
EXCEL ASSIGNMENT

Question 1: What is the difference between 'Paste' and 'Paste Special' in Excel? Briefly explain with examples.

Ans - Paste

- What it does: Pastes *everything* exactly as copied.
- Includes: Values, formulas, formatting, borders, and sometimes comments.
- Example:
 - Copy a cell with the formula =A1+B1 → Paste it → the formula and formatting both come along.

Paste Special

- What it does: Lets you choose *what part* of the copied content to paste.
- Options include: Values only, formulas only, formats only, transpose, multiply/divide, etc.
- Examples:
 - Paste Values: Copy a formula cell → Paste Special → Values → only the result (number) is pasted, not the formula.
 - Paste Formats: Copy a styled cell → Paste Special → Formats → only the look is applied.
 - Transpose: Copy a vertical list → Paste Special → Transpose → it becomes horizontal.

In short:

- Paste = everything
- Paste Special = only what you choose

Question 2: Describe the functions and usefulness of 'Freeze Panes' and 'Split Panes' in Excel.

Ans - Freeze Panes

- Function: Locks specific rows or columns so they stay visible while you scroll.
- Usefulness: Helps you keep headers or labels in view when working with large datasets.
- Example:
 - Freeze the top row → column headings remain visible as you scroll down.
 - Freeze the first column → row labels stay visible when scrolling sideways.

Split Panes

- Function: Divides the worksheet window into separate, scrollable sections.
- Usefulness: Lets you view and work on different parts of the same worksheet at the same time.
- Example:
 - Split the sheet to compare data at the top and bottom without scrolling back and forth.

Key Difference

- Freeze Panes: Keeps rows/columns fixed permanently until unfrozen.
- Split Panes: Creates movable viewing sections that can be adjusted or removed easily.

Question 3: Explain the difference between inserting a new row and inserting a new column in Excel. Can you insert multiple rows or columns at once?

Ans - Difference between inserting a new row and a new column in Excel

- Inserting a new row:
 - Adds a horizontal row above the selected row.
 - Existing rows shift downward.
 - Example: Select row 5 → Insert → a new blank row appears above row 5.
- Inserting a new column:
 - Adds a vertical column to the left of the selected column.
 - Existing columns shift to the right.
 - Example: Select column C → Insert → a new blank column appears before column C.

Inserting multiple rows or columns

Yes, you can insert multiple rows or columns at once.

- Multiple rows:
 - Select the same number of existing rows as you want to insert → Right-click → Insert.
- Multiple columns:
 - Select multiple columns → Right-click → Insert.

Example:

- Select 3 rows → Insert → 3 new rows are added.
- Select 2 columns → Insert → 2 new columns are added.

Question 4: What are logical functions in Excel? Provide examples of at least two logical functions and their applications.

Ans - Logical Functions in Excel

Logical functions are used to make decisions in Excel by testing conditions and returning results based on whether those conditions are TRUE or FALSE.

Examples of Logical Functions and Their Applications

1. IF Function

- Purpose: Tests a condition and returns one value if it's TRUE and another if it's FALSE.
- Syntax: =IF(logical_test, value_if_true, value_if_false)
- Example:
`=IF(A1>=50, "Pass", "Fail")`
Application: Used to determine whether a student has passed or failed based on marks.

2. AND Function

- Purpose: Checks multiple conditions and returns TRUE only if all conditions are true.
- Syntax: =AND(condition1, condition2)
- Example:
`=AND(A1>=50, B1="Yes")`
Application: Used to check eligibility, such as passing marks *and* attendance requirement.

(Optional) 3. OR Function

- Purpose: Returns TRUE if any one of the conditions is true.
- Example:
`=OR(A1>=50, B1="Yes")`
Application: Used when meeting at least one condition is sufficient.

In summary

Logical functions help Excel analyze conditions, make decisions, and automate results based on data.

Question 5: Discuss the purpose of 'XLOOKUP' and how it differs from the traditional 'VLOOKUP' function.

Ans - XLOOKUP is a modern Excel lookup function designed to find and return values from a range or array. Its main purpose is to replace older lookup functions like VLOOKUP, HLOOKUP, and LOOKUP by providing a more flexible, reliable, and easier-to-use solution.

Purpose of XLOOKUP

XLOOKUP searches for a specified value in one range and returns a corresponding value from another range. It can search vertically or horizontally, return exact or approximate matches, and handle errors gracefully.

Key Differences Between XLOOKUP and VLOOKUP

Feature	XLOOKUP	VLOOKUP
Lookup direction	Can look left or right	Can only look to the right
Column reference	Uses arrays (no column index numbers)	Requires column index number
Exact match default	Yes	No (needs FALSE)
Error handling	Built-in if_not_found argument	Requires IFERROR
Search flexibility	Can search top-to-bottom or bottom-to-top	Top-to-bottom only
Horizontal lookup	Yes (replaces HLOOKUP)	No
Formula robustness	Does not break if columns are inserted	Can break if column order changes

Example

- VLOOKUP:
=VLOOKUP(A2, A:B, 2, FALSE)
- XLOOKUP:
=XLOOKUP(A2, A:A, B:B, "Not found")

Conclusion

XLOOKUP is more powerful and user-friendly than VLOOKUP. It eliminates many limitations of VLOOKUP, reduces errors, and makes Excel formulas more readable and reliable. As a result, XLOOKUP is now the recommended lookup function in modern versions of Excel.

