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Competency Statements

- *The students will be able to:*
 - *Understand the meaning, objectives and limitation of financial statement analysis.*
 - *Learn various tools for Financial statements analysis.*
 - *Understand objectives and classification of Accounting Ratios and Ratio analysis.*

Introduction to Ratios :

- (A) Balance Sheet Ratio :
 - (1) Current Ratio
 - (2) Liquid Ratio
- (B) Income Statement Ratio :
 - (1) Gross Profit Ratio
 - (2) Operating Profit Ratio
 - (3) Net Profit Ratio
 - (4) Operating Ratio
- (C) Combined/Mixed Ratio :
 - (1) Return On Capital Employed (ROCE)
 - (2) Return on Investment (ROI)

9.1 Meaning

The Financial Statements are those which are prepared periodically. Generally at the end of financial year all the information recorded in the Books of Accounts of business is summarized in Financial Statements.

“The Statements which are prepared by the business to find out profitability, efficiency, solvency, growth of business to judge the financial strength and status are called as Financial Statements.” These statements give complete picture of financial positions and managerial performance. Financial Statements are prepared for the purpose of presenting Annual Report.

The Financial Statements are prepared by the profit concern as well as Non Profit concern organisations.

There are two important Financial Statements.

- (1) Balance Sheet / A Position Statement
- (2) Profit and Loss A/c / An Income Statement

Financial Statement analysis includes two aspects

- (a) Analysis of Data : It provides methodical classification of financial statement
- (b) Interpretation of Data : It means explanation of meaning and significance of data.

Objectives of Financial Statement Analysis

The Financial Statements are the source of information to various users e.g. Share holders, Investors, Suppliers, Govt, etc. The main objectives of Financial Statement are as follows :

- (1) To help in planning
- (2) To assist in estimating the earnings of business.
- (3) To assist in investment making decision
- (4) To help management in assessing the efficiency of the organisation.
- (5) To provide financial information about economic resources.
- (6) To provide information about changes in net resources arising out of business activities.
- (7) To disclose other information that is relevant to the need of the users of the Financial Statement.

Thus the objectives of Financial Statement is to provide information about the financial position, performance and changes in financial position of an enterprises that is useful to wide range of users in making economic decisions.

Limitations of Financial Statement Analysis :

Financial Statement is a powerful mechanism which helps in ascertaining the strength and weakness in the operations and financial position of an enterprise. Analysis of financial statements depends upon the data and information supplied by the Financial Statement about the economic result and financial position of the business.

The main limitations of the analysis of Financial Statement are :

- (1) **Qualitative informations are ignored :** Only the information which can be represented in monetary terms are shown in financial statement. Other important feature relating to quality which cannot be expressed in monetary terms are ignored. Such as goodwill, harmony, efficiency of management, competitions etc.
- (2) **Historical cost :** Financial statements are prepared on historical cost and book values of Assets. They do not present the effect of change in prices.
- (3) **Based on accounting concepts and conventions:** Financial Statements are prepared on the basis of certain accounting concepts and conventions. This means that these statements are far away from reality and there analysis cannot be of much use.
- (4) **Influenced by personal judgment:** Financial Statements and conclusions are affected by personal decisions. There are so many items which are decided by accountant themselves. For example : Depreciations method, valuation of stock, writing off of deferred expenses etc.
- (5) **Being Uncomparable :** Differences in date of preparation, nature of business, method of Accounting etc. make the financial statement uncomparable.

(6) **Static statement :** Financial Statements are static in nature. They represent absolute figures. They do not present the process by which the figures are arrived.

(7) **Affected by window dressing :** Sometimes management displays rosy picture through financial statement. In order to show excellent profit sales may be increased, closing stock may be overvalued, purchases at the end of the year may not be shown. This may be known as window dressing. It is clear from the above limitations that the result obtained from analysis of Financial Statements should not be taken as true indicator of financial strength and weakness of the business.

These limitations must be kept in mind while taking decisions on the basis of analysis of Financial Statements.

Analysis of Financial Statements.

1. **Balance Sheet:** The balance sheet need to be arranged in vertical format which is suitable for further analysis. Its format is given below :

..... Company Ltd.

Balance Sheet as on

Particulars	Amount ₹	Amount ₹
I) Sources of Funds		
A) <u>Owners Fund/Shareholders Fund.</u>		
a) Share Capital		
Equity share capital	xxx	
Preference share capital.	xxx	
b) Add : Reserves and surplus		
Profit & Loss A/c	xxx	
General reserve	xxx	
Securities Premium.	xxx	
c) Less : Fictitious Assets	xxx	
Net Worth/Owners Fund.	(xxx)	xxx
B) Borrowed Funds		
Bank Loan	xxx	
Debentures	(xxx)	
Total Fund Available		xxx
II) Application of Funds		
1) Fixed Assets	xxx	
Land and Building	xxx	
Plant and Machinery	xxx	
Furniture	xxx	
Vehicle.	xxx	xxx
2) Investment		
3) Working Capital		xxx
Current Assets		
Quick Assets		
Cash	xxx	
Bank	xxx	

Debtors	XXX	
Bill Receivable	XXX	
Total Quick Assets		XXX
<u>Non-Quick Assets</u>		
Stock	XXX	
Prepaid expenses	XXX	
Advances	XXX	XXX
Total Non-quick Assets		
Total Current Assets (Quick + Non Quick Asset)		XXX
Less Current Liabilities		
<u>Quick Liabilities</u>		
Creditors	XXX	
Outside Expenses	XXX	
Bill Payable	XXX	XXX
Total Current Liability		
<u>Non-Quick Liability</u>		
Bank overdraft	XXX	XXX
Total Current Liabilities		
Working Capital (Current Assets Less Current Liabilities)		XXX
Total Funds Employed /Applied		XXX

