

# Excel

## Assignment    Questions

### I: Excel Introduction, Basic Excel Functions.

- i) what is the difference between a workbook and a worksheet in Excel?
- A) workbook and worksheet are two important parts of microsoft Excel, but they are different in purpose and structure.

#### workbook:

It is the main Excel file. It is like a folder that contains one or more worksheets. When we open Excel and save a file, it is saved as a workbook with extensions like .xlsx or .xlz. A workbook helps us organize and manage multiple worksheets in a single file.

#### worksheet:

Example: student-Data.xlsx

#### worksheet:

It is a single sheet inside the work book. It looks like a table made of rows and columns. Worksheets are used to enter, calculate and analyze data. Each worksheet has a unique name such as sheet1, sheet2, etc.,

Example: Marks, Attendence, Fees

Q) How do you Create a basic Formula in Excel?

A) A formula in Excel is used to perform calculations such as addition, subtraction, multiplication and division.

To create basic Formula in Excel, follow these steps:

⇒ select the cell where you want the result to appear.

⇒ Type the equal sign ( $=$ ) Every formula in Excel must start with  $=$ .

⇒ Enter the values or cell references you want to calculate.

⇒ Use arithmetic operators like  $(+, -, *, /)$ .

⇒ Press enter to get the result.

Example:

→ If cell  $A1 = 10$  and  $B1 = 20$

→ In cell  $C1$ , type:

$=A1 + B1$  → Press enter

→ The result will be '30'.

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3) Can you explain how cell referencing works in Excel?

Cell referencing in Excel means using the address of a cell in a formula instead of typing the actual value. It helps Excel automatically update calculations when data changes.

Excel has 3 types of references:

→ Relative cell reference

→ Absolute cell reference

→ Mixed cell reference

→ Relative cell reference:

- This is the default reference in Excel

- It changes automatically when the formula is copied to another cell.

Example:

$$=A1+B1$$

If you copy this formula down one row, it becomes:

Like this =A2+B2

$$=A3+B3$$

→ Absolute Cell Reference:

- This reference does not change when the formula is copied.

- It uses the \$ symbol.

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Example:

$$= \$A\$1 + \$B\$1$$

→ Used when a value (like tax rate or fixed number) must remain the same.

→ Mixed cell Reference:

- Part of the reference is fixed, and part can change.

Example:

$$= \$A1 \text{ (or)} = A\$1$$

- Useful in tables and calculations like multiplication tables.

4) what is the purpose of the sum function, and how do you use it?

The sum function in Excel is used to add numbers quickly and accurately. Its main purpose is to calculate the total of the values in cells, rows, columns, or ranges without doing manual addition.

Purpose of sum function

- To add multiple numbers at the same time.
- To save time and reduce the calculation error
- To automatically update the total when values change

- To work large data easily.
- To improve accuracy in calculations.

Syntax:

=sum (number1, number2, ...)

steps to use:

- select the cell where you want the total.
- Type =sum(
- select the range of cells you want to add.
- close the bracket ).
- Press enter.

Example:

→ If numbers are in cells A1 to A5

→ formula:

$\boxed{\text{sum(A1:A5)}}$

→ Excel will display the total of all values in A1 to A5.

5) How do you apply the average function to a range of cells?

The Average Function in Excel is used to find the mean (average) of numbers in a selected range of cells. It adds all the values and divides the total by the number of values automatically.

Syntax of Average:

=AVERAGE(number1, number2, ...)

Steps to apply Average Function:

- select the cell where you want to average result.
- Type =AVERAGE(.
- select the range of cells you want to calculate the average for.
- close the bracket ).
- Press Enter.

Example:

→ If the marks are in cells A1 to A5

→ Formula:

=AVERAGE(A1:A5)

→ Excel will display the average value of the numbers in A1 to A5.

Q) What is relative cell reference and how does it differ from an absolute cell reference?

A) A cell reference in Excel is used to refer to a cell's address in a formula. Excel mainly uses relative and absolute cell references.

## Relative cell Reference:

- A relative cell reference changes automatically when a formula is copied to another cell.
- It does not use the \$ symbol.
- It is useful when the same calculation is needed for different rows or columns.

### Example:

$$=A1 + B1$$

If this formula is copied from row 1 to row 2, it becomes:

$$=A2 + B2$$

## Absolute cell Reference:

- An absolute cell reference remains fixed even when the formula is copied.
- It uses the \$ symbol before the column and row.
- It is useful when a value must stay the same, such as tax rate or constant value.

### Example:

$$= \$A\$1 + \$B\$1$$

When copied, the reference does not change.

7) How do you quickly sum a row or column of numbers?

A) In Excel the fastest way to add a row or column of numbers is by using the Autosum feature. Autosum automatically inserts the sum function and selects the correct range.

Method 1: Using Autosum Button

→ Select the empty cell just below a column or next to a row of numbers.

→ Click the Autosum ( $\Sigma$ ) button on the Home tab or Formula tab.

→ Excel will automatically select the range of numbers.

→ Press Enter to get the total.

Method 2: Using Keyboard shortcut

→ Select the cell where you want the total.

→ Press Alt + = on the keyboard.

→ Excel automatically applies the sum formula.

→ Press Enter.

Example: For sum consider cell range A1:A5

→ Numbers in A1 to A5

→ Select A6, click AutoSum → Result shows total of A1:A5.

- Explain how to use the Autosum feature.
- A) Autosum is a built-in feature in Excel that helps to quickly add numbers in a row or column without typing the formula manually.
- Steps to use Autosum:
- Select the empty cell where you want the total to appear.
  - Click the Autosum ( $\Sigma$ ) button found on the Home tab or Formulas tab.
  - Excel automatically selects the range of cells to be added.
  - If the selected range is correct, Press Enter.
  - Excel displays the total value in the selected cell.

Example:

→ Numbers in cells A1 to A5

- Select cell A6
- click Autosum → Excel inserts:

$$=\text{sum}(A1:A5)$$

Advantages of Autosum:

- saves time
- Reduces errors
- Easy to use for beginners
- Automatically updates when data changes

Q) How do you insert and delete rows and columns in Excel

In Excel, we can add (Insert) & remove (Delete) rows and columns easily to organize data.

#### How to Insert Rows:

- select the row number where you want to insert a new row.
- Right-click on the selected row number.
- click Insert
- A new row is inserted above the selected row.

#### How to insert columns:

- select the column letter where you want to insert a new column.
- Right-click on the selected column letter.
- click Insert.
- A new column is inserted to the left of the selected column.

#### How to Delete Rows:

- select the row number you want to delete.
- Right-click on the <sup>row</sup> number.
- click Delete.
- The selected row is removed.

### How to delete columns:

- select the column letters you want to delete
- Right click on the column letters.
- click Delete.
- The selected column is removed.

### shortcut method:

- Insert: row/column : Ctrl + +
- Delete : Row/ column : Ctrl + -

10) what are some common uses of Excel in a business environment?

Microsoft Excel is widely used in business to store, analyze, and manage data efficiently.

#### Common uses of Excel in Business:

→ Data Entry and Record Keeping:-

Excel is used to store employee details, customer information, sales records, and inventory data in an organized way.

→ Financial calculations:-

It helps in calculating salaries, expenses, profit, losses, budgets, and tax using formulas and functions.

### → Data Analysis

Businesses uses Excel to analyze data sorting, filtering, charts, budgets and tax using formulas and pivot tables for better decision-making.

### → Reporting and charts

Excel is used to create reports, graphs and charts to present business performance clearly.

### → Planning and Forecasting:

Excel helps in sales forecasting, project planning, timelines, and tracking targets.