Question 6: Create a worksheet titled 'Employee Data' with columns: Name, Age, Department. Add 5 rows of data. Format as follows:

- Bold and center-align the header row
- Apply a fill color
- Auto-fit column width

A screenshot of Microsoft Excel showing a table of employee data. The table has columns for Name, Age, and Department. Row 6 is currently selected, indicated by a green border around the cells A6, B6, and C6. The formula bar shows the address E5. The ribbon is visible at the top, and the status bar at the bottom indicates 'Accessibility: Investigate'.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Name	Age	Department																				
2	Mina	27	HR																				
3	Versha	21	Research and Analyst																				
4	Shubham	22	IT																				
5	Vasu	25	Operations																				
6	Tanu	26	Marketing																				

Question 7: Demonstrate how to insert and delete multiple rows and columns in Excel.

Ans -

BEFORE INSERTING ROWS

A screenshot of Microsoft Excel showing the same employee data table. Row 11 is currently selected, indicated by a green border around the cells A11, B11, and C11. The formula bar shows the address C11. The ribbon is visible at the top, and the status bar at the bottom indicates 'Accessibility: Investigate'.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Name	Age	Department																				
2	Mina	27	HR																				
3	Versha	21	Research and Analyst																				
4	Shubham	22	IT																				
5	Vasu	25	Operations																				
6	Tanu	26	Marketing																				
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AFTER INSERTING ROW

A screenshot of Microsoft Excel showing a table of employee data. The table has columns labeled 'Name', 'Age', and 'Department'. The data includes rows for Mina (27, HR), Versha (21, Research and Analyst), Shubham (22, IT), Vasu (25, Operations), and Tanu (26, Marketing). Row 7 is currently selected, indicated by a green border around the cells.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Name	Age	Department															
2	Mina	27	HR															
3	Versha	21	Research and Analyst															
4	Shubham	22	IT															
5	Vasu	25	Operations															
6	Tanu	26	Marketing															
7																		

AFTER DELETING ROWS

A screenshot of Microsoft Excel showing the same table of employee data. Row 7 has been deleted, so the data starts at row 10. The table now has rows for Mina (27, HR), Versha (21, Research and Analyst), Shubham (22, IT), Vasu (25, Operations), and Tanu (26, Marketing). Row 10 is currently selected, indicated by a green border around the cells.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
1	Name	Age	Department																				
2	Mina	27	HR																				
3	Versha	21	Research and Analyst																				
4	Shubham	22	IT																				
5	Vasu	25	Operations																				
6	Tanu	26	Marketing																				
7																							
8																							
9																							
10																							

Question 8: Use Excel's 'Find and Replace' feature to update department names in a sample table.

Ans-

Before using find and replace feature

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Name	Age	Department																			
2	Mina	27	HR																			
3	Versha	21	Research and Analyst																			
4	Shubham	22	IT																			
5	Vasu	25	Operations																			
6	Tanu	26	Marketing																			

Find – HR

Replace with - Human Resources

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Name	Age	Department																			
2	Mina	27	Human Resources																			
3	Versha	21	Research and Analyst																			
4	Shubham	22	IT																			
5	Vasu	25	Operations																			
6	Tanu	26	Marketing																			

Question 9: Create a small numerical dataset and apply the following functions:

- **AVERAGE**

Screenshot of Microsoft Excel showing a table with data and a formula bar.

The formula bar shows the formula `=AVERAGE(F2:F6)`.

	A	B	C	D	E	F	G
1	Name	Age	Department			Numerical Dataset	
2	Mina	27	Human Resources			70	
3	Versha	21	Research and Analyst			50	
4	Shubham	22	IT			50	
5	Vasu	25	Operations			45	
6	Tanu	26	Marketing			35	
7				Average		50	
8							
9							
10							
11							
12							

• MAX

The screenshot shows a Microsoft Excel interface with the following details:

- File**, **Home**, **Insert**, **Draw**, **Page Layout**, **Formulas**, **Data**, **Review**, **View**, **Help**, **Acrobat** are visible in the ribbon.
- Font** and **Clipboard** tabs are selected in the ribbon.
- Wrap Text**, **Merge & Center**, **General**, **Conditional Formatting**, **Format as Table**, **Cell Styles**, **Insert**, **Delete**, **Format**, **Autosum**, **Fill**, **Sort & Filter**, **Find & Select**, **Clear**, **Comments**, **Share**, **Add-ins**, **Create a PDF** are available in the ribbon.
- F8** is selected in the formula bar.
- Name**, **Age**, **Department** are columns A, B, and C respectively.
- Numerical Dataset** is labeled in cell F2.
- Cells F2 through F6 contain the values 70, 50, 50, 45, and 35 respectively.
- Cell F7 contains the formula `=AVERAGE(F2:F6)`.
- Cell F8 contains the formula `=MAX(F2:F6)`.