Illustrations

1 : Convert following Balance Sheet into Vertical Balance Sheet

Balance Sheet as on 31/3/2019

Liabilities	Amount ₹	Assets	Amount ₹
Capital	50,000	Fixed Assets	60,000
Reserves	15,000	Investment	10,000
12% Loan	30,000	Current Assets	55,000
Current Liabilities	30,000		
	1,25,000		1,25,000

Solution No. 1

Vertical Balance Sheet as on 31/3/2019

Particulars	Amount ₹	Amount ₹
1) Sources of Funds		
a) Owners Fund Capital	50,000	
(+) Reserves	15,000	
(-) Fictitious Assets	Nil	
Net Worth		65000
b) Borrowed Funds		
12% Loan		30,000
Total Fund available		95,000

2) Application Funds		
Fixed Assets		60,000
Investment		10,000
Working Capital		
Current Assets	55,000	
Less : Current Liabilities	(-) 30,000	25,000
Total Fund Applied		95,000

2 : Convert following Balance Sheet into Vertical Balance Sheet

Balance Sheet as on 31st March, 2020

Liabilities	Amount (₹)	Assets	Amount (₹)
Capital	80,000	Fixed Assets	75,000
Reserves and Surplus	20,000	Investment	20,000
12% Loan	24,000	Current Assets	44,000
Current Liabilities	15,000		
	1,39,000		1,39,000

Solution No. 2

Vertical Balance Sheet as on 31st March, 2020

Particulars	Amount (₹)	Amount (₹)
I) Sources of Funds (Owners Fund)		
1) Capital	80,000	
+ Reserves	20,000	
Net Worth		1,00,000
2) Borrowed Funds		
12% Loan		+24,000
Total Fund Available		1,24,000
II) Application of Funds		
3) Fixed Assets		75,000
4) Investment		20,000
5) Working Capital		
Current Assets	44,000	
Less : Current Liabilities	(-)15,000	29,000
Total Fund Applied		1,24,000

- 2) **Income Statement:** The Profit & Loss account need to be arranged in vertical format which is suitable for further analysis. It is also called as vertical Income Statement. Its format is given below :

_____ **Company Ltd.**
Vertical Income Statement for the year ended

Particulars	Amount (₹)	Amount (₹)
Income		
Sales	xxx	
(-) Sales Return	xxx	
Net Sales		xxx
Less Cost of Goods Sold		
Opening Stock	xxx	
Add : Purchases	xxx	
Add : Wages	xxx	
Add : Carriage Inward	xxx	
Add : Direct Exp.	xxx	xxx
Less Closing Stock	xxx	
Net Cost of Goods Sold		xxx
Gross Profit Net Sales - Net Cost of Goods Sold)	xxx	
Less : Operating Exp.		
a. Administrative Exp.	xxx	
b. Finance Exp.	xxx	
c. Selling Exp.	xxx	
Total Operating Expenses		xxxx
Operating Profit (Gross Profit - Operating Expenses)		xxxx
Add : Non-operating Income		xxx
Less : Non-operating Exp.		(xxxx)
Net Profit Before Tax		xxx
Less : Tax (Charged on Net profit Before Tax)		xxx
Net Profit After Tax		xxx

3 : Convert following Trading and Profit and Loss Account into vertical income statement

Trading and Profit and Loss A/c for year ended 31/3/2019

Particulars	Amount (₹)	Particulars	Amount (₹)
To Op. Stock	3,50,000	By Sales	11,00,000
To Purchases	7,00,000	By Closing Stock	2,00,000
To Wages	50,000		
To Gross Profit c/d.	2,00,000		
	13,00,000		13,00,000
To Office Exp.	1,00,000	By Gross Profit b/d.	2,00,000
To Selling Exp.	50,000		
To Finance Exp.	20,000		
To Net Profit c/d	30,000		
	2,00,000		2,00,000

Solution 3 :

Vertical Income statement as on 31/3/2019

Sr. No.	Particular	Amount (₹)	Amount (₹)
1.	Sales		11,00,000
2.	(-) <u>Cost of Goods Sold</u>		
	Opening Stock	3,50,000	
	(+) Purchases	7,00,000	
	(+) Wages	50,000	
		11,00,000	
	(-) Closing Stock	2,00,000	9,00,000
3.	Gross Profit		2,00,000
4.	(-) <u>Operating Exp.</u>		
	Admin Exp.	1,00,000	
	Selling	50,000	
	Finance Exp.	20,000	
5.	Total Operating Exp.		1,70,000
6.	Net Profit		30,000

4 : Convert following Trading and Profit and Loss Account into Vertical Income statement

Trading and Profit & Loss Account for the year ended 31st March 2020.

Particular	Amount (₹)	Particular	Amount (₹)
To Opening Stock	2,00,000	By Sales	12,00,000
To Purchases	9,00,000	By Closing Stock	3,00,000
To Wages	1,00,000		
To Gross Profit c/d	3,00,000		
Total	15,00,000	Total	15,00,000
To Office Expenses	1,25,000	By Gross Profit b/d	3,00,000
To Selling Expenses	1,00,000		
To Finance Expenses	30,000		
To Net Profit c/d	45,000		
Total	3,00,000	Total	3,00,000

Solution 4 :**Income statement in vertical Form :**

Sr. No.	Particular	Amount (₹)	Amount (₹)
1.	Sales		12,00,000
2.	Less : Cost of Goods Sold		
	Opening Stock	2,00,000	
	Purchases	9,00,000	
	Wages	1,00,000	
		12,00,000	
	Less : Closing Stock	3,00,000	9,00,000
3.	Gross Profit		3,00,000
4.	Operating Expenses		
	Office Expenses	1,25,000	
	Selling Expenses	1,00,000	
	Finance Expenses	30,000	
5.	Total Operating Expenses		2,55,000
6.	Net Profit		45,000

9.2 Tools for Financial Statement Analysis :

Financial Statement gives absolute figures of Assets, Liabilities, Revenue, Expenses and Profits or Loss of business. They do not give the earning capacity, liquidity and financial soundness of business.

