



SATYA EDUCATION

जहां सीखना है Easy, और फ्यूचर है Breezy!

MS OFFICE Excel



Students Information

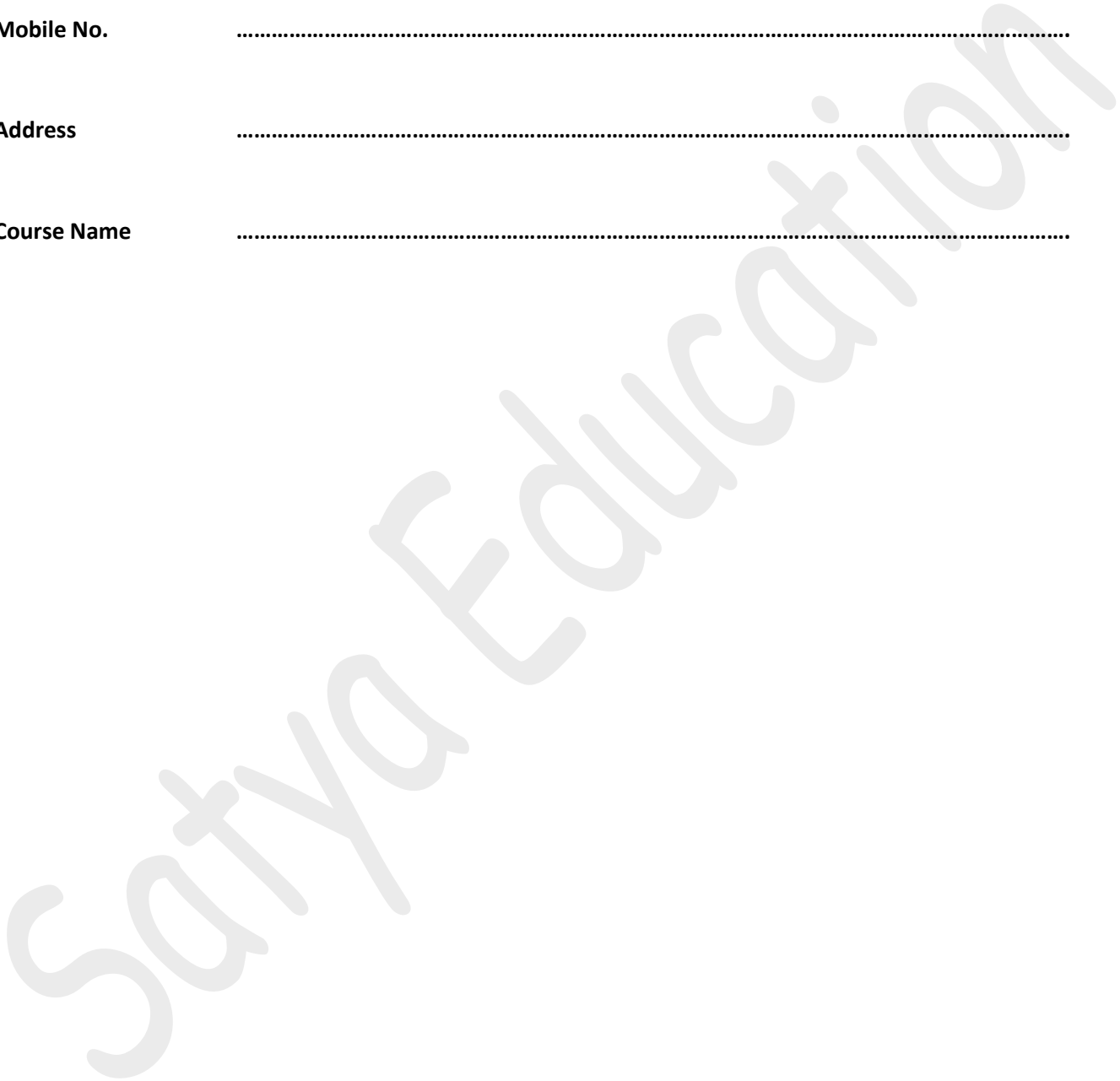
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1

Chapter

Introduction to MS Excel

Microsoft Excel is a spreadsheet program used to record, calculate, analyze, and visualize data. It is widely used in offices, schools, and businesses for handling numbers and data.

Professional: - **Microsoft Excel** is a powerful spreadsheet application developed by Microsoft. It is used to enter, store, organize, and analyze data in a tabular form. Excel allows users to perform calculations using formulas and functions, create charts and graphs for data visualization, and manage large amounts of data efficiently.

Excel Interface Components

The **Excel Interface** is the layout of tools and elements that you see when you open Microsoft Excel. Understanding these parts helps you work efficiently in Excel.

1. Workbook:

An Excel file is called a Workbook. It contains one or more worksheets.

2. Worksheet:

A single spreadsheet page in Excel where you can enter and manage data. Each workbook can have multiple worksheets.

3. Cell:

The basic unit in Excel where you enter data. It is the intersection of a row and a column (e.g., A1, B2).

4. Row:

Rows are horizontal lines in a worksheet, labeled with numbers (1, 2, 3...). (*Total Columns is 1048576*)

5. Column:

Columns are vertical lines, labeled with letters (A, B, C...). (*Total Columns is 16384*)

6. Active Cell:

The currently selected cell where data can be entered or edited. It is highlighted with a thick border.

7. Formula Bar:

Located above the worksheet, it displays the content or formula of the active cell.

8. Ribbon:

A set of tabs (Home, Insert, Page Layout, etc.) containing command buttons and tools for performing tasks.

9. Quick Access Toolbar:

A customizable toolbar at the top-left corner that provides quick access to frequently used commands like Save, Undo, and Redo.

10. Name Box:

Displays the address (name) of the active cell (e.g., A1) and can be used to quickly select ranges.

11. Sheet Tabs:

Located at the bottom of the Excel window, these tabs let you switch between different worksheets in the workbook.

12. Status Bar:

Located at the bottom, it shows information about selected data (like sum, average) and allows you to change worksheet views.