● MIN

The screenshot shows an Excel spreadsheet titled "Book1 - Excel". The formula bar at the top displays the formula `=MIN(F2:F6)`. The main area contains a table with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Name	Age	Department			Numerical Dataset																
2	Mina	27	Human Resources			70																
3	Versha	21	Research and Analyst			50																
4	Shubham	22	IT			50																
5	Vasu	25	Operations			45																
6	Tanu	26	Marketing			35																

Cell F9 contains the formula `=MIN(F2:F6)`, which has been calculated to 35. The formula bar also shows `=MAX(F2:F6)` and `=AVERAGE(F2:F6)`.

Question 10: You're working with a dataset that contains missing values. As a Data Scientist, explain how you'd detect and handle missing data using Excel. Mention tools like:

● Go To Special

The screenshot shows an Excel spreadsheet titled "Book1 - Excel". The formula bar at the top displays the formula `=ISBLANK(B2)`. The main area contains a table with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Name	Age	Department	Salary	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
2	Mina	27	Human Resources	70000																		
3	Versha	21	Research and Analyst																			
4	Shubham	22	IT																			
5	Vasu	25	Operations	45000																		
6	Tanu	26	Marketing	35000																		

Cell B2 is selected, and the formula bar shows `=ISBLANK(B2)`. The formula bar also shows `=MAX(D2:D6)` and `=AVERAGE(D2:D6)`.

● ISBLANK

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I
1	Name	Age	Department	Salary					
2	Mina		Human Resources	70000			TRUE		
3	Versha	21	Resarch and Analyst				TRUE		
4	Shubham	22	IT				TRUE		
5	Vasu	25		45000			TRUE		
6	Tanu	26	Marketing	35000					
7									
8									
9									

The formula `=ISBLANK(B2)` is entered in cell G2. The result is TRUE, indicating that the cell B2 is blank.

After applying ISBLANK for all the missing value columns

● COUNTBLANK

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Name	Age	Department	Salary			ISBLANK	COUNTBLANK						
2	Mina		Human Resources	70000			TRUE	1 (for age)						
3	Versha	21	Resarch and Analyst				TRUE	1 (for Department)						
4	Shubham	22	IT				TRUE	2 (for Salary)						
5	Vasu	25		45000			TRUE							
6	Tanu	26	Marketing	35000										
7														
8														
9														
10														
11														
12														

The formula `=COUNTBLANK(B2:B6)` is entered in cell H2. The result is 1, indicating that there is one blank cell in the range B2:B6.

Handle Missing Value – Age

The screenshot shows an Excel spreadsheet with data in rows 1 through 7. Row 1 contains column headers: Name, Age, Department, and Salary. Rows 2 through 6 contain employee data. Row 7 is a summary row with formulas.

Name	Age	Department	Salary	ISBLANK	COUNTBLANK
Mina	24	Human Resources	70000	FALSE	0 (for age)
Versha	21	Research and Analyst		TRUE	1 (for Department)
Shubham	22	IT		TRUE	2 (for Salary)
Vasu	25		45000	TRUE	
Tanu	26	Marketing	35000		
average	24		50000		

Handle Missing Value – Department

The screenshot shows an Excel spreadsheet with data in rows 1 through 7. Row 1 contains column headers: Name, Age, Department, and Salary. Rows 2 through 6 contain employee data. Row 7 is a summary row with formulas. A formula is shown in cell D5: =IF(ISBLANK(C5), "Unknown", C5).

Name	Age	Department	missing value	Salary	ISBLANK	COUNTBLANK
Mina	24	Human Resources	Human Resources	70000	FALSE	0 (for age)
Versha	21	Research and Analyst	Research and Analyst		TRUE	1 (for Department)
Shubham	22	IT	IT		TRUE	2 (for Salary)
Vasu	25		Unknown	45000	TRUE	
Tanu	26	Marketing	Marketing	35000		
average	24			50000		

Handle Missing Value – Salary.

excel assignment

The screenshot shows an Excel spreadsheet titled "excel assignment". The "Formulas" tab is active. In cell F3, the formula `=MEDIAN(E2:E6)` is entered. The table below has headers in row 1 and data from row 2 to 6. The "CountBLANK" function is used in column G to count blank cells in columns A, B, C, and D. The "Median" function is used in cell F3 to calculate the median salary.

Name	Age	Department	missing value	Salary	missing value	ISBLANK	COUNTBLANK
Mina	24	Human Resources	Human Resources	70000		FALSE	0 (for age)
Versha	21	Research and Analyst	Research and Analyst		45000	TRUE	1 (for Department)
Shubham	22	IT	IT		45000	TRUE	2 (for Salary)
Vasu	25		Unknown	45000		TRUE	
Tanu	26	Marketing	Marketing	35000			
average	23.6						