The main tools or techniques of financial analysis are as follows :

- (A) Comparative Financial Statement
- (B) Common Size Statement
- (C) Cash Flow Analysis

9.2.1 Comparative Financial Statement :

Comparative statement compares financial data at two points of time and helps in deriving the meaning and conclusions regarding the changes in financial positions and operating results.

Meaning : Statement showing financial data for two or more than two years placed side by side to facilitate comparisons are called Comparative Financial Statement.

Methods for comparisons of Financial Statement :

- (1) Comparative Balance Sheet
- (2) Comparative Income Statement.

- (1) Comparative Balance Sheet :** Comparative Balance Sheet as on two or more different dates can be used for comparing assets and liabilities and finding out any increase or decrease in those items.

According to Faulke : Comparative Balance Sheet is the study of the trend of the same items and compared items in two or more Balance Sheet of same business enterprise of

different dates.” Such comparison throws light on changes and progress made in respect of each item of Assets and Liabilities.

The main purpose of Comparative Balance Sheet is to measure the short term and long term solvency position of business.

Methods of preparing comparative Balance Sheet :

Comparative Balance Sheet is prepared by comparing the individual items of assets and liabilities and finding out absolute and percentage increase or decrease in them.

Following steps have to be taken to prepare the comparative Balance Sheet :

Step 1 : Enter the details of Assets and Liabilities in the first column.

Step 2 : Enter the amount of Previous years Balance Sheet in second column.

Step 3 : Record the amount of Current years Balance Sheet in third column.

Step 4 : Record the absolute changes (i.e. difference between column of current year and previous year) in fourth column.

Formula for Absolute Change = Current Year – Previous Year

Step 5 : Record the percentage changes (i.e. expressing absolute change in percentage of figures of previous year) in fifth column.

Formula for % of change = $\frac{\text{Absolute Change}}{\text{Previous Year}} \times 100$

The Comparative Balance sheet need to be prepared in the format of Vertical Balance Sheet given above.

5. : Following is the Balance Sheet of Varun Company Ltd. as on 31.3.2019 and 31.3.2020 is given below :

Liabilities	31-3-2019 (₹)	31-3-2020 (₹)	Assets	31-3-2019 (₹)	31-3-2020 (₹)
Share Capital	2,50,000	3,70,000	Fixed Assets	3,50,000	5,70,000
Reserve and Surplus	60,000	1,00,000	Investment	1,20,000	1,70,000
Secured Loans	1,00,000	1,60,000	Current Assets	1,30,000	1,20,000
Unsecured Loans	90,000	1,40,000			
Current Liabilities	1,00,000	90,000			
	6,00,000	8,60,000		6,00,000	8,60,000

You are required to prepare Comparative Balance Sheet of Varun Company Ltd. as on 31.3.2019 and 31.3.2020.

Solution : Comparative Balance Sheet of Varun Company Ltd. as on 31.3.2019 and 31.3.2020

Particulars	1 31.3.19 (₹)	2 31.3.20 (₹)	3 Absolute Change (₹)	4 Percentage Change
I. Sources of Funds				
a. Share capital	2,50,000	3,70,000	1,20,000	48% Increase
b. Reserves & Surplus	60,000	1,00,000	40,000	66.67% Increase
(A) Net Worth	3,10,000	4,70,000	1,60,000	51.61% Increase
B. Borrowed Funds				
a. Secured Loan	1,00,000	1,60,000	60,000	60% Increase
b. Unsecured Loan	90,000	1,40,000	50,000	55.55% Increase
Total Borrowed Fund	1,90,000	3,00,000	1,10,000	57.89% Increase
Total Fund Available (A + B)	5,00,000	7,70,000	2,70,000	54% Increase
II. Application of Funds				
A. Fixed Assets	3,50,000	5,70,000	2,20,000	62.86% Increase
B. Investment	1,20,000	1,70,000	50,000	41.67% Increase
C. Working Capital				
1. Current Assets	1,30,000	1,20,000	(10,000)	(7.69%) decrease
Less : 2 Current Liabilities	1,00,000	90,000	(10,000)	(10%) decrease
Working Capital (Current Asset Less Current Liabilities)	30,000	30,000	Nil	Nil
Total Fund Applied (A + B + C)	5,00,000	7,70,000	2,70,000	54% Increase

Percentage of Change for Share Capital

$$\frac{\text{Amount of Absolute Change}}{\text{Amount of Previous Year}} \times 100$$

$$\frac{1,20,000}{2,50,000} \times 100 = 48\%$$

Comparative Income Statement : The income statement shows the Net Profit or Net Loss. A comparative income statement will show the absolute figures of two or more periods i.e. absolute change from one period to another. Since the figures for two or more periods are shown side by side, the reader can quickly ascertain whether sales have increased or decreased, whether cost of sales, has increased or decreased etc.

Methods of preparing comparative Income statement :

Comparative Income statement shows increase or decrease in various Trading and Profit and Loss Account.

Preparation of comparative Income statement includes the following steps :

Step 1 : Enter the Amount of Income and Expenditure in First Column.

Step 2 : Enter the figures of previous years income statement in Second Column.

Step 3 : Enter the figures of current year income statement in Third Column.

Step 4 : Enter the absolute changes (i.e. difference between figures of current year and previous year) in fourth column.

Formula for Absolute Change = Current Year – Previous Year

Step 5 : Enter the percentage changes (i.e. expressing absolute changes as percentage of figure of previous year) in Fifth Column.

$$\text{Formula for \% of change} = \frac{\text{Amount of Absolute Change}}{\text{Amount of Previous Year}} \times 100$$

The Comparative Income Statement should be prepared in the format of Vertical Income Statement as given above.