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Short Key of Excel 2016

Shortcut	Description
Ctrl + N	New Workbook
Ctrl + O	Open Workbook
Ctrl + S	Save Workbook
Ctrl + P	Print Workbook
Ctrl + C	Copy selected cells
Ctrl + X	Cut selected cells
Ctrl + V	Paste copied/cut cells
Ctrl + Z	Undo last action
Ctrl + Y	Redo last undone action
Ctrl + F	Open Find dialog box
Ctrl + H	Open Replace dialog box
Ctrl + A	Select all cells
Alt + E + S + V	Paste Special options
Ctrl + W	Close current workbook
Ctrl + Q	Quick Analysis
Ctrl + Arrow Keys	Move to the edge of data region
Home	Move to the beginning of the row
Ctrl + Home	Move to the beginning of the worksheet
Ctrl + End	Move to the last cell with data
Page Up	Move one screen up
Page Down	Move one screen down
Alt + Tab	Switch between open applications
Ctrl + B	Bold selected text
Ctrl + I	Italicize selected text
Ctrl + U	Underline selected text
Ctrl + 1	Open Format Cells dialog box
Ctrl + Shift + L	Toggle filters on/off
Ctrl + Shift + '+'	Insert a new row/column
Ctrl + '-'	Delete selected row/column
Ctrl + Shift + '\$'	Format as currency
Ctrl + Shift + '%'	Format as percentage
Ctrl + Shift + '!'	Format as number with two decimal places
Ctrl + Shift + '&'	Add border around selected cells
F2	Edit active cell
Ctrl + Enter	Fill selected cells with current entry
Alt + Enter	Start a new line within the same cell
Ctrl + D	Fill down (copy from the cell above)
Ctrl + R	Fill right (copy from the cell left)
Ctrl + Shift + '+'	Insert a new cell, row, or column
Ctrl + Page Up	Switch to the previous worksheet
Ctrl + Page Down	Switch to the next worksheet
Shift + F11	Insert a new worksheet
Ctrl + F4	Close workbook
Ctrl + G	Go to a specific cell
F5	Open the 'Go To' dialog box
Alt + H, O, W	Auto resize the width of selected column
Alt + H, O, H	Auto resize the height of selected row
Ctrl + Shift + F	Open the Format Cells dialog box (Fonts tab)
Ctrl + F12	Open the 'Open' dialog box for files
Ctrl + Shift + O	Select all cells with comments

Alt + F3	Insert a name for the selected range
Ctrl + Shift + ~	Apply General number format
Ctrl + Shift + '	Copy the value from the cell above
Ctrl + Shift + L	Toggle filter on/off for the selected range
Ctrl + T	Create a Table
Alt + F1	Create a default chart of selected data
F11	Create a chart in a new worksheet
Ctrl + 1	Open the Format Cells dialog box
Ctrl + Shift + N	Create a new blank workbook
Ctrl + F2	Preview the print layout
Ctrl + Shift + P	Open the Print dialog box
Ctrl + F4	Close workbook
Ctrl + Shift + F4	Close all open Excel files
Ctrl + Alt + F9	Force Excel to recalculate all formulas
Ctrl + Shift + F9	Recalculate the entire workbook
Alt + Shift + F1	Insert a new worksheet
Ctrl + Shift + E	Open the 'Evaluate Formula' window
Ctrl + ;	Enter the current date
Ctrl + Shift + ;	Enter the current time
Alt + N + V	Open the 'Insert PivotTable' dialog box
Ctrl + Shift + U	Expand or collapse the formula bar
Ctrl + T	Create a Table
Alt + F1	Create a default chart of selected data
Ctrl + Shift + F3	Create names from selection
Ctrl + Shift + P	Open Print Preview
Ctrl + F6	Switch between open workbooks
Ctrl + F3	Define a name (named range)
Ctrl + Shift + F3	Create names from selection
Alt + D + F + F	Open Filter menu
Ctrl + Shift + P	Open Print Preview

2

Chapter

Introduction to Home

The **Home tab** is the default tab in Excel and contains the most commonly used commands for formatting and editing data. It is divided into several groups:

Clipboard Group

- **Cut** (Ctrl + X): Removes the selected data and stores it on the clipboard.
- **Copy** (Ctrl + C): Copies the selected data to the clipboard.
- **Paste** (Ctrl + V): Pastes data from the clipboard.
- **Format Painter**: Copies formatting from one place and applies it to another.

How to Use Format Painter

1. **Select the cell** that contains the formatting you want to copy.
2. Go to the **Home tab** on the Ribbon.
3. In the **Clipboard group**, click on the **Format Painter** (brush icon).
4. **Click on the cell** or **drag over the range** where you want to apply the copied formatting.

Font Group

- **Font Type and Size**: Change the style and size of text.
- **Bold (B), Italic (I), Underline (U)**: Format the text style.
- **Font Color**: Change the color of the text.
- **Fill Color**: Change the background color of a cell.
- **Borders**: Add borders to cells.

How to Use Borders in Excel

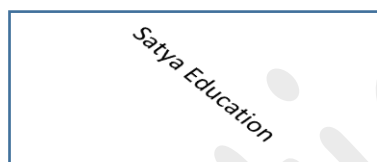
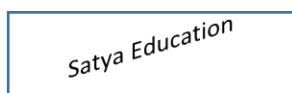
1. **Select the cell(s)** where you want to apply borders.
2. Go to the **Home tab** on the Ribbon.
3. In the **Font group**, click on the **Borders** dropdown button.
4. **Choose a border style** from the options:
 - **Bottom Border**: Adds a border at the bottom of the selected cells.
 - **Top Border**: Adds a border at the top.
 - **Left Border**: Adds a border on the left.
 - **Right Border**: Adds a border on the right.
 - **All Borders**: Adds borders to all sides of the selected cells.
 - **Outside Borders**: Adds borders only to the outer edges of the selected range.
 - **Thick Box Border**: Adds a thicker border around the selected range.
 - **More Borders**: Opens the **Format Cells** dialog box for more advanced border options, such as color and line styles.

To Remove Borders:

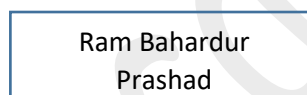
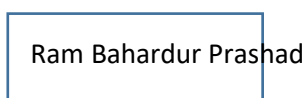
1. **Select the cell(s)** where you want to remove borders.
2. Go to the **Home tab**.
3. In the **Font group**, click on the **Borders dropdown**.
4. Choose **No Border** to remove all borders.

Alignment Group

- **Horizontal and Vertical Alignment:** Align text left, center, or right.



- **Wrap Text:** Displays all the content within a cell by wrapping the text onto multiple lines.



- **Merge & Center:** Combines multiple cells into one and centers the content.

Number Group

- **Number Format:** Change how numbers are displayed (e.g., General, Currency, Percentage, Date).

