

**B. Com. – III**

**Course Code: CE 201 (D)**

**Subject: Computer Application**

**Paper Title: Financial Analysis Using Spread Sheet**

**Objectives:**

To make students learn

- The fundamentals of MS-Excel Worksheet, its functions and its application.
- The implementation of formats, calculations and formulas using criteria, sorting, filtering data on user defined criteria, organizing and summarizing data
- to work with business data analysis through worksheet

**Contents:**

**Unit – I Introduction to Basic concepts of workbook and worksheet :**

Getting started with SPREADSHEET, Basic concepts, creating / Opening, Finding a Workbook, Inserting, Deleting, Moving, Saving and Protecting Workbook, Introduction to Worksheet: Rows, Columns, Cells, and Screen of Worksheet, Work Book, Advantages of Work sheet and how it is usefulness in Business. Creating, Saving, Importing, Exporting new worksheet, Deleting, and Protecting, Worksheet, Entering Text, Numbers and Formulas, Relative and Absolute Referencing, Editing, Deleting, Copying, Moving a data and Formula, Create a custom list, Range names, Search and replace data, Re-arrange cell contents, Inserting, deleting row(s) and column(s), Inserting page break.

**Unit –II formatting and printing worksheet data :**

Fonts, Alignments, editing column and rows, its height and width and splitting of cells, rapping of cell contents, conditional formatting of data range, Autosum, sorting, auto correction of data, Getting Worksheet Printed, Print Preview, Page setup, Page, Margin, Header /footer

**Unit – III Calculation and manipulation of data:**

Basic Properties of a Formula, Order of Precedence of Operators. Entering, Editing a Formula, and types of functions:

Statistical Functions: AVG(), MIN(), MAX(), COUNT(), COUNTIF(), COVAR(), FREQUENCY(),MEDIAN(),STDEV(), VAR(), and other useful Statistical Function for data analysis.

Mathematical Functions: ROUND(), ABS(), FACT(), INT(), MOD(), SQRT()

Lookup and Reference Functions: VLOOKUP(),HLOOKUP()

Financial Functions: PMT(), IPMT(), IRR(), PV(), NPV(), NPER() and other useful Financial Function.

Logical Function: IF() & Nested IF()

Date Function: DATE(), DAY(), DATEVALUE(), MONTH(), NOW(), YEAR(), WEEKDAY(), Today()

String Functions: LEFT(), CONCATENATE(), RIGHT(), LOWER(), UPPER(), EXACT(), FIND(), SUBSTITUTE().

Information function: ISBLANK(), ISNUMBER(), ISTEXT()

**Unit – IV    Advanced Features and Data (What – If ) Analysis :**

Types & Components of Charts (Line, Pie and Stacked Bar, Column), Creating, Deleting, Editing Chart, Changing and Displaying, Formatting a Chart, Data sorting, Data filtering – auto filter and advance filter, Filtering Rows through Data Form, Importing & Exporting Data, Validation of data, sub total, data chart, pivot table and pivot chart, goal seek, scenario.

**Main Reference Book(s):**

- (i) Working with personal computer software, R.P.Soni, Harshal Arolkar, Sonal Jain, Books India Publication.

**Suggested Additional Reading Book(s):**

- (i) Microsoft Office 2003 The Complete Reference by Curt Simmons, Guy Hart-Davis, Jennifer Kettell, Jennifer Kettell, Tata McGraw Hill Publication
- (ii) MS Excel Tutor, BPB Publications
- (iii) MS Office specialist; Excel 2003 study guide by Linda F. Johnson, Wiley Publishing, Inc.
- (iv) Microsoft Office Excel 2010 QuickSteps, John Cronan, Tata McGraw hill Publication
- (v) Successful Project in Excel, BPB Publications
- (vi) Microsoft Excel functions & formula, BPB Publications
- (vii) Office 2010 in Simple Steps, Kogent Learning Solution Inc., Dreamtech Press
- (viii) Computer Application I, Vimal Pandya, HK Arts College Publications, Ahmedabad.
- (ix) Hand Book – Computer fundamental, Windows, Ms-word, Ms-excel and Ms-power point, Dr. G.N. Jani, Vimal N. Pandya Akshar Publications, Ahmedabad

**Accomplishments of the student after completing the Course:**

- Student would be able to format the data and organize it in worksheets, manipulate data using formulas and functions, perform data calculations and convert it into useful information also summarize it and resolve financial problems using advance features of MS-Excel.

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## PRACTICAL – Spreadsheet

- Describe starting & saving of workbook. How to format the worksheet. Working with formulas, sorting the entered data & previewing & Printing.

