Excel Assignment

Question 1:

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

Ans : **Paste** and **Paste Special** are both used to insert copied data in Excel, but they differ in how much control they give over what gets pasted.

Paste is the basic option. When you use Paste (Ctrl + V), Excel copies everything exactly as it is from the source cell. This includes the value, formula, formatting, font, color, borders, and sometimes comments.
 Example: If you copy a cell containing the formula =A1+B1 with a yellow background and paste it elsewhere, the pasted cell will also contain the same formula and yellow background.

Paste Special allows you to choose *what specific part* of the copied content you want to paste. It gives more flexibility and is useful when you do not want to paste everything.
 Example: If you copy a cell with the formula =A1+B1:

- Using **Paste Special → Values**, only the calculated result is pasted, not the formula.

- Using **Paste Special → Formats**, only the formatting (color, font, borders) is pasted, not the data.

- Using **Paste Special → Transpose**, rows become columns and columns become rows.

In short, **Paste** copies everything, while **Paste Special** lets you paste only selected elements like values, formulas, formats, or layout.

Question 2:

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

Ans.**Freeze Panes** and **Split Panes** are Excel features used to improve worksheet viewing and navigation, especially when working with large datasets.

Freeze Panes is used to lock specific rows or columns so they remain visible while scrolling through the rest of the worksheet. This is very useful when you want to keep headings or labels in view.
 Example: If the first row contains column headings, using **Freeze Top Row** ensures the headings stay visible even when you scroll down through many rows of data.

Split Panes divides the worksheet window into two or four separate sections that can be scrolled independently. It does not lock any rows or columns but allows you to view different parts of the same worksheet at the same time.
 Example: You can split the screen to view the top of the sheet and the bottom simultaneously, making it easier to compare data in different areas.

In summary, **Freeze Panes** is best for keeping headers visible while scrolling, whereas **Split Panes** is useful for comparing or viewing multiple parts of a worksheet at once.

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 :

In Excel, inserting a new row and inserting a new column are used to add space for additional data, but they work in different directions.

When you insert a new row, Excel adds a horizontal row above the selected row. All existing data in rows below the selected position is pushed downward.
 Example: If you insert a row above Row 5, the existing Row 5 becomes Row 6, and the new empty row appears at Row 5.

When you insert a new column, Excel adds a vertical column to the left of the selected column. All existing data in columns to the right shifts rightward.
 Example: If you insert a column before Column C, the original Column C becomes Column D, and the new column appears as Column C.

Yes, you can insert multiple rows or columns at once. To do this, select the same number of rows or columns you want to insert, right-click, and choose Insert. Excel will add the same number of new rows or columns in one action.

In short, rows are added vertically, columns are added horizontally, and Excel allows inserting multiple rows or columns together.

Question 4:

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

Ans: **Logical functions in Excel** are used to perform logical tests and return results based on whether a condition is true or false. These functions help in decision-making and data analysis by applying rules to data.

One common logical function is **IF**. It checks a condition and returns one value if the condition is true and another value if it is false.

Example:
```
=IF(A1>=40, "Pass", "Fail")
```
This formula checks whether the marks in cell A1 are 40 or more. If yes, it returns "Pass"; otherwise, it returns "Fail". This is useful for grading or eligibility decisions.

Another logical function is **AND**. It checks multiple conditions and returns TRUE only if all conditions are true.

Example:
```
=AND(A1>=40, B1>=40)
```
This formula checks whether a student has scored at least 40 in both subjects stored in A1 and B1. It is useful when multiple criteria must be satisfied at the same time.

Logical functions help automate decisions, reduce manual checking, and make Excel worksheets more dynamic and efficient.

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

Ans: **XLOOKUP** is a modern lookup function in Excel used to search for a value in one range and return a corresponding value from another range. It is designed to replace older lookup functions like **VLOOKUP** and **HLOOKUP** with more flexibility and fewer limitations.

The main purpose of **XLOOKUP** is to find and return data easily without worrying about the position of columns or rows. It can search both vertically and horizontally and works even when the return column is to the left of the lookup column.

VLOOKUP, on the other hand, searches for a value only in the first column of a table and returns data from a column to the right. It also requires you to specify a column index number, which can cause errors if columns are inserted or deleted.

Example difference:
 With **VLOOKUP**, if the lookup value is not in the first column, the function will not work.
 With **XLOOKUP**, you can look up values in any column and return results from any other column.