Rs. 6556	Rupees	58%	Percentage
INR 645	Rupees	18:59	Time

How to Use Number Format in Excel

1. **Select the cell(s)** that contain the numbers you want to format.
2. Go to the **Home tab** on the Ribbon.
3. In the **Number group**, you'll find a dropdown to change the number format.
4. **Choose a number format** from the options:
 - **General:** The default format. Numbers are displayed without any specific formatting.
 - **Number:** Displays numbers with a comma separator for thousands and decimal places.
 - You can adjust the number of decimal places and whether to use a comma separator.
 - **Currency:** Formats the number as a monetary value (e.g., \$1,000.00).
 - You can select the currency symbol you prefer (e.g., \$, €, £).
 - **Accounting:** Similar to Currency but aligns the currency symbols and decimal points.
 - **Short Date / Long Date:** Formats numbers as dates (e.g., 1/1/2025 for Short Date).
 - **Time:** Formats the number as time (e.g., 12:00 PM).
 - **Percentage:** Multiplies the number by 100 and adds a percentage sign (e.g., 50%).
 - **Fraction:** Displays numbers as fractions (e.g., 1/2, 3/4).
 - **Scientific:** Converts the number into scientific notation (e.g., 1.23E+03).
 - **Text:** Treats numbers as text, preserving leading zeros (e.g., 00123).
- **Increase/Decrease Decimal:** Adjust the number of decimal places.

Rs. 6556.2222	Rupees	Rs. 6556.22	After
6464.322222	Rupees	6464.322222	After

Styles Group

- **Conditional Formatting**

Conditional Formatting in Excel is used to automatically apply formatting (such as colors, icons, or data bars) to cells based on the cell's value or a condition.

Highlight Gerater than 40						
62	95	8		1		1
45	32	98		2		2
17	52	98		3		3
30	79	19		4		4
32	62	26		5		5
16	38	86		6		6
				7		7

How to Use Conditional Formatting

1. **Select the cell(s)** that you want to apply conditional formatting to.
2. Go to the **Home tab** on the Ribbon.
3. In the **Styles group**, click on **Conditional Formatting**.
4. Choose one of the following options:
 - **Highlight Cell Rules:**
 - **Greater Than / Less Than:** Format cells based on a comparison with a specific value.
 - **Between:** Format cells if their value is between two numbers.
 - **Equal To:** Format cells that are equal to a specified value.
 - **Text that Contains:** Format cells containing specific text.
 - **A Date Occurring:** Format cells with dates falling within a certain range (e.g., today, next week).
 - **Top/Bottom Rules:**
 - **Top 10 Items / Bottom 10 Items:** Format the top or bottom N items in a range.
 - **Top 10% / Bottom 10%:** Format the top or bottom percentage of items in a range.
 - **Data Bars:**
 - Apply colored bars inside cells to show relative values. The longer the bar, the higher the value.
 - **Color Scales:**
 - Apply a color gradient based on cell values, allowing you to visually compare data. For example, high values can be green, and low values can be red.
 - **Icon Sets:**
 - Apply icons (like arrows or traffic lights) to represent values based on their magnitude.
5. **Customize the Format:**
 - After selecting an option, you can customize the formatting rules, such as the colors or values, by selecting **Manage Rules**.

To Remove Conditional Formatting:

1. **Select the cells** with the applied conditional formatting.
 2. Go to the **Home tab**.
 3. In the **Styles group**, click on **Conditional Formatting**.
 4. Choose **Clear Rules** and select from:
 - **Clear Rules from Selected Cells**
 - **Clear Rules from Entire Sheet**
- **Format as Table:** Quickly formats a range as a table.

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8
Ram	81	78	60	95	24	52	77
Rocky	33	24	48	91	72	58	13
Mohan	56	23	53	84	82	18	27
Sohan	96	97	96	27	22	52	35
Rohan	28	27	56	35	77	98	85
Geeta	69	86	65	34	18	56	78
Maya	62	63	70	85	14	16	50
Lovely	43	49	20	41	39	75	23

Format as Table

1. **Select the range of cells** that you want to format as a table (including headers if you have them).
2. Go to the **Home tab** on the Ribbon.
3. In the **Styles group**, click on **Format as Table**.
4. Choose a table style from the available options.
5. A dialog box will appear, confirming the range. If your data has headers, make sure the box "**My table has headers**" is checked.
6. Click **OK**. Your selected data will now be formatted as a table.

Benefits of Formatting as Table:

- Automatically applies style to your data.
- Makes it easier to sort and filter data.
- Enables **structured references** for formulas.

- **Cell Styles**

Cell Styles are predefined formatting options in Excel that allow you to quickly apply consistent formatting (such as font, color, and borders) to cells.

1. Select the cell(s) you want to format.
2. Go to the **Home tab**.
3. In the **Styles group**, click on **Cell Styles**.
4. Choose a style from the gallery.

Cells Group

The **Cells group** on the **Home tab** contains tools for managing the structure of your worksheet, such as inserting, deleting, and formatting cells, rows, and columns.

1. **Insert:** Add new cells, rows, or columns.
2. **Delete:** Remove cells, rows, or columns.
3. **Format:** The **Format Cells** option allows you to change the appearance of cells including number format, alignment, font, border, fill, and protection.

How to use Format:

1. Select the cell(s).
2. Right-click and choose **Format Cells**, or go to **Home tab** → **Cells group** → **Format** → **Format Cells**.
3. Use the tabs (Number, Alignment, Font, Border, Fill, and Protection) to apply formatting.
4. Click **OK** to apply.

Let's Achieve	Satya Education				Your Goal
COMPUTER	TEXT		Value one	Value Two	Calculate condition
			50	5	55 +
			50	5	45 -
			50	5	250 *
			50	5	10 /
TEXT	NAME		50	5	10 %
	FATHER				
	MOTHER				
	MOBILE				

Second Project

Mark sheet format

Create Date: -/..... /20.....

Second Project

Bill format with calculation

Create Date: -/..... /20.....

Second Project

Mark sheet format

Create Date: -/..... /20.....

Second Project

Bill format with calculation

Create Date: -/..... /20.....

Editing Group

- **AutoSum:** Quickly adds up a range of numbers.
- **Fill**

Fill is used to apply a background color to selected cells or to automatically fill data using patterns or series.

To Apply Fill Color:

1. Select the cell(s).
2. Go to **Home tab** → **Font group** → **Fill Color** (paint bucket icon).
3. Choose a color to fill the cells.

To Auto Fill Series:

1. Enter data (e.g., 1, 2).
2. Select the cells.
3. Drag the **fill handle** (small square at the corner) to continue the series.

- **Clear:** Removes content, formatting, or comments.
- **Sort & Filter**

Sort & Filter helps organize data by arranging it in a specific order or displaying only the data you need.

To Sort Data:

1. Select the data range.
2. Go to **Home tab** → **Editing group** → **Sort & Filter**.
3. Choose **Sort A to Z, Z to A, or Custom Sort**.

To Filter Data:

1. Select the header row.
2. Go to **Home tab** → **Sort & Filter** → **Filter**.
3. Click the dropdown arrows in the headers to select filter options.

- **Find & Select:** Search for specific text or formatting.

Second Project

Filter use

Create Date: -/..... /20.....