6 : Income Statement of ABC Limited for the year ended 31.3.2019 and 31.3.2020 is given below. Prepare Comparative Income Statement

Particulars	31.3.2018 (₹)	31.3.2019 (₹)
Sales	4,00,000	6,00,000
Less : cost of sales	2,20,000	3,60,000
Gross Profit	1,80,000	2,40,000
Less : Indirect Expenses	80,000	1,00,000
Net Profit before Tax	1,00,000	1,40,000
Less : Income Tax 50%	50,000	70,000
Net profit after Tax	50,000	70,000

Solution :

Comparative Income Statement of ABC Limited for the year ended 31.3.2018 and 31.3.2019

Particulars	31.3.2018 (₹)	31.9.2019 (₹)	Absolute Change (₹)	% change
Sales	4,00,000	6,00,000	2,00,000	50% Increase
Less : Cost of Sales	2,20,000	3,60,000	1,40,000	63.64% Increase
Gross Profit	1,80,000	2,40,000	60,000	33.33% Increase
Less : Indirect Expenses	80,000	1,00,000	3,20,000	25% Increase
Net Profit before Tax	1,00,000	1,40,000	40,000	40% Increase
Less : Tax 50%	50,000	70,000	20,000	40% Increase
Net Profit after Tax	50,000	70,000	20,000	40% Incre. ase

Percentage of Change for Sales

$$= \frac{\text{Amount of Absolute Change}}{\text{Amount of Previous Year}} \times 100$$

$$= \frac{2,00,000}{4,00,000} \times 100 = 50\%$$

9.2.2 Common Size Statement

Meaning - Common Size Statements are those in which individual figures are converted into percentage to some common base. Percentage of each individual item shows its relation to its respective total i.e., Total Assets or Total Liabilities or Total Net Sales. In the income statement the sales figure is assumed to be 100 and all figures are expressed as a percentage of this total. In case of Balance Sheet Total Fund Available are considered as 100 and all figures are expressed as a percentage of this total. For example: If the Total Fund available in of Balance Sheet is ₹ 16,00,000 and Building is ₹ 4,00,000

$$\begin{aligned} \text{Formula} &= \frac{\text{Amount of Building}}{\text{Total Fund Available}} \times 100 \\ &= \frac{4,00,000}{16,00,000} \times 100 = 25\% \end{aligned}$$

Steps to Prepare Common Size. Balance Sheet.

- (1) Enter the number of items in Balance Sheet.
- (2) Enter the absolute amount of different types of Assets and Liabilities of previous years Balance Sheet.
- (3) Enter the absolute amount of different items of Assets and Liabilities of current year Balance Sheet.
- (4) Enter the percentage relations of different items Balance Sheet to total Assets/Liabilities of previous year which are taken as 100.
- (5) Enter the percentage relation of different items of current year Balance Sheet to total Assets/Liabilities of Current year which are taken as 100.

7 : Balance Sheet of XYZ Ltd for the year ending 31.3.20 is given below.

Balance-sheet as on 31.3.2020

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity Share Capital	9,00,000	Fixed Assets	9,00,000
Preference Share Capital	80,000	Investment	1,50,000
Reserve & surplus	1,50,000	Current Assets	7,30,000
Secured Loans	3,00,000		
Unsecured Loans	2,00,000		
Current Liabilities	1,50,000		
	17,80,000		17,80,000

You are required to prepare Common Size Statement for the year ending 31.3.2020

Solution: Common Size Statement for the year ending 31.3.2020

Common size Balance sheet as on 31.3.2020

Particular	Amount (₹)	%
1) Sources of Fund		
1) Owners Equity	9,00,000	55.22
Eq. St. Capital	80,000	4.91
Pref. Sr. Capital	1,50,000	3.20
Reserve and surplus	11,30,000	69.33
(2) Borrowed Fund		
Secured loans	3,00,000	18.40
Unsecured loans	2,00,000	12.27
	5,00,000	30.67
Total Borrowed fund	16,30,000	100%
3) Application of fund		
1) Fixed Assets	9,00,000	55.21
2) Investment	1,50,000	9.20
3) Working Capital		
A) Current Assets	7,30,000 (44.78%)	
Less B) Current Liabilities	1,50,000 (9.20%)	
Net working capital	5,80,000	35.59
Total Fund Applied	16,30,000	100%

$$\text{Common Size \%} = \frac{\text{Amount of Item}}{\text{Total Fund Employed}} \times 100$$

8. : Prepare Common Size Income Statement for the year ended 31.3.2019 and 31.3.2020 from the following information.

Particulars	31.1.2019 (₹)	31.3.2020 (₹)
Net Sales	5,00,000	6,00,000
Less cost of goods sold	3,00,000	3,60,000
Gross Profit	2,00,000	2,40,000
Less: Office and Administrative expences	55,000	72,000
Selling and Distribution Expense	52,500	66,000
Net Profit	92,500	1,02,000

Solution No. 8

Common size Income Statement for the year ended 31.3.2019 and 31.3.2020

Particulars	Amount(₹)	Percentage %	Amount (₹)	Percentage %
Net Sales	5,00,000	100%	6,00,000	100%
Less → Cost of Sales	3,00,000	60%	3,60,000	60.0%
Gross Profit	2,00,000	40%	2,40,000	40,0%
Less → Office and Administrative Expense	55,000	11%	72,000	12%
Selling and Distribution Expense	52,500	10.5%	66,000	11%
Net Profit	92,500	18.5%	1,02,000	17%