In summary, **XLOOKUP** is more flexible, easier to use, and more reliable than **VLOOKUP**, making it the preferred choice in modern Excel versions.

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

Ans:

NAME	AGE	DEPARTMENT	NAME	AGE	DEPARTMENT
RAUL	25	IT	RAUL	25	IT
PRIYA	28	HR	PRIYA	28	HR
AMAN	30	SALES	AMAN	30	SALES
NEHA	27	FINANCE	NEHA	27	FINANCE
KARAN	32	MARKETING	KARAN	32	MARKETING

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

Ans:Before Screenshot:

The worksheet contains the original Employee Data table before inserting or deleting multiple rows and columns.

A	B	C	D	E	F
NAME	AGE	DEPARTMENT	NAME	AGE	DEPARTMENT
RAUL	25	IT	RAUL	25	IT
PRIYA	28	HR	PRIYA	28	HR
AMAN	30	SALES	AMAN	30	SALES
NEHA	27	FINANCE	NEHA	27	FINANCE
KARAN	32	MARKETING	KARAN	32	MARKETING

After Screenshot:

The worksheet shows the updated table after inserting and deleting multiple rows and columns.

A	B	C	D	E	F
NAME	AGE	DEPARTMENT		AGE	DEPARTMENT
RAUL	25	IT		25	IT
PRIYA	28	HR		28	HR
NEHA	27	FINANCE		27	FINANCE
KARAN	32	MARKETING		32	MARKETING

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

Ans : Before

A	B	C	D	E	F
NAME	AGE	DEPARTMENT	NAME	AGE	DEPARTMENT
RAUL	25	IT	RAUL	25	IT
PRIYA	28	HR	PRIYA	28	HR
AMAN	30	SALES	AMAN	30	SALES
NEHA	27	FINANCE	NEHA	27	FINANCE
KARAN	32	MARKETING	KARAN	32	MARKETING

After: HR department replaced with Human resources

A	B	C	D	E	F
NAME	AGE	DEPARTMENT	NAME	AGE	DEPARTMENT
RAUL	25	IT	RAUL	25	IT
PRIYA	28	Human resources	PRIYA	28	Human resources
AMAN	30	SALES	AMAN	30	SALES
NEHA	27	FINANCE	NEHA	27	FINANCE
KARAN	32	MARKETING	KARAN	32	MARKETING

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

●AVERAGE

●MAX

●MIN

A	B	C	D	E	F	G	H	I
NAME	AGE	Maths	English	Science	Total	Max	Min	Average
RAUL	25	53	67	56	145	67	53	44
PRIYA	28	67	76	65	171	76	65	52
AMAN	30	87	87	76	204	87	76	62.5
NEHA	27	56	78	67	161	78	56	50.25
KARAN	32	87	98	78	217	98	78	65.75

Ans:

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

-
ISBLANK

-
COUNTBLANK

Ans: When working with a dataset that contains missing values, Excel provides several built-in tools to detect and handle blank or missing data efficiently.

First, to identify blank cells visually, I would use Go To Special. By selecting the dataset and pressing Ctrl + G, then clicking Special and choosing Blanks, Excel highlights all empty cells in the selected range. This makes it easy to see where data is missing. I can then either fill these cells with appropriate values or remove the corresponding rows, depending on the requirement.

Second, I would use the ISBLANK function to check individual cells for missing values. This function returns TRUE if a cell is empty and FALSE if it contains data. For example, using `=ISBLANK(A2)` helps confirm whether a specific cell has missing data. This is useful for applying conditional logic or highlighting blanks.

Third, the COUNTBLANK function is used to count the total number of blank cells in a selected range. For example,

`=COUNTBLANK(A2:A20)` returns the number of missing values in that range. This helps understand how severe the missing data problem is before deciding on a cleaning strategy.

To handle missing data, I may fill blanks with default values such as "Not Available," replace them with averages in numerical columns, or delete rows with excessive missing values.

For documentation, I would include a screenshot showing blank cells highlighted using Go To Special or a column using ISBLANK to identify missing values. This clearly demonstrates the detection and handling process in Excel.

NAME	AGE	Maths	English	Science	Total	Max	Min	Average
RAUL	25	53	67	56	145	67	53	44
PRIYA	28	67	76	65	171	76	65	52
AMAN	30	87	87	76	204	87	76	62.5
NEHA	27	56	78	67	161	78	56	50.25
KARAN	32	87	98	78	217	98	78	65.75