Second Project

filter and other all option

Create Date: -/..... /20.....

3

Chapter

Introduction to Insert

The **Insert tab** provides tools to add visual and functional elements like tables, charts, images, and more into your worksheet.

Tables Group

- **Table**

A **Table** in Excel is a structured range that makes it easier to manage, sort, filter, and analyze related data.

Steps to Create a Table:

1. Select your data range.
2. Go to **Insert tab** → **Tables group** → **Table**.
3. Confirm the range and check "**My table has headers**" if applicable.
4. Click **OK** – your data is now formatted as a table.

- **PivotTable**

A **PivotTable** is a powerful tool used to quickly summarize, analyze, and explore large amounts of data.

Steps to Create a PivotTable:

1. Select your data range.
2. Go to **Insert tab** → **Tables group** → **PivotTable**.
3. Choose the location for the PivotTable (new or existing worksheet).
4. Click **OK**, then drag fields into **Rows**, **Columns**, **Values**, and **Filters**.

- **Recommended PivotTables:** Offers automatic PivotTable suggestions based on your data.

Second Project

Filter use

Create Date: -/..... /20.....

Second Project

filter and other all option

Create Date: -/..... /20.....

Illustrations Group

The **Illustrations group** allows you to insert visual elements to enhance your worksheet.

- **Pictures:** Add images from your computer sources.
- **Online Pictures:** Add images from online sources.
- **Shapes:** Insert ready-made shapes like arrows, circles, etc.
- **Icons:** Add built-in icons to illustrate content.

Pictures allow you to insert images from your computer into your worksheet to enhance visual understanding.

Steps to Insert a Picture:

1. Go to **Insert tab** → **Illustrations group** → **Pictures**.
2. Click **This Device**.
3. Browse and select the image file.
4. Click **Insert** – the picture will appear in your worksheet.

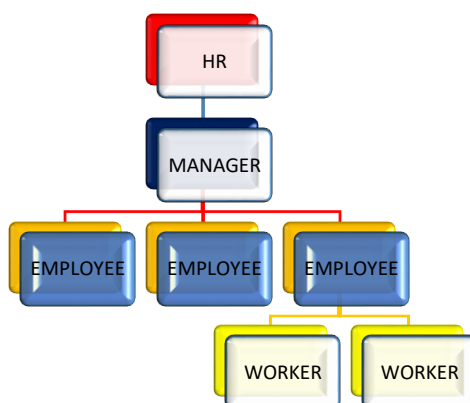


- **SmartArt**

SmartArt is used to create diagrams like processes, hierarchies, and cycles to visually represent information.

Steps to Insert SmartArt:

1. Go to **Insert tab** → **Illustrations group** → **SmartArt**.
2. Choose a layout (e.g., Process, Hierarchy, Cycle).
3. Click **OK** and enter your text in the diagram.



Second Project

Create Date: -/..... /20.....

Second Project

Create Date: -/..... /20.....

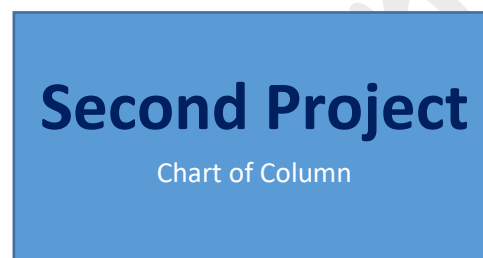
Charts Groups

The **Charts group** lets you insert visual representations of your data to make it easier to understand and analyze.

- **Column Chart** – compares values vertically.
- **Line Chart** – shows trends over time.
- **Pie Chart** – displays proportions as slices.
- **Bar Chart** – compares values horizontally.
- **Area Chart** – emphasizes magnitude of change over time.
- **Scatter (XY) Chart** – shows relationships between values.
- **Combo Chart** – mixes two chart types in one.



Create Date: -/..... /20.....



Create Date: -/..... /20.....

Sparkline's Groups

- **Sparklines**

Sparklines are tiny charts that fit in a single cell and show trends or patterns in a row of data.

Steps to Insert Sparklines:

1. Select the cell where you want the sparkline.
2. Go to **Insert tab** → **Sparklines group**.
3. Choose a type: **Line**, **Column**, or **Win/Loss**.
4. Select the data range and click **OK**.

Links Groups

The **Links group** allows you to insert and manage hyperlinks in your worksheet.

- **Link (Hyperlink):** Add a link to a webpage, file, email, or another cell/sheet.
- **Recent Links:** Quickly access recently used links.
- **Bookmark (in some versions):** Jump to specific parts within a file.

Steps to Insert a Link:

1. Select a cell or text.
2. Go to **Insert tab** → **Links group** → **Link**.
3. Choose link type (e.g., Existing File, Web Page, Place in This Document).
4. Click **OK**.

Text Group

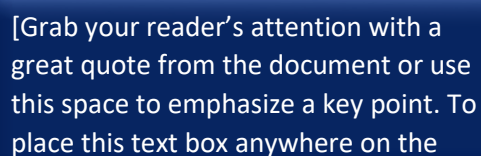
The **Text group** allows you to insert various text-related elements into your worksheet.

- **Text Box**

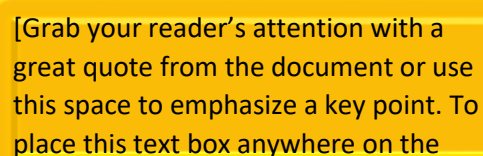
A **Text Box** lets you insert and position text anywhere in the worksheet, independent of cell boundaries.

Steps to Insert a Text Box:

1. Go to **Insert tab** → **Text group** → **Text Box**.
2. Click and drag on the worksheet to draw the box.
3. Type your desired text inside the box.



[Grab your reader's attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the



[Grab your reader's attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the

- **Header & Footer**

Header & Footer are sections at the top (header) and bottom (footer) of printed pages where you can add text like titles, dates, or page numbers.

Steps to Insert Header & Footer:

1. Go to **Insert tab** → **Text group** → **Header & Footer**.
2. Excel switches to **Page Layout View**.
3. Click inside the header or footer area and type your text (or use options like page number, file name, etc.).

- **WordArt**

WordArt is decorative text that allows you to add stylized titles or headings with special effects like shadows, outlines, and colors.

Steps to Insert WordArt:

1. Go to **Insert tab** → **Text group** → **WordArt**.
2. Choose a WordArt style.
3. Type your text in the placeholder box that appears on the sheet.
4. Use the **Format tab** to adjust style, size, and effects.

- **Signature Line**

Signature Line allows you to add a placeholder for a digital or handwritten signature in your worksheet.

