1. Introduction to Excel – Layout of Excel

- What are the differences between the Ribbon and the Quick Access Toolbar?

- How do you customize the Excel interface to add frequently used commands?

- Explain the purpose of different worksheet views available in Excel.

2. Cell References

- Why are relative cell references important when copying formulas?

- When should you prefer absolute cell references over relative ones?

- Give a practical example where mixed references are useful in building formulas.

3. Entering Values into a Cell

- What happens if you start an entry in a cell with the = sign?

- Explain the difference between entering a date as text versus as a valid Excel date format.

- What are different ways to edit the contents of a cell?

4. Advanced Functions and Formulas

Array Formulas

- How can array formulas be used to calculate totals without helper columns?

- Compare single-cell array formulas with multi-cell array formulas.

- Write an example of an array formula to calculate the sum of only positive values in a range.

Nested Functions Basics

- Why might you use nested functions instead of multiple separate formulas?

- Give an example of a nested IF function with at least three conditions.

- How does nesting the LEN function inside IF provide more flexibility?

Logical Functions (IF, AND, OR)

- What is the difference between using IF alone and combining it with AND?

- Create an example where OR is used to check multiple conditions.

- Explain how logical operators (>, <, =) are applied inside IF functions.

Practice

- Create a formula that checks if a student scored more than 50 in all subjects using AND and array logic.

- How would you debug a formula that returns #VALUE! due to nested logical errors?

5. Lookup and Reference Functions

VLOOKUP, HLOOKUP

- What are the limitations of VLOOKUP compared to INDEX-MATCH?

- Explain how you can use VLOOKUP with approximate match (TRUE).

- How do you use IFERROR to handle failed lookups?

INDEX, MATCH, INDIRECT, OFFSET

- How does the MATCH function make INDEX more powerful?

- Write an example where INDIRECT is used to dynamically reference a sheet.

- Show a case where OFFSET helps in building a moving average formula.

Practice

- Design a problem requiring both HLOOKUP and OFFSET to extract data.

- How can combining INDEX and MATCH improve performance in large files?

6. Text Manipulation and Regular Expressions

- Which Excel functions can be used to clean unwanted spaces in text?

- Give an example of combining LEFT, MID, and RIGHT functions to extract substrings.

- Explain how pattern matching can be applied to validate email addresses.

7. Advanced Data Validation and Conditional Formatting

- What are custom formulas in data validation, and when would you use them?

- How can conditional formatting be applied dynamically using formulas?

- Provide a scenario where multiple conditional formatting rules overlap.

8. GPTExcel – AI in Excel

- What is GPTExcel and how does it assist users in working with spreadsheets?

- How can GPTExcel be used to automatically generate Excel formulas based on natural language input?

- Provide an example of a task where GPTExcel could save time compared to manual formula writing.