

Resource Metadata

Level	Undergraduate
Duration	11 practicals (approx. 1.5–2 hours each)
Software Required	Microsoft Excel

Learning Outcome

Through these practical exercises, students gain comprehensive, hands-on experience with Excel's essential features for data entry, calculation, analysis, and validation. They develop proficiency in using formulas, functions, and data validation tools, enabling them to create accurate, reliable, and user-friendly spreadsheets. These skills are foundational for academic, professional, and personal data management, supporting informed decision-making and effective communication of quantitative information.

Practical 3 – Using calculations

1. Create the spreadsheet as shown.

Given that: Cost = Price * Quantity
Gross Total = Sum of all Costs
Tax = 6% of the Gross Total
Net Total = Gross Total-Tax

	A	B	C	D	E	F
1			EXPORTS			
2						
3	Item I.D	Description	Price	Quantity	Cost	
4						
5	111	Food	56.13	5		
6	112	Beverages	71.25	8		
7	113	Machinery	43.55	11		
8	114	Aircraft	32.35	7		
9	115	Automobiles	75.25	15		
10						
11				Net Total		
12				Tax (6%)		
13				Gross Total		
14						
15	Name: xxxxxxxxxxxxxxx			Class: xxxxxx		

2. Save your work as *Practice3*

Practical 4 – More on formatting

Retrieve Practical 2 and copy the table 'Budget Spreadsheet' into a new file

Then, perform the following:

- Include a dotted-line at row 5, a double-line at row 11.
- Format the numeric data as indicated (Rs and use Format Painter).
- Change the column width of A to 12, and B,C,D,E,F to 11.
- Include today's date with the format of (Month Day Year, e.g. March 17, 1995)
- Save the edited file as a new file **Practice4**.

	A	B	C	D	E	F
1	Date:		Budget Spreadsheet			
2						
3	Budget	First	second	Third	Fourth	Annual
4	Category	Quarter	Quarter	Quarter	Quarter	Total
5						
6	Supplies	Rs 37.69	Rs 42.75	Rs 42.75	Rs 35.00	Rs 158.19
7	Travel	Rs 300.00	Rs 250.00	Rs 375.00	Rs 300.00	Rs 1,225.00
8	Phone	Rs 75.00	Rs 75.00	Rs 75.00	Rs 75.00	Rs 300.00
9	Xpress Mail	Rs 106.25	Rs 65.75	Rs 75.60	Rs 89.35	Rs 336.95
10	Periodical	Rs 72.50	Rs 55.00	Rs 35.68	Rs 65.80	Rs 228.98
11						
12	Qrtly Total	Rs 591.44	Rs 488.50	Rs 604.03	Rs 565.15	
13						
14	Income :	Rs 4,500.00				
15	Expenses :	Rs 2,249.12				
16	Net income (Loss):		Rs 2,250.88			

Practical 5 – cell references

- Open Practice 2
- Change the *cell references* by naming them as follows: **Net Income=Income-Expenses**
- Save your work.**
- Open Practice 3
- Change the *cell references* by naming them to calculate **Gross Total, Tax and Net Total**.
- Save your work.**

Practical 6 – Using Date Functions

Copy the table 'Exports' [Practical 3](#) into a new file and perform the following:

- Move the label data from cell C1 to B1.
- Include the date information in cell F1, using the DATE function.
- Format the numerical data (Price, Cost, Net cost, Tax, Gross Total) by using the € currency format.
- Change column width of A to 11, B to 20, E to 10, F to 12.
- Delete column C.

Save your work

Practical 7 – Using Formulas in Excel

Info: Cells should be named

Create the spreadsheet as shown below.

Given that:

Volume= Length * Width *Depth

Compound Interest Amount = Principal * (1+Rate) ^ Term

Average = Hits/Bat

Sales Commission Amount = Sales * Rate

	A	B	C	D	E	F	G
1	FOPRMULAE						
2							
3	Volume of Box				Batting Average		
4							
5	Length	Width	Depth	Volume	Hits	Bat	Average
6	12	4.5	3.2		150	450	
7							
8	=====						
9	Compound Interest				Sales Commission		
10							
11	Principal	Rate	Term	Amount	Sales	Rate	Amount
12							
13	2000	0.09	3		50000	0.08	
14							

Practical 8 – Formulas - Mean, Median and standard deviation (based on entire population)

Create the Spreadsheet as shown below.

	A	B	C	D	E	F	G	H
1		Student Roster						
2	Name	Seat	1/9	8/9	9/1	Today's Date	The following Date	One Week after Today's date
3	<i>Mina</i>	R2-1	93	97	89			
4	<i>Priya</i>	R2-2	95	85	83			
5	<i>Amina</i>	R2-3	97	95	92			
6								
7		Mean						
8		Median						
9		Standard Deviation						

- Calculate the **mean**, **median** and **standard deviation** (based on the entire population) for each test.
- Adjust the decimal places to
 - 1 place for the Median, and
 - 2 places for the Standard Deviation.
- Use a formula to display automatically
 - today's date,
 - the day after, and
 - one week after today's date.