Steps to Insert Signature Line:

1. Go to **Insert tab** → **Text group** → **Signature Line**.
2. Choose **Microsoft Office Signature Line**.
3. Fill in signer details (name, title, etc.).
4. Click **OK** – a signature box will appear in the sheet.

- **Object**

The **Object** feature lets you insert files, documents, or other embedded items (like Word, PDF, or images) into your worksheet.

Steps to Insert an Object:

1. Go to **Insert tab** → **Text group** → **Object**.
2. In the dialog box, choose:
 - **Create New** to insert a new file type (e.g., Word Document).
 - **Create from File** to embed an existing file.
3. Browse and select the file, then click **OK**.

Symbols Group

- **Symbols**

Symbols allow you to insert special characters, mathematical symbols, and foreign language letters into your worksheet.

Steps to Insert a Symbol:

1. Go to **Insert tab** → **Text group** → **Symbol**.
2. In the dialog box, select the symbol or character you want to insert.
3. Click **Insert** and then **Close**.

First Project

Use word art and Text

Create Date: -/..... /20.....

Second Project

Header & Footer

Create Date: -/..... /20.....

4

Chapter

Introduction to Data

The **Data tab** provides tools for managing and analyzing data, including sorting, filtering, and data validation.

Sort & Filter Group

Sort & Filter tools in Excel allow you to organize data by sorting it and filtering out specific information.

Sort:

1. **Sort A to Z:** Organizes data in ascending order (e.g., alphabetically or numerically).
2. **Sort Z to A:** Organizes data in descending order.
3. **Custom Sort:** Sort by multiple columns or specific criteria.

Filter:

1. **Filter:** Displays a dropdown list for each column header to filter and show only the data you want (e.g., specific dates, values, or text).
2. **Clear Filter:** Removes any applied filters.

First Project

Make a list and filter

Create Date: -/..... /20.....

Second Project

make list and filter by Pivot table

Create Date: -/..... /20.....

Get & Transform Data Group

Get & Transform Data (formerly known as Power Query) helps you import, clean, and transform data from various sources like databases, web pages, or files.

Steps to Use Get & Transform Data:

1. Go to **Data tab** → **Get & Transform Data group**.
2. Click **Get Data**, then choose the data source (e.g., From File, From Database, From Web).
3. Follow the prompts to load the data into Excel.
4. Use the **Power Query Editor** to clean and transform the data (filter, merge, etc.).
5. Click **Close & Load** to load the cleaned data back into the worksheet.

Data Tools Group

The **Data Tools** group on the **Data tab** provides several features for managing and organizing data in your worksheet.

- **Text to Columns:** Splits a column of text into multiple columns based on a delimiter (e.g., commas, spaces).
- **Remove Duplicates:** Eliminates duplicate values from a selected range or column.
- **Consolidate:** Combines data from multiple ranges into one, useful for summary reports.

- **Flash Fill:** Automatically fills in data based on patterns you specify.
- **Data Validation:**

Data Validation allows you to control the type of data entered into a cell, ensuring that only valid data is entered based on your criteria.

Steps to Apply Data Validation:

1. Select the cell(s) where you want to apply validation.
2. Go to **Data tab** → **Data Tools group** → **Data Validation**.
3. In the **Data Validation** dialog box, set the criteria (e.g., whole numbers, dates, specific list of values).
4. Optionally, set input messages or error alerts to guide users.

Example Use:

- Restricting entries to numbers between 1 and 100.
- Creating a dropdown list of options to select from.

Outline Group

The **Outline** feature allows you to group and summarize data, making it easier to navigate and analyze large datasets.

- **Group:** Organizes data into collapsible groups to hide or show sections.
- **Ungroup:** Removes grouping from selected rows or columns.

The **Group** feature allows you to organize data into collapsible sections, making it easier to manage large datasets by hiding or displaying details.

Steps to Group Data:

1. Select the rows or columns you want to group.
2. Go to **Data tab** → **Outline group** → **Group**.
3. In the dialog box, select either **Rows** or **Columns** to group.
4. Click **OK** – the selected rows/columns will be grouped, and you'll see a minus sign (–) to collapse or expand the group.

To Ungroup:

1. Select the grouped data.
2. Go to **Data tab** → **Outline group** → **Ungroup**.

- **Subtotal:** Automatically adds subtotals for grouped data.

The **Subtotal** feature allows you to insert automatic subtotals for grouped data, making it easier to summarize large datasets.

Steps to Insert Subtotals:

1. Ensure your data is sorted by the column you want to group (e.g., by product category).
2. Go to **Data tab** → **Outline group** → **Subtotal**.
3. In the **Subtotal** dialog box:
 - Choose the column to group by.
 - Select the function (e.g., SUM, AVERAGE) for the subtotal.
 - Specify the column(s) to apply the subtotal to.
4. Click **OK** – Excel will insert subtotal rows for each group.

To Remove Subtotals:

Go to **Data tab** → **Outline group** → **Remove Subtotals**

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Chapter

Introduction to Page Layout

The **Page Layout tab** provides tools for adjusting the appearance of your worksheet when printed, including page setup, themes, and alignment options.

Key Features in Page Layout Tab:

Themes

Themes in Excel allow you to apply a consistent set of formatting options (such as colors, fonts, and effects) across your entire workbook for a professional and unified look.

Steps to Apply a Theme:

1. Go to the **Page Layout tab** → **Themes group**.
2. Click on **Themes** and choose from the available options (e.g., Office, Colorful, Dark, etc.).
3. Excel will automatically update the workbook's colors, fonts, and effects to match the selected theme.

Customizing Themes:

You can also create a custom theme by selecting **Colors**, **Fonts**, and **Effects** individually.

Page Setup

- **Orientation in Excel:**

The **Orientation** option determines the direction of the printed page.

- **Portrait:** Vertical orientation (default for most documents).
- **Landscape:** Horizontal orientation, useful for wide tables or charts.

Steps:

1. Go to **Page Layout tab** → **Page Setup group** → **Orientation**.
2. Select **Portrait** or **Landscape**.

- **Margins in Excel:**

Margins define the amount of space between your content and the edges of the paper.

- **Normal:** Default margin settings.
- **Wide:** Larger space between content and edges.
- **Narrow:** Smaller space for more content on the page.
- **Custom:** Manually set the margin size.

Steps:

1. Go to **Page Layout tab** → **Page Setup group** → **Margins**.
2. Choose your desired margin setting or click **Custom Margins** for manual adjustments.

- **Size in Excel:**

The **Size** option lets you select the paper size for printing.

- **Common sizes** include A4, Letter, Legal, etc.

Steps:

1. Go to **Page Layout tab** → **Page Setup group** → **Size**.
2. Choose the paper size from the list or set a custom size.

