, images (if any), etc.
* Data Source (.tds): Tableau data source file does not contain the actual data. It contains the changed made in the data source while working on data preparation like groups, calculated fields, etc.
* Packaged Data Source (.tdsx): Packaged data source is a zip file that contains the data source file (.tds), extract files (.tde), text files, Excel files, Access files, etc.
* Extract (.hyper or .tde): Beginning in version 10.5, new extracts use the .hyper format instead of the .tde format. Extracts in the .hyper format take advantage of an improved data engine, which supports the same fast analytical and query performance as the data engine before it, but for even larger extracts.
* Bookmarks (.tbm): Tableau bookmarks contain a single worksheet and are an easy way to quickly share with others.
* Tableau Map Source (.tms): Tableau Map Source allows you to share your map with others so they can quickly import it into their own workbooks and use it to create new map views.
* Tableau Preferences (.tps): You can create a custom color palettes by modifying the Preferences (.tps) file in Tableau Desktop.
* Tableau Datasource Customization (.tdc): When connected with a database, we can use Tableau Datasource customization (.tdc) to fine-tune the connection information in order to improve the performance of complex SQL queries during the execution.

**Q28: What is the difference between filter and parameter?**

* Filters get only values that are in variables you choose to filter by. In parameters, you can enter your values (integers, floats, dates, and strings).
* Filters can’t be used in calculations, parameters can be used in a calculated field.
* Filters are slower than parameters.

**Q29: What is a LOD expression?**

Level of Detail expressions (also known as LOD expressions) allows you to compute values at the data source level and the visualization level. However, LOD expressions give you even more control over the level of granularity you want to compute. They can be performed at a more granular level (INCLUDE), a less granular level (EXCLUDE), or an entirely independent level (FIXED).

FIXED level of detail expression computes a value using the specified dimensions, without reference to the dimensions in the view.

INCLUDE level of detail expression computes values using the specified dimensions in addition to whatever dimensions are in the view.

EXCLUDE level of detail expression declares dimensions to omit from the view level of detail. EXCLUDE level of detail expressions are useful for ‘percent of total’ or ‘difference from overall average’ scenarios. EXCLUDE level of detail expression cannot be used in row-level expressions (where there are no dimensions to omit).

**Q30: How many types of joins are available in Tableau?**

There are four types of joins in Tableau.

1. Left Join
2. Right Join
3. Inner Join
4. Full Outer Join