The data is as under:

State	January	February	March
PA	\$ 465.00	\$ 644.00	\$ 457.00
MJ	\$ 345.00	\$ 365.00	\$ 543.00
NY	\$ 345.00	\$ 347.00	\$ 345.00
CT	\$ 543.00	\$ 344.00	\$ 633.00
DE	\$ 456.00	\$ 653.00	\$ 934.00

- How to select cells & Create worksheet also try to find out how Data Entry is possible. Then edit the cell. Also rearrange worksheet. Perform spell check.

Create following data entries with automatic data fill facility.

1	January	February	March	April	May	June	July	August
2	1/7/97							
3								
4								
5								
6								
7								
8	1/14/97							

- Create following worksheet. Also try to show how AutoText can be entered into the worksheet.

1	January	February	March	April	May	June	July	August
2								
3								
4								
5								
6								
7								
8								

Use Autoformat to format the type of table you require. Enter the values in cell as indicated:

2000 in cell A2, 3000 in cell A3 2750 in cell A4, 3800 in cell A5, 1900 in cell A6.

In A7 find the total of A2 to A6 .Use conditional formatting, alter when our total sales goes below 12000 to red.

- Create following worksheet.

### MARKSHEET

ROL_NO	NAME	SUB1	SUB2	SUB3	TOTAL	PERC
101	SONIA	67	77	88		
103	ARTI	56	64	45		
105	PUJA	-	-	-		
107	-	-	-	-		
111	-	-	-	-		
110	-	-	-	-		

- (i) Type the entries and apply formatting as shown.  
Title in Arial, 14, bold, italic.  
Remaining text in Times New Roman, 12.  
Heading in bold, italic and fill with Gray color.  
All numbers with 2 decimal places.  
Roll no should be center aligned.  
Apply border to all entries
- (ii) Calculate total and percentage using appropriate formula.
- (iii) Calculate minimum, maximum and average marks of each subject
- (iv) Save worksheet by MARKS.XLS.
- (v) Using data- fill give rank to each student.

5. Create following worksheet:

	A	B	C	D
1	Sales Rep.	Territory	29900	% of Total
2	McMohan, Susan	Southern	30200	Calculated value of Total
3	Lipari, Angle	Western	40000	#DIV/0!
4	Miserino, Carl	Eastern	34700	#DIV/0!
5	Powers, Jessica	Northern	34000	#DIV/0!
6	Total	Mid-West	23000	#DIV/0!

In cell D3 to D6, it shows an error. Why it shows an error. Find it & Display corrected formula.

Note: - Use absolute copy instead of relative copy.

6. Create following worksheet:

EMP NAME	HRA	TA	DA	GROSS SALARY	PF	TAX	DED.	NET SALARY	% SALARY
TAMMY	\$3500	\$40	\$10	?	\$20	?	?	?	?
”	”	”	”	”	”	”	”	”	”
TOTAL	?	?	?	?	?	?	?	?	?

Give the commands for the following (Indicate cell address for commands)

E.g. cell E4: @SUM (B4..D4)

- 6.1 Centre align the Labels HRA, TA, DA, SALARY
- 6.2 Specify command(s) to draw a line in Row 3 as shown.
- 6.3 Increase the column width of the first column to 18
- 6.4 Display all the amount figures with a two place decimal point (X.XX)
- 6.5 Insert a blank column DEDU. And NET.
- 6.6 Using calculation commands and copy commands, find out.
  - 6.6.1 GROSS SALARY as the sum of BASIC, TA, DA
  - 6.6.2 DEDU. As the sum if PF and TAX.
  - 6.6.3 NET SALARY as the difference between GROSS SALARY and DEDU.
  - 6.6.4 TOTAL is the total of all respective columns.
  - 6.6.5 % SALARY is achieved by dividing individual NET SALARY with TOTAL NET SALARY.
  - 6.6.6 TAX is calculated using following criteria. (Use Hlookup and Vlookup)

Salary Range	Tax Amt.(%)
< 1000	NIL
>=1000 and <2000	10
>=2000 and <3000	20
>=3000 and <4000	30
Otherwise	40

7. You are saving Rs. 200 every month in a deposit scheme for a period of 6 years. Fixed rate of interest is 12% what amount will you receive after 6 years? Find this using your own formula & also using available function. Compare both the values.
8. A customer is given a loan of Rs. 80,00,000 for a period of ten years with a fixed interest rate of 12.5%. What will be his monthly installment payment? (Hint: Use Goal Seek and Financial Function PMT() )
9. Create a data table to calculate and display monthly installment values for the following rates of interest and loan amounts for 10 years.