- **Print Area in Excel:**

The **Print Area** defines which part of the worksheet will be printed.

- You can set a specific range of cells as the print area.

Steps:

1. Select the range you want to print.
2. Go to **Page Layout tab** → **Page Setup group** → **Print Area** → **Set Print Area**.

- **Headers & Footers in Excel:**

Headers & Footers allow you to add information like page numbers, dates, and titles at the top or bottom of each printed page.

Steps:

1. Go to **Page Layout tab** → **Page Setup group** → **Header & Footer**.
2. Click to add custom text or use pre-set options (like page numbers or file names).

- **Scaling in Excel:**

Scaling adjusts the size of the worksheet content to fit it on the desired number of printed pages.

- **Fit to One Page:** Shrinks the content to fit on one page.
- **Custom Scaling:** Adjust the print size to a specific percentage.

Steps:

1. Go to **Page Layout tab** → **Page Setup group** → **Scale to Fit**.
2. Adjust the **Width, Height, or Scale** percentage as needed.

Scale to Fit

Scale to Fit helps you adjust the size of your worksheet content to ensure it fits within the specified number of pages when printed, without needing to manually adjust the content or margins.

Key Options in Scale to Fit:

- **Width:** Defines how many pages wide the printed content should be. You can set it to fit within one page, or a specific number of pages.
- **Height:** Defines how many pages tall the printed content should be.
- **Scale:** Allows you to set a custom percentage for the size of the printed content.

Steps to Use Scale to Fit:

1. Go to **Page Layout tab** → **Page Setup group** → **Scale to Fit**.
2. Adjust the **Width, Height, or Scale** options to control how the content fits on the printed page.
 - **Width:** Set to "1 page" to fit the content within one page wide.
 - **Height:** Set to "1 page" to fit the content within one page tall.
 - **Scale:** Set a custom percentage (e.g., 80%) to shrink or enlarge the content.

Sheet Options

The **Sheet Options** group in the **Page Layout tab** allows you to control how gridlines and headings appear when printing the worksheet.

Key Features in Sheet Options:

- **Gridlines:** Allows you to show or hide the gridlines (the lines separating cells) when printing the worksheet.
 - **Show gridlines:** Displays the gridlines in the printed document.
 - **Print gridlines:** Ensures that gridlines are printed, even if they aren't visible on the screen.
- **Headings:** Controls whether row and column headings (A, B, C, 1, 2, 3) appear in the printed document.
 - **Print headings:** Prints the column and row labels (A, B, C, 1, 2, 3) on each page.

Steps to Adjust Sheet Options:

1. Go to the **Page Layout tab** → **Sheet Options group**.
2. Check or uncheck the **Gridlines** and **Headings** boxes based on your preference.
 - **Gridlines:** For visible gridlines, check the box for **Print**.
 - **Headings:** To print the row/column labels, check the **Print** box.

Arrange

The **Arrange** group in the **Page Layout tab** allows you to organize and manage objects (like images, shapes, charts, etc.) within your worksheet.

- **Bring Forward / Send Backward**

These options are used to **change the stacking order** of objects (like shapes, pictures, or charts) when they overlap.

- **Bring Forward:** Moves the selected object **one level up**, making it appear on top of others.
- **Send Backward:** Moves the selected object **one level down**, placing it behind other overlapping objects.

You can also use:

- **Bring to Front:** Brings the object to the very top.
- **Send to Back:** Sends the object behind all other objects.

Steps:

1. Select the object (e.g., image or shape).
2. Go to **Page Layout tab** → **Arrange group**.
3. Click **Bring Forward** or **Send Backward** as needed.

- **Align:**

The **Align** option is used to **position multiple objects (like shapes, images, or charts)** precisely in relation to each other or the worksheet.

Common Align Options:

- **Align Left / Center / Right** – Aligns objects horizontally.
- **Align Top / Middle / Bottom** – Aligns objects vertically.
- **Distribute Horizontally / Vertically** – Evenly spaces multiple objects.

Steps to Use Align:

1. Select two or more objects (hold **Ctrl** and click each).
2. Go to **Page Layout tab** → **Arrange group** → **Align**.
3. Choose the desired alignment option from the dropdown.

Note: To align objects to the worksheet (not just each other), check **“Align to Page”** before choosing the alignment.

- **Group:**

The **Group** option lets you combine multiple objects (like shapes, images, or charts) so they act as **one single object**. This makes it easier to move, resize, or format them together.

Steps to Group Objects:

1. Select the objects (hold **Ctrl** and click each one).
2. Go to **Page Layout tab → Arrange group → Group**.
3. Click **Group** from the dropdown menu.

To Ungroup:

- Select the grouped object → Go to **Arrange → Group → Ungroup**.
- **Rotate:** Rotates objects to any angle, either using preset options or custom degrees.
- **Selection Pane:** Opens a pane to show all objects in the worksheet and lets you manage their visibility, order, and selection.

First Project

Make print with print area

Create Date: -/..... /20.....

Second Project

use Header & Footer

Create Date: -/..... /20.....

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Chapter

Introduction to Formulas

The **Formulas tab** provides tools to create, manage, and audit formulas and functions in Excel. It helps you perform calculations and manage data efficiently.

Function Library

The **Function Library** group in the **Formulas tab** provides a categorized collection of built-in Excel functions. These functions help perform calculations, analyze data, and manipulate text, dates, and more.

AutoSum:

Quickly adds totals using functions like **SUM**, **AVERAGE**, **COUNT**, **MAX**, and **MIN**.

Financial:

Functions for financial calculations, such as **PMT**, **FV**, and **NPV**.

Logical:

Functions like **IF**, **AND**, **OR**, and **NOT** used for decision-making formulas.

Text:

Functions for text manipulation, like **CONCATENATE**, **LEFT**, **RIGHT**, **MID**, **LEN**, etc.

Date & Time:

Functions to work with dates and times, such as **TODAY**, **NOW**, **DATE**, and **DATEDIF**.

Lookup & Reference:

Functions like **VLOOKUP**, **HLOOKUP**, **INDEX**, and **MATCH** used to find and retrieve data.

Math & Trig:

Includes functions like **SUM**, **ROUND**, **ABS**, **INT**, **MOD**, and more.

More Functions:

Access **Statistical**, **Engineering**, **Information**, and custom functions.

Steps to Use a Function from the Library:

1. Go to **Formulas tab** → **Function Library** group.
2. Choose a category and select the desired function.
3. A dialog box appears to help you enter the required arguments.

Defined Names

The **Defined Names** group in Excel allows you to **assign names to cells or ranges**. These names make formulas easier to read, understand, and manage.

- **Define Name:**

Define Name allows you to give a **custom name** to a specific cell or range of cells, making formulas easier to understand and manage.

