**1. What does the dollar($) sign do?**

**2. How to Change the Reference from Relative to Absolute (or Mixed)?**

**3. Explain the order of operations in excel?**

**4. What, according to you, are the top 5 functions in excel and write a basic syntax for any of two?**

**5. When would you use the subtotal function?**

**6. What is the syntax of the vlookup function? Explain the terms in it?**

**A1.** A particular useful and common symbol used in Excel is the dollar sign within a formula. Note that this does not indicate currency; rather, it’s used to “fix” a cell address in place in order that a single cell can be used repetitively in multiple formulas by copying formulas between cells.

**A2.** 1- Select the cell that contains the formula.

2- In the formula bar. , select the reference that you want to change.

3- Press F4 to switch between the reference types.

**A3.** In general, Excel's order of operation follows the acronym PEMDAS (**Parentheses, Exponents, Multiplication, Division, Addition, Subtraction**) but with some customization to handle the formula syntax in a spreadsheet. First, any expressions in parentheses are evaluated.

**A4**.  The SUM Function

The TEXT Function

The VLOOKUP Function

The AVERAGE Function

The CONCATENATE Function

The syntax formula for sum function is “=SUM” (number1, number2, etc.).

The syntax formula for the average function is “AVERAGE” (number1, number2, etc.).

**A5.** The subtotal function is designed for columns of data, or vertical ranges. It is not designed for rows of data, or horizontal ranges. For example, when you subtotal a horizontal range using a function\_num of 101 or greater, such as SUBTOTAL(109,B2:G2), hiding a column does not affect the subtotal.

**A6**. Syntax of vlookup formula contains required four arguments or parameters to work in MS Excel.  
VLOOKUP(lookup\_value, table\_array, col\_index\_num,range lookup).

•**lookup\_value**: lookup\_value is the first parameter of excel Vlookup formula . lookup\_value is a required parameter in Vlookup function in excel . Lookup value is a value which user wants to search in the first column of a range array and wants the respective row values to be returned. If excel finds lookup value in the table array it will return the respective row value of the given column in the range. Otherwise it will return #N/A error.

•**table\_array**: table\_array is the second parameter of excel Vlookup formula. table\_array is a required parameter in Vlookup function in excel. table\_array is a range in Excel worksheet which user wants to search the lookup value in the first column of this table array.  
  
•**col\_index\_num**: col\_index\_num is the third parameter of excel Vlookup formula. We need to mention column index number in the Vlookup formula to tell Excel from which column of the given array to be picked a row value of the lookup value. Column index number should be always greater than equals to 1 and less than or equals to number of columns in the given table array range. If you specify less than 1, Vlookup formula returns #VALUE error value. And if you mention a column number which is greater than number of columns in the lookup table array range, vlookup formula returns #Ref error value.

•**range lookup**: range\_lookup is the fourth parameter of excel formula. range\_lookup is an optional parameter in Vlookup function in Excel. Range lookup parameter is to specify whether user required an exact match values or an approximate match values. If you omit this parameter, Vlookup function treat it as TRUE as default.  
You can mention TRUE (or 1) or FALSE (or 0) as a range lookup. Here TRUE searches for the exact match and returns the respective row values if match founds. Otherwise Vlookup returns approximate row values of the given lookup value. I.e. less than the exact match. Here TRUE and FALSE are Boolean values.  
FALSE returns the Exact matched row values. If lookup value not found in the first column of the table array, vlookup function returns #N/A error value.