

1. **SUM** – Totals the marks obtained by all students.
2. **AVERAGE** – Calculates the average marks of students.
3. **COUNT** – Counts the number of cells that contain numbers (e.g., students with valid marks).
4. **MAX** – Finds the highest mark in a range.
5. **MIN** – Finds the lowest mark in a range.
6. **MEDIAN** – Returns the middle number in a set of numbers.
7. **MODE.SNGL** – Returns the most frequently occurring number in a data set.
8. **TEXT** – Converts a value to text in a specified format (e.g., formatting dates as "dd-mm-yyyy").
9. **PROPER** – Converts text so that the first letter of each word is capitalized and all other letters are in lowercase.
10. **COUNTA** – Counts the number of non-empty cells (such as status entries).
11. **COUNTBLANK** – Counts the number of empty cells (e.g., missing marks).
12. **COUNTIF** – Counts cells that meet a single condition (e.g., counting students who passed).
13. **COUNTIFS** – Counts cells that meet multiple conditions (e.g., counting students who passed with marks  $\geq 70$ ).
14. **SUMIF** – Sums cells that meet a specified condition (e.g., summing the marks of passing students).
15. **SUMIFS** – Sums cells that meet multiple conditions (e.g., summing marks for exams on a specific date).
16. **AVERAGEIF** – Calculates the average of cells meeting a single condition (e.g., average marks of passing students).
17. **AVERAGEIFS** – Calculates the average of cells meeting multiple criteria (e.g., average marks for exams in March).
18. **IF** – Returns one value if a condition is true and another if false (e.g., assigning "Pass" if marks are  $\geq 70$ ).
19. **IFS** – Checks multiple conditions and returns a value corresponding to the first true condition (useful for assigning grades).
20. **AND** – Returns TRUE if all given conditions are TRUE (e.g., verifying a student passed with marks  $\geq 80$ ).

21. **OR** – Returns TRUE if at least one condition is TRUE (e.g., if a student passed or scored  $\geq 80$ ).
22. **XOR** – Returns TRUE if an odd number of conditions are TRUE (useful for checking if exactly one condition is met).
23. **CONCAT** – Combines two or more text strings into one (e.g., merging a student's name and status).
24. **LEFT** – Extracts a specified number of characters from the beginning of a text string (e.g., the first character of a Student ID).
25. **RIGHT** – Extracts a specified number of characters from the end of a text string (e.g., the last 3 digits of a Student ID).
26. **LOWER** – Converts all letters in a text string to lowercase.
27. **UPPER** – Converts all letters in a text string to uppercase.
28. **TRIM** – Removes extra spaces from text (useful for cleaning up names).
29. **LEN** – Returns the number of characters in a text string (e.g., counting characters in student names).
30. **RAND** – Generates a random number between 0 and 1 (which can be scaled to create random IDs).
31. **SIN** – Returns the sine of an angle (in radians).
32. **COS** – Returns the cosine of an angle (in radians).
33. **TAN** – Returns the tangent of an angle (in radians).
34. **DAYS360** – Calculates the number of days between two dates based on a 360-day year (commonly used in financial calculations).
35. **CODE** – Returns the numeric ASCII code of the first character in a text string.
36. **CHAR** – Returns the character corresponding to a given numeric code.
37. **LOOKUP** – Searches for a value in a one-dimensional range and returns a corresponding value from another range.
38. **VLOOKUP** – Searches vertically in a table for a specified value and returns a value from a specified column.
39. **XLOOKUP** – Searches a range or array for a match and returns the corresponding value (a more flexible alternative to VLOOKUP).
40. **IFERROR** – Returns a specified value if a formula results in an error; otherwise, returns the formula's result.
41. **REPLACE** – Replaces part of a text string with another text string, based on a starting position and number of characters.
42. **SQRT** – Returns the square root of a number.
43. **POWER** – Returns the result of a number raised to a specified power.
44. **ABS** – Returns the absolute value of a number (converts negative numbers to positive).

- 45. **NOW** – Returns the current date and time.
- 46. **TODAY** – Returns the current date.
- 47. **ROUND** – Rounds a number to a specified number of digits.
- 48. **CONVERT TIME TO SECONDS** – Converts a time value (stored as a fraction of a day) to seconds by multiplying by 86,400.
- 49. **DIFFERENCE BETWEEN TIMES** – Calculates the difference between two time values; multiply the result by an appropriate factor (e.g., 24 for hours) to convert to a specific unit.
- 50. **NPV (NET PRESENT VALUE)** – Calculates the net present value of an investment by discounting a series of future cash flows using a specified discount rate.
- 51. **REMOVE DUPLICATES** – A feature (not a formula) available under the Data tab's Data Tools; it allows you to remove duplicate entries from a selected range or table.