Example:

Instead of using a formula like:

=SUM(A1:A10)

*You can define the range A1:A10 as **Sales**, then use:*

=SUM(Sales)

Steps to Define a Name:

1. Select the cell or range (e.g., A1:A10).
2. Go to **Formulas tab** → **Defined Names group** → **Define Name**.
3. Type the name (e.g., Sales2024) in the dialog box.
4. Click **OK**.

Note: *Defined names must start with a letter and can't contain spaces (use underscores if needed).*

First Project

Use define

Create Date: -/.....

Second Project

use fine and other

Create Date: -/.....

- **Name Manager:**

Name Manager allows you to **view, edit, delete, and manage all defined names** in your workbook.

Steps to Open Name Manager:

1. Go to **Formulas tab** → **Defined Names group** → **Name Manager**.
2. A dialog box will open showing all named ranges.
3. Use **New**, **Edit**, or **Delete** buttons to manage the names.

- **Use in Formula:**

Quickly insert a defined name into a formula without typing it manually.

Steps to Use:

1. Start typing a formula (e.g., =SUM()).
2. Go to **Formulas tab** → **Defined Names group** → **Use in Formula**.
3. Select the defined name you want to insert.
4. Finish your formula and press **Enter**.

Formula Auditing

- **Trace Precedents:**
Shows **blue arrows** pointing to the selected cell **from the cells it depends on** (input cells).
- **Trace Dependents:**
Shows **blue arrows** pointing **from the selected cell to other cells** that use its value in formulas.
- **Remove Arrows:**
Removes all **precedent and dependent arrows** from the worksheet.
- **Show Formulas:**
Displays formulas in cells **instead of the results**, making it easier to review and edit.
- **Error Checking:**
Scans the worksheet for common formula errors and gives **explanations or fixes**.
- **Evaluate Formula:**
Opens a dialog box to **break down a formula step-by-step** and show how Excel calculates it.

Calculation

- **Calculate Now:**
Recalculates all formulas in the entire workbook immediately.
- **Calculate Sheet:**
Recalculates formulas only in the **active sheet**.
- **Calculation Options:**
Choose how Excel handles automatic updates:
 - **Automatic:** Excel recalculates formulas **whenever a change is made**.
 - **Automatic Except for Data Tables:** Recalculates all formulas except data tables.
 - **Manual:** Formulas update **only when you click Calculate Now or F9**.

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Chapter

Introduction to Review

The **Review tab** provides tools for **proofing, protecting, and collaborating** on your Excel workbook.

Proofing:

- **Spelling:** Checks and corrects spelling errors.
- **Thesaurus:** Suggests synonyms for selected words.
- **Translate:** Translates selected text into different languages.

Accessibility:

- **Check Accessibility:** Reviews your workbook for issues that may affect users with disabilities.

Insights:

- Provides quick access to **Smart Lookup** (definitions, web results, etc.).

Comments:

- **New Comment / Show Comments:** Add or review comments for collaboration.
- Useful in shared workbooks for feedback and notes.

Notes:

- **New Note / Show All Notes:** Older version of comments for adding personal notes to cells.

Protect:

- **Protect Sheet:** Restricts editing of specific cells or the entire sheet.

You can choose what actions are allowed (e.g., select cells, format, insert/delete rows). You can set a password to prevent unauthorized changes.

Steps to Use:

1. Go to **Review tab** → **Protect group** → **Protect Sheet**.
2. Select the actions you want to allow.
3. Enter a **password** (optional) and click **OK**.

- **Protect Workbook:** Prevents structure changes like adding/moving sheets.

Used to **prevent changes** to the workbook's structure, such as adding, deleting, or moving worksheets. You can set a **password** to block unauthorized modifications.

- **Allow Edit Ranges:** Specify editable ranges for different users.

8

Chapter

Introduction to View

The **View tab** provides tools to control how the worksheet is displayed and how you interact with the workbook.

Workbook Views:

- **Normal:** Default view for everyday editing.
- **Page Layout:** View how the workbook will look when printed, including headers, footers, and margins.
- **Page Break Preview:** Displays the page breaks and allows you to adjust them.

Show:

- **Gridlines:** Show or hide gridlines in the worksheet.
- **Headings:** Show or hide row and column headings (A, B, C... 1, 2, 3...).
- **Formula Bar:** Show or hide the formula bar where you enter data or formulas.

Zoom:

- **Zoom In/Out:** Adjust the zoom level of the worksheet for easier viewing.

Window:

- **New Window:** Open a new window of the current workbook.
- **Arrange All:** Arrange multiple workbook windows on your screen.
- **Freeze Panes:** Used to **lock specific rows or columns** in place so they stay visible while you scroll through the rest of the worksheet. It helps in viewing headers or labels during data navigation.

Select a cell *below the row and/or to the right of the column* you want to freeze.
(e.g., to freeze Row 1 and Column A, click on **cell B2**)

- Go to the **View tab**.
- Click on **Freeze Panes** in the **Window group**.

Choose one of the options:

- **Freeze Panes:** Freeze rows above and columns to the left of the selected cell.
- **Freeze Top Row:** Freezes only the first row.
- **Freeze First Column:** Freezes only the first column.
- **Split:** Split the window into separate panes for easier navigation.

Macros:

- **Record Macro:** Start recording a macro to automate tasks.
- **Use Macro:** Run a macro that you've previously recorded.

Satya Education

9

50 MCQ with Answer

Chapter

❑ **What is a Workbook in Excel?**

- a) A single spreadsheet
- b) An Excel file containing worksheets
- c) A chart file
- d) A row of data

Answer: b) An Excel file containing worksheets

❑ **What does a cell refer to in Excel?**

- a) A row
- b) A column
- c) The intersection of a row and column
- d) A workbook

Answer: c) The intersection of a row and column

❑ **Which bar displays the content of the active cell?**

- a) Name Box
- b) Ribbon
- c) Formula Bar
- d) Task Pane

Answer: c) Formula Bar

❑ **What is the maximum number of columns in Excel?**

- a) 1024
- b) 1048576
- c) 16384
- d) 65536

Answer: c) 16384

❑ **What does the Name Box display?**

- a) Cell formula
- b) Workbook name
- c) Active cell address
- d) Sheet name

Answer: c) Active cell address

❑ **Which command is used to copy formatting in Excel?**

- a) Format Builder
- b) Paint Brush
- c) Format Painter
- d) Brush Tool

Answer: c) Format Painter

❑ **Ctrl + X is the shortcut for:**

- a) Paste
- b) Cut

c) Copy

d) Undo

Answer: b) Cut

❑ **To apply bold formatting, use:**

- a) Ctrl + I
- b) Ctrl + B
- c) Ctrl + U
- d) Ctrl + A

Answer: b) Ctrl + B

❑ **Which option merges multiple cells and centers the content?**

- a) Wrap Text
- b) Merge & Center
- c) Format Painter
- d) Align Center

Answer: b) Merge & Center

❑ **Which option wraps text within a cell?**

- a) Word Wrap
- b) Auto Fit
- c) Wrap Text
- d) Text Box

Answer: c) Wrap Text

❑ **What does the Currency format display?**

- a) Percentage symbol
- b) Scientific values
- c) Monetary values
- d) General numbers