**ROI**

- ◆ 0.175
- ◆ 0.185
- ◆ 0.195

**Loan Amount**

- ◆ 225000
- ◆ 200000
- ◆ 185000

Change the years from 10 to 5 and see the effect.

Find this using your own formula (Absolute and Mixed)

10. Create following worksheet.

***EMPLOYEE INFORMATION***

EMPNO	NAME	DEPT	BASIC	HRA	PF	NET
101	BINA	ACTS	7700			
103	AYESHA	EDP	6400			
105	PUNIT	ACTS	-			
107	-	-	-			
111	-	-	-			

- (i) Apply formatting of your choice.
- (ii) Calculate HRA = 30% of basic.
- (iii) Calculate PF=10% of basic.
- (iv) Calculate NET = BASIC + HRA –PF.
- (v) Calculate TOTAL for each column.
- (vi) Sort the list in alphabetic order by name.
- (vii) Apply filter to show only records where BASIC>5000.
- (viii) Apply filter for showing records of only EDP department.
- (ix) Sort the list department wise.
- (x) Calculate dept wise subtotals.
- (xi) Remove subtotals.
- (xii) Save the sheet by EMP.XLS.

**11.** Perform the following task

- (i) Open the sheet MARKS.XLS.
- (ii) Generate bar chart of name v/s. Percentage.
- (iii) Specify Titles, Axes, Legend, Gridlines, Data labels.
- (iv) Save the chart in other sheet.
- (v) Change the chart type to pie chart.
- (vi) Fill it with different patterns and colors.
- (vii) Save the chart.
- (viii) Generate another 3D-column chart of Rollno v/s. Total marks.
- (ix) Using the data of exercise no. 4 Plot Line, Bar, Stack-bar charts to compare marks in all the subjects. Save all this charts with different name and take printout all charts.
- (x) Specify titles, Axes, Legend and Gridlines.
- (xi) Apply data labels with value.
- (xii) Save it as object in current sheet.
- (xiii) Rotate chart and observe the change.
- (xiv) Apply different color and patterns in 3D-column.

**12.** Perform the following task

- (i) Open the sheet EMP.XLS
- (ii) Protect it using password
- (iii) Insert one column grade
- (iv) Fill it using following criteria
 

<b>Basic</b>	<b>grade.</b>
>=10000	m1
>=6000 and <10000	m2
>=3000 and <6000	m3
- (v) Save the sheet.
- (vi) Open the MARKS.XLS.
- (vii) Insert one column grade in the sheet MARK.XLS and use following criteria.
 

<b>Perc.</b>	<b>grade</b>
>=70	dist.
>=60 and >70	first
>=50 and >60	second
>=40 and <50	third
Otherwise	fail

13. Create a following workbook contains a list of stationary products:

Month	Item	Quantity	Rate/Qty	Amount
Jan	Pen	100	10	
Mar	Pencil	210	5	
Feb	Eraser	50	2	
Jan	Sharpener	30	3	
Jan	Scale	20	5	
Feb	Notebook	40	20	
Mar	Calc	5	50	
Jan	Pen	200	10	
Mar	Pencil	40	5	
Jan	Eraser	20	2	
Jan	Scale	20	5	
Feb	Pen	50	10	
Feb	Pencil	60	5	

Perform the following:

- Create a pivot table of above data.
- Find out the Subtotal of all items.

14. Create a following workbook contains production statistics of Tyres:

Year	Depot	Production (in lacs)	Return	Demand
2001	Ranchi	20.05	3 %	80 %
2003	Patana	26.04	5 %	70 %
2004	Nagpur	24.18	4 %	74 %
2005	Jamnagar	36.90	8 %	82 %
2007	Pune	38.23	10 %	85 %
2008	Cochin	21.36	2 %	60 %
2010	Ranchi	56.24	15 %	90 %
2011	Nagpur	78.31	12 %	88 %

Perform the following:

- Calculate Actual Return cost & Demand in new columns.
- Find out the average production using Database function.
- Generate what- if analysis report for 6% and 11% return.

15. Create following table & perform following task:

Month	Area	Chocolate	Cake	Pastry
Jan	Satellite	45	18	37
Feb	Naranpura	51	30	18
Jan	Paldi	44	21	33
Jan	Navrangpura	56	18	24
Feb	Ranip	17	11	82
Mar	Vastrapur	65	10	25
Mar	Vasna	56	9	20

Perform the following on the above worksheet :

- i) Give appropriate format of sheet respect to data.
  - ii) Sort the data area wise in ascending order and descending order.
  - iii) Compute the Best case and Worst case using following data.
    - a. Chocolate: 50, 20
    - b. Cake: 15,5
    - c. Pastry: 35,19
  - iv) Find out the total production of chocolate shop percentage for each month.
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