1. What are charts and different types of charts?

A chart is a tool you can used to communicate data graphically. Charts allow your audience to see the meaning behind the numbers, and they make showing comparisons and trends much easier. There are several types of charts available in excel for to use, available charts in MS excel are as bellow.

- **Column**
- **Line**
- **Pie**
- **Bar**
- **Area**
- **X Y (Scatter)**
- **Map**
- **Stock**
- **Surface**
- **Radar**
- **Tree map**
- **Sunburst**
- **Histogram**
- **Box and whisker**
- **Waterfall**
- **Funnel**
- **Combo**

2. What are pivot table in excel and what are their implementation?

A pivot table is a statistics tool that summarizes and reorganizes selected columns and rows of data in a spreadsheet or database table to obtain a desired report. The tool does not actually change the spreadsheet or database itself, it simply "pivots" or turns the data to view it from different perspectives.

Implementations: - Pivot tables are especially useful with large amounts of data that would be time-consuming to calculate by hand. A few data processing functions a pivot table can perform include identifying sums, averages, ranges or outliers. The table then arranges this information in a simple, meaningful layout that draws attention to key values.

3. What is conditional formatting? Distinguish 5 types of conditional formatting.

Conditional formatting makes it easy to highlight certain values or make particular cells easy to identify. This changes the appearance of a cell range based on a condition (or criteria). You can use conditional formatting to highlight cells that contain values which meet a certain condition.

5 types of conditional formatting

- ***Highlight cell rules***

  The Highlight Cells Rules option finds values in specific cells. It allows us to apply a different format to cells whose values are more significant, lesser or within a range we mark. We can also get a different format if they contain a specific text, a date, or to find duplicate values.

- ***Top/Bottom rules***

Using Top/Bottom Rules, you can use any options from the top 10, the bottom 10, the top 10%, the bottom 10%, Above average and below average, and pick the value from a data set. This way, we can delimit all the higher and lower values with a certain point and work only with those that interest us. In addition, we can also take the ten values directly above or below a specific value.

- ***Data bars***

Data bars are horizontal bars; they suggest the relationship of values in a cell range. You can add data bards to the cells and present them in a bar graph form. The higher the value, the longer the bar.

- ***Colour scale***

Colour scales allow changing the colour of each cell depending on its value. Every colour scale uses a two or 3-color gradient.

- ***Icons***

Microsoft Excel allows us to put different icons depending on the information that each of the cells has.

4. How to clear cell formatting without actually removing the cell content?

Cell formatting can be removed by 2 methods.

- Under home tab $\longrightarrow$ Styles ribbon $\longrightarrow$ Conditional formatting $\longrightarrow$ Clear rules $\longrightarrow$ Clear rules from entire sheet/selected cells.
- Under home tab $\longrightarrow$Editing ribbon $\longrightarrow$ Clear $\longrightarrow$ Clear formats

5. Define statistics

Statistics is the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data. In applying statistics to a scientific, industrial, or social problem, it is conventional to begin with a statistical population or a statistical model to be studied.

Descriptive statistics summarize your dataset, painting a picture of its properties. These properties include various central tendency and variability measures, distribution properties, outlier detection, and other information. Unlike inferential statistics, descriptive statistics only describe your dataset's characteristics and do not attempt to generalize from a sample to a population. sing a single function, Excel can calculate a set of descriptive statistics for your dataset. This post is an excellent introduction to interpreting descriptive statistics even if Excel isn't your primary statistical software package.

6. Explain about any two data analysis tool pack

The Analysis ToolPak is a built-in add-in program that offers data analysis tools for various financial, statistical and engineering problems. Analysis ToolPak fetches the result in an output table by using the relevant statistical or engineering macro functions. This remarkable tool surely saves time and effort by providing the data and parameters for every analysis. Though there are plenty of analysis functions, you can use only one function on your Excel worksheet. Sometimes you may work on grouped worksheets, and for those cases, the result of data analysis will be displayed on the first spreadsheet, and other formatted tables will be shown on the remaining spreadsheet. But if you wish to execute data analysis on the remaining worksheets, recalculate the analysis tool for each excel spreadsheet.

7. Explain about histogram

A histogram is a graphical representation of a grouped frequency distribution with continuous classes. It is an area diagram and can be defined as a set of rectangles with bases along with the intervals between class boundaries and with areas proportional to frequencies in the corresponding classes. In such representations, all the rectangles are adjacent since the base covers the intervals between class boundaries. The heights of rectangles are proportional to corresponding frequencies of similar classes and for different classes, the heights will be proportional to corresponding frequency densities. In other words, a histogram is a diagram involving rectangles whose area is proportional to the frequency of a variable and width is equal to the class interval.