Net Sales is to be taken as base. At the year ending 31.3.2019. Net Sales ₹ 5,00,000 is taken as base i.e. 100% sales. At the year ending 31.3.2020. Net Sales ₹ 6,00,000 is taken as base 100%

$$\begin{aligned}\text{For 31.3.2019 \% of Cost Goods Sold} &= \frac{\text{Cost of Goods Sold}}{\text{Net Sales}} \times 100 \\ &= \frac{3,00,000}{5,00,000} \times 100 = 60\%\end{aligned}$$

$$\begin{aligned}\text{For 31.3.2020 \% of Cost of Goods Sold} &= \frac{\text{Cost of Goods Sold}}{\text{Net Sales}} \times 100 \\ &= \frac{3,60,000}{6,00,000} \times 100 = 60\%\end{aligned}$$

Advantages / Benefits of Common Size Statement

- (1) Common size business statement denotes the trend in different items of Balance Sheet and income so, it is very useful for comparing the profitability and Financial position for two or more business firms.
- (2) It is useful for inter firm comparison. This is because the financial statements of different firms can be converted into uniform common size of individual items.
- (3) The Relationship can be established between various items of the Profit and Loss Account i.e. Income statements to sales and various items of Balance Sheet to total Assets or Total Liabilities. Meaningful conclusions can be drawn by studying the changes in relationship.

9.2.3 Cash Flow Statement :

Cash Flow Analysis is another important technique of financial analysis. It shows the sources and applications of cash by preparing Cash Flow Statement. It is inflows (Receipts) and outflows (Payments) of cash from various activities during the particular period. It analyses the reasons for changes in balance of cash between the dates of two Balance Sheet. Cash Flow Analysis is more useful for short-term planning.

Thus cash flow statement can be defined as a “Statement which summarises sources of cash inflows and uses for cash outflows during a particular period.”

Importance of Cash Flow Statement :

Primary objective of Cash flow statement is to help management in taking decisions and making a plan by providing current information on cash inflow and out flow of any accounting period.

Importance of Cash flow Statement:

- 1) **Useful in Short term financial planning and decision making :** Cash flow statement provides importance of uses of cash and equivalents for a specific period, which is useful of management plan, operating, financial and investment requirement of the business enterprise.
- 2) **Helps in analysis of liquidity positions :** Cash flow statement is prepared on monthly basis or quarterly basis which helps to find out liquidity in a better way. Analysis of liquidity is important for banks and financial Institutions as it shows the ability of the business to pay its Current liabilities.
- 3) **Help in efficient cash management :** Cash flow statement gives information relating to surplus or deficit of cash which helps the business enterprise to decide on the short term investment of surplus and arrange short term credit of deficit.
- 4) **Helps in comparative study :** A Comparison of Cash Flow statement with cash budget will indicate the extent to which cash resources of business were generated and used according to cash budget. Causes of difference between the Cash flow statement and Cash Budget can be analysed and necessary corrective measures can be taken.
- 5) **Helps in study of Receipts and Payments :** Cash Flow Statement gives the speed at which Cash is generated from debtors, stock and other current asset and the speed at which current liabilities are paid off. This enables the management to find the true position of Cash in future.
- 6) **Helpful in dividend declaration :** Before declaring dividend the management goes through the Cash Flow statement to ascertain the position of cash generated from operating activities which can be used for payment of dividend.
- 7) **Tools of Planning :** Cash Flows statement can be used for projecting future investing and financial plans by the management of a business enterprise.

Uses of cash Flow Statement :

Cash Flow Statement is a useful tool of historical analysis and helps to answer many questions such as

- (1) What is the liquidity position of the business?
- (2) Why the net profit has gone up even though cash balance is decreased?
- (3) Why the cash balance is increased even if there is a net loss?
- (4) How the working capital needs were met by the fund generated from current operations?
- (5) Did the firm use external sources of finance to meet its needs of funds?
- (6) Did the firm sell any of its non-current assets?

Presentation of Cash Flow Statement :

According to AS - 3 Cash Flow Statement should be presented in a manner that it reports inflows and outflows of cash by classifying business transactions of a specific period into three categories e.g. Operating, Investing financing, etc.

Format for Cash Flow for the year ended _____

	₹	₹
I] <u>Cash Flow from Operating Activities</u>	xxx	
<u>Net Profit</u>		
Adjust Non Cash/Non operating Items		
+ Depreciation	xxx	
+ Interest Paid	xxx	
+ Loss on Sale of Asset	xxx	
(-) Interest/Dividend Received	xxx	
(-) Profit on sale of Asset	xxx	
<u>Adjust working capital changes</u>		
Add - Increase in current Liabilities	xxx	
Add - Decrease in current Assets	xxx	
Less - Increase in current Assets	xxx	
Less - Decrease in current Liabilities	xxx	
Cash generated from operations		xxx
II] <u>Cash Flow from Investing Activities</u>		
Add :- 1) Interest/Dividend received	xxx	
2) Sale of Asset/Investment	xxx	
Less :- 1) Purchase of Fixed Asset/Investment	xxx	
Net cash from Investing Activities.		xxx
III] <u>Cash Flow from Financing Activities</u>		
Add :- 1) Issue of Shares/Debentures	xxx	
2) Loan borrowed	xxx	
Less :- 1) Redemption of Share/Debentures	xxx	
2) Loan Repaid	xxx	
3) Interest/Dividend paid	xxx	xxx
Net Cash from Financing Activities		xxx
Add :- Cash of beginning (op Bal. of cash + Bank)		xxx
Cash at the end (Cl. Bal of cash + Bank)		xxx

Practical Problems on Cash Flow Statement.

