Excel

Math and trigonometry functions
Referencing, Naming Ranges

Q1 :- How do you use the SUMIF function to add values that meet a specific criterion?

A) Using the SUMIF Function :-

It adds values in a specific range that meet a single condition.

Syntax :- =SUMIF(range, criteria, [sum_range])

example :- =SUMIF(A1:A10, ">100", B1:B10)

adds values in column B only if the corresponding cell in column A is greater than 100.

Q2 :- What is the difference between the sum and SUMPRODUCT Function?

A) SUM : simply adds up all numbers in a range

SUMPRODUCT :- Multiplies corresponding components in two or more arrays and then returns the sum of those products. It is great for calculating weighted averages or total costs (eg. qty * price)

Q3 :- How would you use the ROUND, ROUNUP, and ROUNDDOWN Functions?

A) ROUND, ROUNDUP, and ROUNDDOWN

ROUND :- Rounds to the nearest digit based on standard math (0-4 down, 5-9 up).

ROUNDUP :- Always rounds the number away from zero

ROUNDDOWN :- Always rounds the number toward zero

Q4 :- Explain how to use the COUNTIF function to count cells that meet a condition

A) COUNTIF Function :

Counts the number of cells within a range that meet a given criterion

Ex :- =countIf (B1:B20, "Completed") tells you how many tasks are marked as "completed" in that range

Q5 :- What is the purpose of the PI function in excel?

A) Purpose of the PI Function :

It returns the mathematical constant π (3.14) accurate to 15 digits. It is used for geometric calculations like finding the area of circle =PI()

=PI()* (A1^2)

Q6) How do you apply the SIN, COS, and TAN function in excel?

A) SIN, COS and TAN Functions :-

These functions calculate trigonometric ratios. Note that excel expects angles in radians, not degrees

To use degrees, wrap your number in the RADIANS Function:= SIN(RADIANS(45))

Q7) How can naming ranges improve the readability and management of formulas?

A) Naming a group of cells (eg: naming A2:A50 as "sales") makes formulas easier to read:
=SUM(sales) is much cleaver than
=SUM(A2:A50). It also creates an absolute reference by default, so the range doesn't shift if you copy the formula.

Q8:- What are dynamic named ranges, and how do you create one?

A) Dynamic Named Ranges :-

These are ranges that automatically expand or contract as you add or remove data. We can

~~You~~ create them using the Name manage with a formula like OFFSET or INDEX

ex:- =OFFSET (A1,0,0, COUNTA ($A:$A),)

Creates a list that grows as you add items to column A:

Q9 How do you reference cells from another worksheet in a formula)

A) Referencing other worksheets :-

To reference a cell in a different sheet, use the sheet name followed by an enclamation point.

* syntax : =sheet name ! cell Adress

example : =SUM(Sheet 2 ! B1 : B10)

(If the sheet name has spaces, use single quotes;
='Monthly sales' ! B1).

Q10 :- What is an array formula, and how does it differ from a regular formula?

A) An array formula can perform multiple calculations on one or more items in an array (a row, column or table)

Difference: A regular formula usually provides a single result for a single cell. An array formula (often entered with Ctrl + Shift + Enter in older excel versions) can process entire blocks of data at once and return either a single value or an entire range of results.