DATASOFT
-INSTITUTE-

Shaktinagar

Write up – MS Excel

Excel Function Categories: Mathematical, Trigonometric, Logical, Text, Lookup/Reference, Statistical, Database, Date/Time, Engineering, Financial, Information.

Cell Reference Types *:* Relative (A5), Absolute (A5) & Mixed (A$5 or $a5).

Function	Application	Syntax
	Mathematical & Statistical Functions	
Sum()	To add all the numbers given in a range.	=Sum (num1,num2,…….)
Product ( )	To multiply a given range of cells.	=Product (num1,num2…….)
Average ( )	To find the average of given range.	= Average (num1,num2…….)
Max( )	To find the maximum (highest) number out of the given range.	=Max (num1,num2…….)
Min( )	To find the minimum (lowest) number out of given range.	=Min (num1,num2…….)
Mode ( )	To find the number which is repeated more time in a given range	=Mode(num1,num2,……)
Count ( )	To count the cell which consists of only numbers?	=Count(num1,num2…….)
Counta ( )	To count the cell which consists any thing.	=Counta (num1,num2…….)
Countblank()	Count Empty Cell in a Specified Range of Cell	=Countblank(Cell Range)
Power ( )	To find the power of any number.	=Power(Number, Power)
Mod ( )	To display the remainder of any divided number	=Mod(Number, Divisor)
Fact ( )	To display the factorial of a given number.	=Fact(Number)
Round ( )	Rounds a number to specified number digit	=Round(num)
Roundup ( )	Round a number up, away from zero	=Roundup(number,num_digit)
Rounddown()	Round a number down, toward zero	=Rounddown(number,num_digit)
Trunc ( )	Truncates a number to an integer by removing the fractional part.	=Trunc(Number,num_digit)
Int( )	Rounds a number down to the nearest integer	=Int(num)
Sqrt ( )	To display the square root of a number	=Sqrt(Number)
Abs ( )	Return the absolute value of a number, a no. without its sign	=Abs(num)
Randbetween()	Generates a random integer between two numbers that specify.	=Randbetween(start no, end no)
Large()	Return the k^{th} large value ina data set.	=large(range,k)
Small()	Return the k^{th} smallest value ina data set.	=Small(range,k)
Rank()	Returns the rank or position of a number within a range of numbers	=Rank(number, Range)
	Text & Character Functions	
Upper ( )	To display the word in Capital Letter.	=Upper(text)
Lower ( )	To display the word in Small Letter.	=Lower(text)
Proper ( )	To capitalize the first letter of every word.	=Proper(text)
Len ( )	To find the length of any given matter in a cell	=len(text)
Left ( )	To display specified number of characters from Left part of the word.	=Left(Text,Num_Char)
Right ( )	To display specified number of characters from Right part of the word.	=Right(Text,Num_Char)
Mid ( )	Display specified number of characters from the Middle part of the word.	=Mid(Text,Start_Num,Number_of_Char)
Concatenate( )	To add two or more cell's value.	=Concatenate (text1," ", text2," ",…….)
Rept()	Repeats a character a specified number of times	=Rept(text, no of times)
Trim ( )	To remove left side space in a cell.	=Trim(text)
Exact()	Tests if two supplied text strings are exactly the same and if so, returns TRUE; Otherwise returns FALSE.	=EXACT(A2,F2)
Code ( )	To display the code of any character.	=Code(Text)
Char ( )	To display the Character of any entered code.	=Char(Number)
	Conditional, Logical & Statistical Function	
If ( )	To apply conditional statement	=If(Logical Test,Value if True,Value if False)
And ( )	If all the conditions are true then only displays True other wise displays False.	=And (logical1,[logical2],……..)
Or ( )	Even if any one condition is True then displays True.	=Or (logical1,[logical2],……..)
Not ( )	If condition is true then result False & if condition is False then result True.	=Not(logical)
Countif ( )	To count a given content according to the condition specified.	=Countif(range,criteria)
Sumif ( )	To calculate a given number according to the condition specified.	=Sumif(range,criteria,sum_range)
	Engineering Function	
Number System : Decimal, Binary, Octal & Hexa Decimal. (Convert from all formats to all formats) Dec2Bin(n), Dec2Oct(n), Dec2Hex(n),Bin2Dec(n),Bin2Oct(n),Bin2Hex(n),Oct2Bin(n), Oct2Dec(n),Oct2Dec(n), Hex2Bin(n),Hex2Dec(n),Hex2Oct(n)		
Convert()	conversion of units from one to another measurement system	=CONVERT(number, "from unit ","to unit")

Units (Code):
Wight & Mass- Gram("g"), Ton("ton") **Distance -** Meter("m"), Inch("in"), Foot("ft"), Yard("yd") **Time -** Year("yr") | Day("d"), Hour("hr"), Minute ("mn"), Second("s") **Temperature -** Celsius ("C"), Fahrenheit("F"), Kelvin("K"), **Area –** Square Feet ("ft2"), Square inch ("in2"), Square miles("mi2"), SqYards ("yd2") **Information –** Byte("byte"), Bit("bit")