Illustration I

From the following information prepare the cash flow statement:

Particulars	Amount (₹)
Opening Cash Balance	30,000
Closing Cash Balance	34,000
Decrease in Stock	16,000
Increase in Bills Payable	24,000
Sale of fixed Assets	60,000
Payments of long term Loan	1,00,000
Net Profit for the year	4,000

Solution :

Cash Flow Statement

Particulars	Amount (₹)	Amount (₹)
A) Cash flow from Operating Activities : Net Profit before taxation		4,000
Add : Decrease in Current Assets : Stock	16,000	
Add : Increase in Current liabilities : Bills payable	24,000	40,000
Net Cash from Operating Activities : (A)		44,000
B) Cash Flow from Investing Activities : Sale of fixed Assets	60,000	
Net Cash from Investing Activities (B)		60,000
C) Cash Flow from Financing Activities : Repayment of Long term Loan	1,00,000	
Net Cash used in Financing Activities (C)		1,00,000
Net Increase in Cash and Cash Equivalents (A + B – C)		4,000
Cash and Cash Equivalents at the beginning of Period		30,000
Cash and Cash Equivalents at the end of Period		34,000

Illustration 2:

From the following Balance Sheet of Mr. Anand as on 1st April 2018 & 31st March 2019. prepare the Cash Flow Statement.

Liabilities	1 st April 2018 (₹)	31 st March 2019 (₹)	Assets	1 st April 2018 (₹)	31 st March 2019 (₹)
Capital	1,48,000	1,49,000	Stock	25,000	22,000
Sundry Creditors	36,000	41,000	Debtors	35,000	38,400
Long Term Loan	30,000	45,000	Cash	4,000	3,600
			Buildings	50,000	55,000
			Machinery	80,000	86,000
			Land	20,000	30,000
	2,14,000	2,35,000		2,14,000	2,35,000

Solution :

Cash Flow Statement
For the year ended 1st April 2018 and 31st March 2019

Particulars	Amount (₹)	Amount (₹)
(A) Cash Flow from Operating Activities : Profit for the year (1,49,000 - 1,48,000)	1,000	5,600
Add : Decrease in Current Assets : Stock	3,000	
Add : Increase in Current Liabilities : Sundry Creditors	5,000	
	9,000	
Less : Increase the Current Assets : Debtors	(3,400)	
Net Cash From Operating Activities (A)		5,600
(B) Cash Flow from Investing Activities		21,000
Purchase of Land	10,000	
Purchase of Machinery	6,000	
Purchase of Building	5,000	
Net Cash used in Investing Activities (B)		
(C) Cash Flow from Financial Activities		15,000
Borrowing of Long Term Loan	15,000	
Net Cash from Financial Activities (C)		
Net Decrease in Cash and Cash Equivalents (A + C – B)		
Cash Equivalent at the begining of Period		
Cash Equivalent at the end of Period		3,600

9.3 Ratio Analysis - Meaning, Objectives and Classification of Ratios.**Meaning :**

Ratio is a mathematical number that measures the relationship between two accounting figures. It is also called as “Financial ratio”. It can be expressed as fraction proportion or percentage in between two accounting figures.

The use of different types of accounting ratios to evaluate the financial performance of business is called Ratio Analysis.

Example :

If gross profit of business is 30000 and sales is 1,20,000 calculate Gross Profit Ratio.

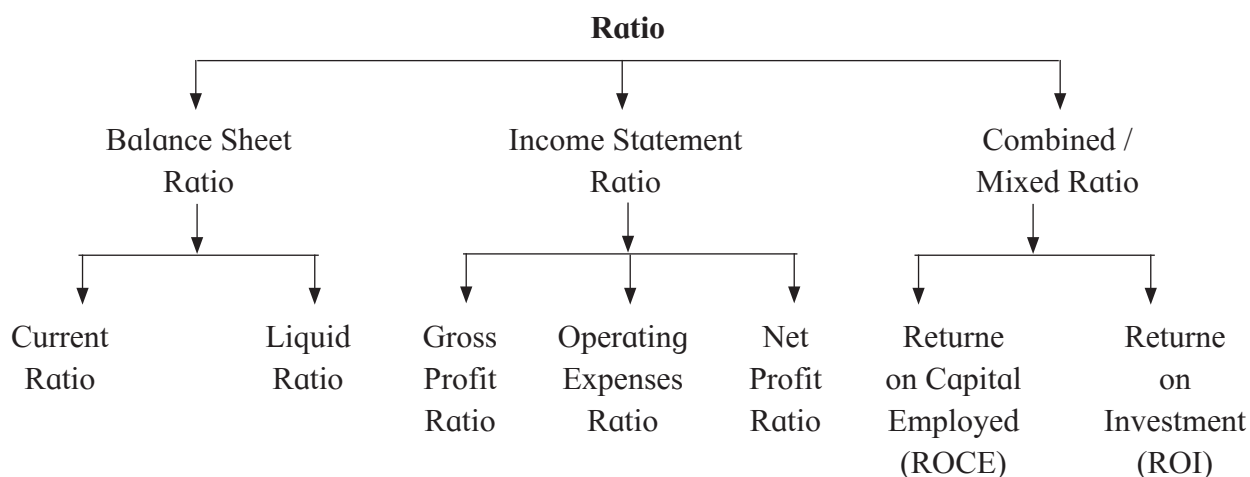
$$\begin{aligned}
 \text{Solution : Gross Profit Ratio} &= \frac{\text{Gross profit}}{\text{Net Sales}} \times 100 \\
 &= \frac{30,000}{1,20,000} \times 100 = 25\%
 \end{aligned}$$

Thus it express “quantitative” relationship between two items or group of items.

Objectives of ratios : Ratio analysis provide financial information and points out the areas which require more application of arithmetical relationship to simplify the complex data. Following are the objectives of Ratios

- (1) Ratios are helpful for comparative analysis of profitability liquidity and solvency of business.
- (2) It helps to know the changes occurring in the business.
- (3) It helps to understand whether the business unit has taken right kind of operating, investing and financing decisions. It shows how far it is helpful to improve the performance.
- (4) Ratios are helpful for various comparison
 - (a) **Intra-firm comparison** : Comparison within the firm itself - over number of years.
 - (b) **Inter firm comparison** : Comparison between two different firms over a number of years and Comparison between two firms when particular standard for firm / industry is set up.

