

BSC – III

Course Code: EC - 201

Course Name: Business Data Processing

Objectives:

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.

Contents:

- Unit – I **Introduction to Spreadsheet and Basic concepts of workbook :**
Introduction to Worksheet: Rows, Columns, Cells, and spreadsheet, Work Book, Advantages of Worksheet and its usefulness in Business. Creating, opening, Saving, Importing, Exporting new as well as existing worksheet, Deleting, and Protecting Worksheet, Entering data like text and numbers in worksheet, Editing, Deleting, Copying, Moving data, Relative and Absolute Referencing
Printing Features: Print Preview, Page setup, Page, Margin, Header /footer Tab.
- Unit –II **Formatting data and Worksheet:**
Editing, Deleting, Copying, Moving a data and Formula, Creating a custom list and data series, Range names, Search and replace data, Re-arrange cell contents, Inserting, resizing and deleting row(s) and column(s), Inserting page break, page setup, editing columns and rows by merging and splitting of cells, rapping of cell contents, conditional formatting of data range, sorting, Autosum and Autocorrection of data.
- Unit – III **Calculation and manipulation of data:**
Objectives, Basic Properties of a Formula, Order of Precedence of Operators. Entering, Editing a Formula.
Types of Functions: Statistical Functions: *AVG()*, *MIN()*, *MAX()*, *COUNT()*, *SUM()*, *LARGE()*, *SMALL()*
Mathematical Functions: *ROUND()*, *ABS()*, *FACT()*, *INT()*, *SQRT()*, *FLOOR()*, *EXP()*, *MOD()*, *POWER()*, *PRODUCT()*, *TRUNK()*
Financial Functions: *PMT()*, *PV()*, Logical Function: *IF()* & Nested *IF()*, *OR()*, *AND()* ,*NOT()*
Date Function: *DATE()*, *DAY()*,*DATEVALUE()*, *MONTH()*, *NOW()*, *YEAR()*, *WEEKDAY()*, *DAYS360()*, *TODAY()* S
tring Functions: *LEFT()*, *CONCATENATE()*, *RIGHT()*, *LOWER()*, *UPPER()*, *EXACT()*, *FIND()* *SUBSTITUTE()*, *LEN()*, *MID()*, *TRIM()*
Lookup functions: COLOUM(), *ROW()*, *VLOOKUP()*, *HLOOKUP()*
Information function: *ISBLANK()*, *ISNUMBER()*, *ISTEXT()*
- Unit – IV **Advanced Features of MS. Excel :**
Data sorting, Data filtering – auto filter and advance filter, wild cards criteria, 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.
- (ii) Computer Application I, Vimal Pandya, HK Arts College Publications, Ahmedabad.
- (iii) Hand Book – Computer fundamental, Windows, Ms-word, Ms-excel and Ms-power point, Dr. G.N. Jani, Vimal N. Pandya Akshar Publications, Ahmedabad
- (iv) Ms-Office 2000 for everyone by Sanjay Saxena (Vikas Publication House Pvt. Ltd.)
- (v) Successful Project in Excel, BPB Publications
- (vi) Microsoft Excel functions & formula, BPB Publications

SUGGESTED ADDITIONAL READING:

- (i) Microsoft Office 2003 The Complete Reference by Curt Simmons, Guy Hart-Davis, Jennifer Kettell, Jennifer Kettell
- (ii) MS Excel Tutor, BPB Publications
- (iii) MS Office specialist; Excel 2003 study guide by Linda F. Johnson, Wiley Publishing, Inc.

Accomplishments of the student after completing the Course:

After completion of this course student will be able to know

- The fundamentals of MS-Excel workbook and its components.
- The implementation of formats and various calculations also formula application, using criteria, sorting, filtering data, organizing and summarizing data
- The use of what-if-analysis tools, exporting - Importing data, printing of data in organized manner, with header and footer in various formats
- Usefulness in formulating information for decision making in a business

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.

4. 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

Basic	grade.
>=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.

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