

Question 1 : Explain the difference between Absolute, Relative, and Mixed Cell Referencing in Excel with examples.

Ans. 1. Relative Cell Referencing

Definition:

Relative references change automatically when a formula is copied to another cell.

Example:

Formula in cell **C2**:

=A2+B2

•

If you copy this formula from **C2** to **C3**, it becomes:

=A3+B3

•

Explanation:

Excel adjusts the row numbers relative to the new position.

Use case:

When performing the same calculation across multiple rows or columns (e.g., adding values row by row).

2. Absolute Cell Referencing

Definition:

Absolute references **do not change** when a formula is copied. They are fixed using the **\$ (dollar sign)**.

Syntax:

\$Column\$Row

Example:

Formula in cell **C2**:

=A2*\$B\$1

-
- Copying this formula anywhere will always refer to **cell B1**.

Explanation:

\$B\$1 remains constant regardless of where the formula is copied.

Use case:

When referencing a constant value like a tax rate, discount rate, or fixed multiplier.

3. Mixed Cell Referencing

Definition:

Mixed references lock **either the row or the column**, but not both.

Types & Examples:

a) Column fixed, row relative

=**\$A1**

- Column **A** is fixed
- Row changes when copied down

b) Row fixed, column relative

=**A\$1**

- Row **1** is fixed
- Column changes when copied across

Example Formula:

=**\$A1*B\$2**

Use case:

Useful in tables such as multiplication tables or when applying formulas across rows and columns.

Question 2 : What is a Macro in Excel? How does it help in automation?

Ans.A Macro in Excel is a set of recorded or written instructions (code) that automates repetitive tasks. Macros are written using VBA (Visual Basic for Applications) and allow Excel to perform multiple actions automatically with a single command.

Question 3 : What are Text Functions in Excel? Mention any five with examples.

Ans.Text functions in Excel are used to **manipulate, combine, format, and extract text** from cells. They are especially useful when working with names, addresses, codes, and other text data.

Five Common Text Functions in Excel (with Examples)

1. LEFT()

Purpose:

Extracts a specified number of characters from the **left** side of a text.

Example:

```
=LEFT("Excel", 2)
```

Result: Ex

2. RIGHT()

Purpose:

Extracts a specified number of characters from the **right** side of a text.

Example:

```
=RIGHT("Excel", 3)
```

Result: cel

3. MID()

Purpose:

Extracts characters from the **middle** of a text.

Example:

```
=MID("Excel", 2, 3)
```

Result: xce

4. LEN()

Purpose:

Counts the **number of characters** in a text (including spaces).

Example:

```
=LEN("Microsoft Excel")
```

Result: 16

5. CONCAT() / CONCATENATE()

Purpose:

Joins two or more text strings into one.

Example:

```
=CONCAT("Hello", " ", "Excel")
```

Result: Hello Excel

Question 4 : What is the use of Scenario Manager in decision making?

Ans. Use of Scenario Manager in Decision Making

Scenario Manager is a What-If Analysis tool in Excel that helps users make better decisions by comparing different possible outcomes when key input values change.

How Scenario Manager Supports Decision Making

1. Evaluates Multiple Alternatives

It allows users to create and compare scenarios such as *Best Case*, *Worst Case*, and *Most Likely Case* by changing several variables at once.

2. Analyzes Impact of Uncertainty

Decision makers can see how changes in factors like cost, price, or sales affect results such as profit or revenue.

3. Improves Planning and Forecasting

Helps in budgeting, financial planning, and forecasting by testing various assumptions before finalizing a plan.

4. Reduces Risk

By visualizing different outcomes, managers can choose strategies with lower risk and higher returns.

Question 5 : Define the purpose of VLOOKUP and HLOOKUP. How are they different from XLOOKUP? Which among XLOOKUP and INDEX-MATCH is best while usage?

Ans.

1. VLOOKUP (Vertical Lookup)

Purpose:

VLOOKUP is used to **search for a value in the first column** of a table and return a corresponding value from another column in the **same row**.

Example:

=VLOOKUP(101, A2:D10, 3, FALSE)

Looks for value **101** in column A and returns the value from the **3rd column** of the table.

2. HLOOKUP (Horizontal Lookup)

Purpose:

HLOOKUP is used to **search for a value in the first row** of a table and return a corresponding value from another row in the **same column**.

Example:

```
=HLOOKUP("Sales", A1:D5, 2, FALSE)
```

Looks for **Sales** in the first row and returns the value from the **2nd row**.