Classification of Ratios : Ratios are classified into various groups based on the purpose for which ratio is computed as follows.



(A) Balance - Sheet - Ratio :

- (1) **Current Ratio** : This ratio compare the current Assets with Current Liabilities. The ideal current ratio is 2:1 which indicates that Current Assets are twice the Current Liabilities. It measures short term solvency of business enterprises

$$\text{Current Ratio : } \frac{\text{Current Assets}}{\text{Current liabilities}}$$

Current Assets includes	Current Liability includes
(1) Sundry Debtors	(1) Sundry Creditors
(2) Loose Tools	(2) Bill Payable
(3) Bill Receivable	(3) Bank Overdraft
(4) Cash and Bank Balance	(4) Income Received in Advance
(5) Investment in Marketable Securities	(5) Short Term Loan
(6) Short term Loans and Advances	(6) Provision for Taxation
(7) Stock and Inventories	(7) Outstanding Expenses
(8) Prepaid Expenses etc.	(8) Unclaimed dividend etc.

(2) Liquid Ratio / Quick Ratio / Acid Test ratio :

The Ratio of quick assets to Current Liability is called quick ratio or acid test ratio or liquid Ratio. The Assets which can be converted into cash immediately or at short notice are called Quick Assets. All current Assets except Stock and Prepaid Expenses are considered as quick Assets.

The ideal Quick Ratio is 1:1. It measures the liquidity position of business enterprises.

Note : Prepaid Expenses, Advance taxes etc. are excluded because they cannot be converted into cash. Stock is excluded because it is uncertain as to when and how much it will realise

$$\text{Liquid ratio} = \frac{\text{Liquid Assets / Quick Assets}}{\text{Current Liabilities}}$$

$$\text{Liquid Assets} = \text{Current Asset} - (\text{stock} + \text{Prepaid Expense})$$

Quick Assets

$$\text{Liquid Assets} = \text{Cash Balance} + \text{Bank Balance} + \text{Debtors} + \text{Bills Receivable} + \text{Marketable securities}$$

$$\text{Liquid Liabilities} = \text{Current Liabilities} - (\text{Bank Overdraft and Advance Received})$$

(B) Income Statement Ratio / Turnover or Margin ratio :

(1) Gross Profit ratio : This ratio measure relationship between Gross Profit and Net Sales. It is calculated to measure the efficiency of production department. It is usually expressed in the form of percentage.

$$\text{Gross Profit} = \text{Net Sales} - \text{Cost of Goods Sold}$$

$$\text{Cost of Good Sold} = \text{Opening Stock} + \text{Purchase} + \text{Direct Expense} - \text{Closing Stock}$$

$$\text{Gross Profit} = \text{Net Sales} - \text{Cost of Goods Sold}$$

$$\text{Cost of Good Sold} = \text{Opening Stock} + \text{Purchase} + \text{Direct Expense} - \text{Closing Stock}$$

$$\text{Net Sales} = \text{Sales} - \text{Sales Return}$$

$$\text{Gross Profit Ratio} = \frac{\text{Gross profit}}{\text{Net Sales}} \times 100$$

Expenses may be divided into two parts :

(a) Operating Expenses : Expenses which are incurred by the business for routine operation of business are called Operating Expenses. For Example - Office and Administrative Expenses, Selling and Distribution Expenses.

$$\text{Operating Profit} = \text{Gross Profit} - \text{Operating Expenses}$$

(b) Non Operating Expenses : Includes loss on sale of fixed assets, loss by fire Goodwill written off, Discount on issue of shares and Debentures, Preliminary Expenses etc. Operating profit ratio shows the operational efficiency of business.

Net Profit Ratio : Net profit ratio shows the relationship between Net Profit and Net Sales. It is expressed in percentage. This ratio measures the overall efficiency of business.

$$\text{a) Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

$$\text{b) Net Profit Ratio} = \frac{\text{Net Profit Before Tax}}{\text{Net Sales}} \times 100$$

$$\text{c) Net Profit Ratio} = \frac{\text{Net Profit After Tax}}{\text{Net Sales}} \times 100$$

Profit = Operating Profit + Non Operating Income - Non Operating Expenses

Non Operating Income : It includes income from non trading activities e.g. Interest received, Dividend received, Compensation received, Refund received, Profit on Sale of Fixed Assets and Investments. Such net profit can be taken before tax paid or after tax paid.

The main purpose of this ratio is to understand return on investment.

Operating Profit Ratio :

Meaning : Operating Profit Ratio indicates the relationship between operating profit and the net sales. It is usually expressed in the form of a percentage and is also known as Net Operating Profit Ratio.

Formula :

$$\text{Operating Profit} = \frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$$

Where (OP) = Gross Profit - Operating Expenses

Net Sales (S) = Sales - Return - Allowances

4. Operating Ratio

Meaning : It expresses the relationship between total operating costs and net sales and is expressed by way of percentage

Formula :

$$\text{Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100$$

Where cost of Goods Sold = Opening stock + Purchases + Wages - Cl. Stock

Operating Expenses =

1. Office and Administrative Expenses
2. Selling and Distribution Expenses
3. Finance Expenses (Excluding Interest on Loans and Debentures)

Net Sales = Sales - Returns - Allowances.

(C) Combine Mixed Ratio :

(A) Return on investment (ROI) : This ratio measures net profit before tax and interest and capital invested. This ratio is computed to measure the overall efficiency or profitability of business.

Return on capital investment :

$$\frac{\text{Profit before Tax, Interest and Dividend}}{\text{Capital Employed}} \times 100$$

Considering 12th syllabus does not have Company Act in detail

$$\text{ROI should be} = \frac{\text{Net Profit}}{\text{Capital Employed}} \times 100$$

Capital Employed : Equity Share Capital + Preference Share Capital + Reserves and Surplus + Debenture Capital and Other Long Term Loans

Capital Employed = Fixed Assets + Current Assets - Current Liabilities.

