**Excel assignment -2**

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

A.1—The Dollar ($) sign is used to change the type of cell reference in Excel formulas. A cell reference is the way you refer to a cell or a range of cells in a formula.

There are three types of cell references in excel:

Relative, Absolute, Mixed.

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

A.2 – We change the reference from relative to absolute or mixed in excel by using the F4 key on keyboard. The F4 key allows us to switch between different types of cell references in a formula.

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

**A.3 –** The order of operations in Excel is the sequence of steps that Excel follows to evaluatea formula. It is based on a standard mathematical convention called PEMDAS, which stands for Parenthesis, Exponents, Multiplication, Division, Addition, Subtraction. However, Excel also have some additional rules and operations that affect the order of operations. Here is a summary of the order of operations in excel:

🡪First, excel evaluates any expressions inside parentheses, starting from the innermost parentheses and moving outward. Parentheses override the number order of operations and force excel to calculate the enclosed expressions first.

🡪Next, Excel resolves any references to cells or ranges, such as A1, B2 or C3:C5. Excel replaces the references with the values from the cells or the arrays of values from the ranges. Excel also evaluates any range operators, such as colon (:), Space ( ), or comma (,), which create references to multiple cells or ranges.

🡪Then Excel performs my exponentiation, negation, or precent operations, in that order. Exponentiation (^) raises a number to a power, such as 2^3, which equals 8. Negation (-) changes the sign of a number, such as -1, which equals -1. Percent (%) converts a number to a percentage, such as 50%, which equals to 0.5

🡪After that, Excel Performs any multiplication or division operations, from left to right. Multiplication multiplies two numbers, such as 2 and 3 which equals 6. Division (/) divides one number by another, such as 6/3, which equals to 2.

🡪Next excel performs any addition or subtraction operations, from left to right. Addition (+) adds two numbers such as 2+3, which equals to 5. Subtraction (-) subtracts one number from another, such as 5-3, which equals to 2.

🡪Then, excel performs any concatenation operations, from left to right. Concatenation (&) joins two text strings together, such as “Hello” & “World”, which equals “HelloWorld”.

🡪Finally, excel evaluates any logical operators, if present. Logical operators compare two values and return TRUE or FALSE. The logical operators are equal to (=), less than (<), greater than (>), less than or equal to (<=), greater than or equal to (>=), and not equal to (<>). For example, 2=2 returns TRUE, while 2<>3 returns TRUE.

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

**A.4** The Top 5 functions in Excel are

1. =XLOOKUP

Lookup functions are must to know for any modeler. They are used to quickly and easily find data in a table, for example, to find the amount sold by an employee, ID number, and Thousands of other things.

SYNTAX:

=XLOOKUP (what do you want to lookup, where can it be found, what do you want to return)

2. =EOMONTH ()

EOMONTH function finds the last day of month after you add a specific number of months to a date. It’s useful for calculating maturity dates or due dates that fall on the last day of the month. It also aids in setting up your financial model.

SYNTAX:

=EOMONTH (start date, month you want to add/subtract)

3. =SUMIFS

SUMIFS function adds all of its arguments that meets multiple criteria.

SYNTAX:

=SUMIFS (sum range, criteria range 2, criteria 1, Criteria range 2, Criteria 2)

4. =INDEX () & MATCH ()

Sometimes, XLOOKUP won’t do the job, as it can only compare one array with another one. Index and match function combination can look up values in the whole table – it’s 2 Dimensional.

SYNTAX:

=INDEX (what you want to return), =MATCH (what are you looking for, where can it be found)

5. =SEQUENCE

The SEQUENCE function allows you to generate a list of sequential numbers in an array. SEQUENCE function works great if you need to generate list of 10,000 numbers in a column.

SYNTAX:

=SEQUENCE (number of rows you want to generate, number of columns you want to generate, starting point, step)

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

A.5 We use subtotal function when we want to:

🡪Summarize data in a list or table by applying different functions, such as SUM, AVERAGE, COUNT, MAX, MIN.

🡪Create subtotals and grand totals for different groups or categories of data.

🡪Exclude hidden or filtered rows from our calculations, depending on the function number you use.

SYNTAX:

=SUBTOTAL(function\_num, ref1, [ref2], ….)

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

A.6 – Syntax:

=VLOOKUP(lookup\_value,table\_array,col\_index\_num,[range\_lookup])

The terms in the syntax are:

* Lookup\_value: This is the value that you want to find in the first column of the table. It can be number, text, logical, value,or a cell reference.
* table\_array: This is the range of cells that contains the table. The first columns in the tble must contain the lookup\_value. We can also use a named range or a table name intead of a cell refrence.
* col\_index\_num: This is the column number in the table from which you want to return the value.The column number starts from 1for the left-most column of the table.
* range\_lookup: This is an optional argument that specifies whether you want an exact match or an approximate match for the lookup\_value. We can use TRUE or 1 for an approximate match, or FALSE or 0 for an exact match. If you omit this argument, the default value is TRUE.