

Day – Excel Core Functions (Data Analytics)

Topics Covered

IF, Nested IF, SUMIF, COUNTIF, VLOOKUP, HLOOKUP, XLOOKUP

1. IF Function

Used to make decisions based on a condition.

Syntax: =IF(condition, value_if_true, value_if_false)

Example: =IF(A2>=40,"Pass","Fail")

2. Nested IF

Used when multiple conditions are required.

Example:

=IF(A2>=75,"Distinction",IF(A2>=60,"First Class",IF(A2>=40,"Pass","Fail")))

3. SUMIF

Adds values based on a condition.

Syntax: =SUMIF(range, criteria, sum_range)

Example: =SUMIF(C:C,"South",D:D)

4. COUNTIF

Counts records based on a condition.

Syntax: =COUNTIF(range, criteria)

Example: =COUNTIF(B:B,"IT")

5. VLOOKUP

Used to fetch data vertically from a table.

Syntax: =VLOOKUP(lookup_value, table_array, col_index, FALSE)

Example: =VLOOKUP(L4,A3:G7,7,FALSE)

6. HLOOKUP

Used to fetch data horizontally from the first row.

Syntax: =HLOOKUP(lookup_value, table_array, row_index, FALSE)

Example: =HLOOKUP("Feb",A2:D4,2,FALSE)

7. XLOOKUP (Recommended)

Modern replacement for VLOOKUP and HLOOKUP.

Syntax: =XLOOKUP(lookup_value, lookup_array, return_array)

Example: =XLOOKUP("Sales",A3:A4,C3:C4)

Key Interview Points

- 1 XLOOKUP is more flexible and safer than VLOOKUP
- 2 HLOOKUP searches only the first row
- 3 SUMIF and COUNTIF are used for conditional aggregation
- 4 Nested IF handles multiple conditions