**Tableau Exam**

**Section A**

1. Dimensions contain qualitative values like names, dates, or geographical data. Dimensions are used to categorize, segment, and reveal the details in your data. Facts are measures (numerical values) like sales, profit etc.
2. Tableau has features to organize and simplify the data present. Filter confines the number of records present in data set based on some conditions we may provide. Various types of filters used in Tableau are extract filters, data source filters, context filters, dimension filters and measure filters.
3. Heat map is a type of visualization graph that is very appropriate to compare different categories. It helps to visualize measures against dimensions with the help of colors and size to compare one or more dimensions & up to two measures. Tree map is a chart type that displays hierarchical or part-to-whole relationships using many rectangles. In case of hierarchical (tree-structured) data these rectangles are nested. The space in the view is divided into rectangles that are sized and ordered by a measure.

In tableau we have two types of formats to save the file- TWB and TWBX . Tableau Packaged Workbook (TWBX) is a package of files compressed together. It includes a data source file, TWB, and any other file used to produce the workbook (including images). TWBX is intended for sharing.

1. Open Tableau, make any bar graph and drag any value to the colors box. Right-click a field in the Data pane,and select Default Properties > Color. In the Edit Colors dialog box, associate the field values with the custom color palette, and then click OK when finished.

**Section B**

1. For most databases, one can connect to a specific query rather than the entire data set as databases have slightly different SQL syntax from each other, the custom SQL used to connect to one database might be different from the custom SQL that might be used to connect to another. Yet, using custom SQL can be useful when one has to extract the exact information and understands how to write SQL queries. Still there are several common reasons why one might use custom SQL, one can use custom SQL to union the data across tables, recast fields to perform cross-database joins, restructure or reduce the size of the data for analysis, etc.
2. To create a view of top 5 and last 5 sales in same view, we create 2 sets. Say we have items with their profit. We create 1 set for top 5 profit and another for bottom 5 profit. Then a combined data set for both the sets with a full outer join is created and added in rows with profit as columns
3. Suppose we are given profits of products and the States of the country for each value. We drag the states to our sheet and put it into the column bar, then go on the right hand side, click on Show me, select the map chart. Now, we take our profit measure then drag it to the color box given on left hand side. The states with dark colors have high profits and the one with low profits are light in colour.
4. To create a calculated field, we go to the left-hand side of our screen where our measure and dimensions are defined. On top of that, click the arrow button, select create calculated field, a white space will appear to write calculations and on the right side there will be various options of operations to perform.
5. Joining your data can only be done when the data comes from the same source, i.e., from two sheets within one Excel file. If that same information was stored in separate Excel files you would need to do a data blend in Tableau. A blend is always required if the data is stored in two separate data sources within Tableau. So even if your data is very closely related and exists in two separate files or databases, you will have to do a data blend if you are combining the data in Tableau.
6. If we want to show the Sales and profit in each and every city under the states in the same work sheet we follow steps-

* Double click on the State filed.
* Drag the City and drop into Marks box (under the State field)
* Drag the sales and drop into size.
* Drag the profit and drop into color.
* Click on Size legend and increase the size.(75%)
* Right click on the State field and select show quick filter.
* Select any state and check whether you got the required view or not. In this view size indicates the amount of sales and color indicates the Profit values.