Date & Time Function		
Today ( )	To display the current date.	=Today( )
Date ( )	To display the date entered by the user.	=Date(yy,mm,dd)
Time ( )	To display the time entered by the user.	=Time(Hour,Minute, Second)
Now ( )	To display the current date and time.	=Now( )
Day ( )	Returns the day of a date, represented by a serial number.	=Day (serial no.)
Month ( )	Returns the month of a date, represented by a serial number.	=Month (serial no.)
Year ( )	Returns the year corresponding to a date.	=Year (serial no.)
Weekday ( )	Returns the day of the week corresponding to a date.	=Weekday(serial_num,return_type)
Days360 ( )	Returns the number of days between two dates based on a 360-day year	=days360(start date, end date)
Datedif()	Return the number of days, months and year also	=Datedif(D_O_B, Present Date ,"D" or "m" or "y")
Financial Function		
Pmt ( )	To calculate the monthly Payment of any loan amount.	=PMT(Rate, Nper,PV,FV,Type)
IPmt()	To calculate the "Interest" portion of a loan payment.	=IPMT(rate, Month No, Nper, PV)
PPmt()	To calculate the "Principal" portion of a loan amount	=PPMT(rate, Month No, Nper, PV)
Fv ( )	Returns the future value of an investment.	=FV(rate,nper,pmt,pv,type)
Pv ( )	Returns the present value of an investment	=PV(rate,nper,pmt,fv,type)
Npv ( )	Calculates the net present value of an investment with different Am.	=NPV(rate,value1,value2, ...)
DB ()	Calculates the depreciation of an asset for a specific period.	=DB(cost, salvage, life, Yr No)
Lookup Function		
Vlookup ( )	Searches for a value in the first column of a table array and returns a value in the same row from another column in the table array.	*=Vlookup(lookup_value,table_array,col_index_num,range_lookup)*
Hlookup ( )	Searches for a value in the top row of a table or an array of values, and then returns a value in the same column from a row you specify in the table or array	=Hlookup(lookup_value,table_array,row_index_num,range_lookup)
Choose()	Uses index_num to return a value from the list of value arguments	=choose(index_num,value1,value2,…)

	Some important options of MS Excel
Menu	**Tools & *Application***
Home	Transpose paste, Wrap text, merge & center, Conditional formatting, Auto sum etc
Insert	Pivot Table, Charts, Hyperlink, Header Footer etc
Page Layout	Page Orientation, size, print area, Gridlines(view, print), Heading(view, print),
Formulas	Insert function, Function categories, Define name, Trace Precedents, Trace Dependents, Remove Arrows, Show Formulas, Error checking, Evaluate formula etc.
Data	Sort, Filter, Get External Data, Text to columns, Remove Duplicates, Data validation, Goal seek, Group, ungroup, subtotal etc.
Review	Proofing, Comment, Protect sheet, protect workbook etc.
View	Workbook views, Rules, Gridlines, Formula, Headings, Zoom, New Window, Arrange all, Freeze pane etc.

Shortcuts Keys :

Shortcut	Description	Shortcut	Description
ALT+=	Inserts a SUM formula.	**Ctrl + 1**	Display the format cell dialog box.
CTRL+Page Up / Page Down	Scroll between worksheets .	**Ctrl + 2 / Ctrl + B**	Bold
CTRL+HOME	Quickly move to home.	**Ctrl + 3 / Ctrl + I**	Italic
Ctrl + ;	Enter the current date.	**Ctrl + 4 / Ctrl + U**	Underline
Ctrl + G / F5	Display the Goto dialog box.	**Ctrl + 5**	Strikethrough
F2	Edit the active cell.	**Ctrl + 9**	Hide the selected rows.
Shift + F6	To navigate the Ribbon.	**Ctrl + 0**	Hide the selected columns.
CTRL+'	Copies a formula from the cell above	**Ctrl + ~**	View formulas in cell.
Ctrl + D	copies the cell above	**CTRL+K**	Opens the Hyperlink dialog box.

Exercise:

1. Create a marksheet which mentioned total marks, percentage, Division, Rank in class. (also display records through chart) , also transfer the Std name , per & rank on another sheet.**(**syntax **= sheet Name! cell address)**
2. Create an income tax sheet on the basis of Income input.

(0 to 4.0 lakh - 0%, 4.0 to 8.0 lakh -5%, 8.0 to 12.0 lakh – 10%, 12.0 to 16.0 lakh – 15%, 16.0 to 20.0 lakh – 20%, 20.0 to 24.0 lakh – 25%, above 24.0 lakh – 30%)

3. Design a Salary sheet of Employees on the basis of Basic Salary.
4. Design a wages sheet on the basis of Attendance (P / A) of the Month.
5. Display the different companies Income with particular year through chart.
6. Create various records of companies on their individual Sheets , also connect all companies sheets through home sheet.
7. Office Button – Excel Options.