Note:

Today's Date – Today()

Mean is the average; Median – use formula with Median and Standard Deviation use the formula STDEV.P

Practical 9 – Using IF function

Write down the Excel formulae for the following tasks.

Given that:

1. Result=30%of Ica1+70%of Ica2
2. Remark1 (table2): An **IF** function is required.
3. Grade (table3): An **IF** function is required.
4. Pass Count=1 if remark is equal to Pass otherwise pass count is equal to 0
5. Write down the function to calculate:
 - ◊ In cell **G8**: the number of students.
 - ◊ In cell **G9**: the number of students passed.
 - ◊ In cell **G10**: the number of students failed.
6. Remark2 (table4):
Write down the formulae to display
 - a) one * if pass count is 0.
 - b) three *** if pass count is 1.

Save your work.

	A	B	C	D	E	F	G	H
1	Name	Ica1	Ica2	Result	Remark1	Grade	Pass Count	Remark2
2	Wendy	52	60					
3	Arvin	30	44					
4	Nishta	68	59					
5	Danny	89	79					
6	Sonia	73	70					
7	David	92	97					
8						Number of Students:		
9						Number of Students passed:		
10						Number of Students failed:		

Table2: Remark1

Remark1	Fail	Pass
Result	<50	≥50

Ex: Wendy

Remark1: =if(D2<50,"Fail",if(D2>=50,"Pass"))

Table3: Grade

Marks	0 to <50	50 to <60	60 to <70	70 to <80	80 to <90	≥90
Grade	F	D	C	B	A	DISTINCTION

Table4: Remark2

Pass Count	0	1
Remark2	*	***

Practical 10 – More on IF function

Create a new sheet in same document and perform the following:

Note: An IF Function is required for questions 1, 2 and 3.

- Write down the formulae to display the appropriate **Town** in column C by using table 1.
- Write down the formula to display the appropriate **Discount** in column E by using table 2.
- Write down the formula to display the appropriate **Bonus** in column G by using table 3.
- Calculate the total amount (column F).

	A	B	C	D	E	F	G
5	NAME	AGE	TOWN	SELLING PRICE: COMPUTERS	DISCOUNT	TOTAL	BONUS
6	ARVIN	15		Rs32,000			
7	ANJU	23		Rs32,000			
8	RAJ	30		Rs32,000			
9	PRIYA	17		Rs32,000			

Table1

NAME	Anju	Priya	Raj	Arvin
TOWN	PORT-LOUIS	ROSE-HILL	GRAND-BAIE	BOIS-CHERI

Table2

TOWN	PORT-LOUIS	ROSE-HILL	GRAND-BAIE	BOIS-CHERI
DISCOUNT	Rs300	Rs200	Rs75	Rs600

Table3

AGE	<15	<17	<23	<30	≥30
BONUS	Pen	T-shirt	Walkman	Books	CD-ROM

Save your work.

Practical 11 – More on IF function

Write down the formula to display the appropriate **Rate** in cell B4 by using the **IF** function.

	A	B
1	Rate 1 (0 to 10 units)	Rs 0.70
2	Rate 2 (more than 10 units)	Rs 0.90
3	Unit	Rate
4	4	
5	5	
6	12	

Practical 12 – More on IF function with discounts

- Calculate
 - the Selling Price
 - the Discount amount
 - the Total amount
 by using the appropriate functions or formulas. An **IF** function is required for the Discount amount.

	A	B	C	D		
1	Quantity	Discount				
2	1 to 50	0%				
3	Above 50	10%				
4	Product	Unit Price (Rs)	Quantity Ordered	Selling Price (Rs)	Discount	Total
5	Tables	200	60			
6	Chairs	150	35			
7	Computers	15 000	30			

Save your work.

Practical 13 – Data Validation

Info: If you are creating an Excel spreadsheet that will be used by other people it is important to make it as easy to use and reducing the possibility of errors can make a workbook easier to use and this is where Excel's **data validation** feature can be useful. **Data Validation** can be used in the following ways:

- Restrict the data that can be entered in to certain cells.
- Provide a list of accepted values to assist in data entry.
- Provide prompts to assist a user in data entry.
- Produce meaningful error messages.

- Create a new worksheet with the following table:

Info: Use Alt 131 to display the â for age for 'l'âge de Glace3'.

	A	B	C	D	E	F	G
1							
2		C	S				
3		I	t				
4		N	a	Port-Louis			
5		E	r				
6		M					
7		A					
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Save your work