Answer: c) Monetary values

❑ **Which format shows values like 50%?**

- a) Text
- b) Fraction
- c) Percentage
- d) Date

Answer: c) Percentage

❑ **Which format would be used to enter '00123'?**

- a) General
- b) Number
- c) Text
- d) Date

Answer: c) Text

❑ **To decrease decimal points in numbers, you use:**

- a) Decrease Decimal

b) Number Format

c) Percentage

d) Round Off

Answer: a) Decrease Decimal

☐ **Which format shows data in scientific notation?**

a) Fraction

b) Date

c) Scientific

d) Time

Answer: c) Scientific

☐ **Which feature colors cells based on values?**

a) Cell Styles

b) Data Bars

c) Conditional Formatting

d) Filters

Answer: c) Conditional Formatting

☐ **Which formatting highlights cells between two values?**

a) Equal to

b) Text that Contains

c) Between

d) Greater Than

Answer: c) Between

☐ **What does Format as Table do?**

a) Adds chart

b) Merges cells

c) Formats data range as a table

d) Converts text to number

Answer: c) Formats data range as a table

☐ **What are predefined formatting styles called?**

a) Cell Styles

b) Formats

c) Tables

d) Filters

Answer: a) Cell Styles

☐ **Which feature helps in adding outer borders to cells?**

a) Wrap Text

b) Format Cells

c) Border Style

d) Cell Merge

Answer: c) Border Style

☐ **Which tool is used to add a series like 1,2,3...?**

a) Auto Number

b) Auto Fill

c) Auto Sum

d) Sort

Answer: b) Auto Fill

☐ **What does the Clear button NOT remove?**

a) Content

b) Formatting

c) Comments

d) Worksheet

Answer: d) Worksheet

☐ **Which command sums up selected cells?**

a) Count

b) AutoSum

c) Average

d) Min

Answer: b) AutoSum

☐ **Which command lets you find and replace text?**

a) Filter

b) AutoFill

c) Find & Replace

d) Format Painter

Answer: c) Find & Replace

☐ **Which tool helps sort data A to Z?**

a) Filter

b) Sort & Filter

c) Auto Sum

d) Flash Fill

Answer: b) Sort & Filter

☐ **Which tool summarizes large data quickly?**

a) Chart

b) Table

c) PivotTable

d) Format as Table

Answer: c) PivotTable

☐ **What does SmartArt create?**

a) Charts

b) Diagrams

c) Hyperlinks

d) Conditional Formatting

Answer: b) Diagrams

☐ **Which chart is used for comparing proportions?**

a) Pie Chart

b) Line Chart

c) Column Chart

d) Bar Chart

Answer: a) Pie Chart

☐ **Which feature inserts a clickable link?**

a) Text Box

b) Comment

c) Hyperlink

d) Shape

Answer: c) Hyperlink

❑ Which element lets you draw independent text?

- a) Cell
 - b) Text Box
 - c) Header
 - d) WordArt
- Answer:** b) Text Box

❑ Which tab controls print orientation?

- a) View
 - b) Insert
 - c) Page Layout
 - d) Review
- Answer:** c) Page Layout

❑ To print only selected cells, set:

- a) Print Option
 - b) Print Area
 - c) Scale to Fit
 - d) View Area
- Answer:** b) Print Area

❑ Which option shrinks content to one page?

- a) Resize
 - b) Page Fit
 - c) Scale to Fit
 - d) Compact
- Answer:** c) Scale to Fit

❑ Which orientation is vertical?

- a) Portrait
 - b) Landscape
 - c) Horizontal
 - d) Upright
- Answer:** a) Portrait

❑ Which feature arranges objects like images?

- a) Organize
 - b) Arrange
 - c) View
 - d) Design
- Answer:** b) Arrange

❑ Which function adds numbers?

- a) COUNT
 - b) ADD
 - c) SUM
 - d) TOTAL
- Answer:** c) SUM

❑ What does the IF function do?

- a) Sorts values
 - b) Performs condition-based action
 - c) Filters values
 - d) Counts numbers
- Answer:** b) Performs condition-based action

❑ What is the use of CONCATENATE?

- a) Adds numbers
 - b) Joins text strings
 - c) Sorts data
 - d) Filters duplicates
- Answer:** b) Joins text strings

❑ Which function returns the current date?

- a) NOW
 - b) DATE
 - c) TODAY
 - d) TIME
- Answer:** c) TODAY

❑ Which tab contains the Function Library?

- a) Insert
 - b) Home
 - c) Formulas
 - d) Data
- Answer:** c) Formulas

❑ Which tool removes repeated values?

- a) Remove Values
 - b) Filter
 - c) Remove Duplicates
 - d) Consolidate
- Answer:** c) Remove Duplicates

❑ What does Flash Fill do?

- a) Highlights cells
 - b) Filters data
 - c) Auto-fills based on pattern
 - d) Converts numbers
- Answer:** c) Auto-fills based on pattern

❑ Which tool splits text into columns?

- a) Separator
 - b) Split Cell
 - c) Text to Columns
 - d) Parse
- Answer:** c) Text to Columns

❑ Which feature groups rows or columns?

- a) Merge
 - b) Border
 - c) Group
 - d) Combine
- Answer:** c) Group

❑ Which function creates subtotals?

- a) Total
 - b) Sum
 - c) Subtotal
 - d) AutoFill
- Answer:** c) Subtotal

☐ **Which view shows headers and footers?**

- a) Normal
- b) Page Layout
- c) Page Break
- d) Web Layout

Answer: b) Page Layout

☐ **Which command freezes rows/columns in view?**

- a) Lock Cells
- b) Freeze Panes
- c) Protect Sheet
- d) Pin View

Answer: b) Freeze Panes

☐ **Which option checks spelling?**

- a) Grammar
- b) Spelling
- c) Language
- d) Proof

Answer: b) Spelling

☐ **What is the use of Protect Sheet?**

- a) Hide cells
- b) Lock formatting
- c) Prevent editing
- d) Track changes

Answer: c) Prevent editing

☐ **Which feature allows running automated steps?**

- a) Script
- b) Function
- c) Macro
- d) Rule

Answer: c) Macro