This ratio indicates the ability of company to generate the profit per rupee of capital Employed.

(B) Return on Capital Employed (ROCE) : This ratio measures a relationship between net profit before interest and Tax and share holders fund. The funds are supplied Equity and Preference Share holders.

$$\text{Return on Capital Employed} : \frac{\text{Net Profit before interest and Tax}}{\text{Net Capital Employed/ Equity}}$$

$$\begin{aligned}\text{Net Capital Employed} &= \text{Total Assets} - \text{Current Liabilities} \\ &= \text{Fixed Assets} + \text{Current Assets} - \text{Current Liabilities}\end{aligned}$$

This ratio indicates whether share holders fund is efficiently used or not.

This ratio should be higher than ROI.

Illustrations

(A) Balance Sheet Ratio:

1 : A company had following Current Assets and Current Liabilities

Debtors - ₹ 60,000, Creditors ₹ 30,000, Bills Payable ₹ 20,000, Stock ₹ 30,000, Loose Tools ₹ 10,000, Bank Overdraft = ₹ 10,000 Calculate current ratio

Solution 1 :

$$\begin{aligned}(1) \text{ Current Assets} &= \text{Debtors} + \text{Stock} + \text{Loose Tools} \\ &= 60,000 + 30,000 + 10,000 \\ &= ₹ 1,00,000 \\ (2) \text{ Current Liabilities} &= \text{Creditors} + \text{Bills payable} + \text{Bank Overdraft} \\ &= 30,000 + 20,000 + 10,000 \\ &= 60,000 \\ \text{Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\ &= \frac{1,00,000}{60,000} = \frac{10}{6} = \frac{5}{3} \text{ i.e. } 5:3\end{aligned}$$

Activity 1: A company had following Current Assets and Current Liabilities. Debtors 90,000, Creditors 45,000, Bills Payable 10,000, Stock 40,000, Loose Tools 20,000, Bank Overdraft 20,000. Calculate Current Ratio. (Ans = 2:1)

2 : Current Liabilities of company were * 1,50,000 and its current ratio is 3:1 Find Current Assets.

Solution 2 :

$$\begin{aligned}\text{Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\ \frac{3}{1} &= \frac{\text{Current Assets}}{1,50,000} \\ \text{Current Assets} &= 3 \times 1,50,000 \\ &= ₹ 4,50,000\end{aligned}$$

Activity 2 : Current Assets of company is ₹ 6,00,000 and its Current Ratio is 2: 1. Find Current Liabilities. (Ans = ₹ 3,00,000)

3 :

Total Assets = ₹ 2,20,000

Fixed Assets = ₹ 1,00,000

Capital Employed ₹ 2,00,000

There were no long term investments. Calculate Current Ratio.

Solution 3 : Calculation of Current Ratio

$$\begin{aligned}\text{Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\ \text{Current Assets} &= \text{Total Assets} - \text{Fixed Assets} \\ &= 2,20,000 - 1,00,000 \\ &= ₹ 1,20,000 \\ \text{Current Liabilities} &= \text{Total Assets} - \text{Capital Employed} \\ &= 2,20,000 - 2,00,000 \\ &= 20,000 \\ \text{Current Ratio} &= \frac{120,000}{20,000} \\ &= 6:1\end{aligned}$$

4 : Calculate the Quick ratio from the following

Working Capital ₹ 50,000, Current Assets ₹ 60,000, Stock ₹ 10,000 Prepaid Expense ₹ 4,000

$$\begin{aligned}\text{Solution : Quick Assets} &= \text{Current Assets} - \text{Stock} - \text{Prepaid Expense} \\ &= 60,000 - 10,000 - 4,000 \\ &= 46,000\end{aligned}$$

$$\begin{aligned}\therefore \text{Quick Liabilities} &= \text{Current Assets} - \text{working Capital} \\ &= 60,000 - 50,000 \\ &= 10,000\end{aligned}$$

$$\begin{aligned}\text{Quick Ratio} &= \frac{\text{Quick Assets}}{\text{Quick liabilities}} \\ &= \frac{46,000}{10,000} = \frac{46}{10} = 4.6 : 1\end{aligned}$$

5 : (Quick ratio) :

Current Liabilities ₹ 1,50,000, Bank Overdraft ₹ 50,000

Working Capital ₹ 4,00,000 and inventory ₹ 1,00,000.

Calculate Quick Ratio.

$$\begin{aligned}\text{Solution : Current Assets} &= \text{Current Liabilities} + \text{Working Capital} \\ &= 1,50,000 + 4,00,000 \\ &= ₹ 5,50,000 \\ \text{Quick Assets} &= \text{Current Assets} - \text{Inventory} \\ &= 5,50,000 - 1,00,000 \\ &= ₹ 4,50,000 \\ \text{Quick Liability} &= \text{Current Liabilities} - \text{Bank Overdraft} \\ &= 1,50,000 - 50,000 \\ &= 1,00,000 \\ \text{Quick Ratio} &= \frac{\text{Quick Assets}}{\text{Quick liabilities}} \\ &= \frac{4,50,000}{1,00,000} = 4.5 : 1\end{aligned}$$

(B) Income Statement Ratio :

6 : (Gross Profit Ratio)

Calculate the Gross Profit Ratio

Sales ₹ 5,40,000,

Net purchase ₹ 3,00,000

Sales Return ₹ 40,000

Closing stock ₹ 50,000

Opening stock ₹ 90,000

Solution :

$$\begin{aligned}\text{Cost of goods sold} &= \text{Opening Stock} + \text{Purchases} - \text{Closing Stock} \\ &= 90,000 + 3,00,000 - 50,000 \\ &= ₹ 3,40,000 \\ \text{Net Sales} &= \text{Sales} - \text{Sales Return} \\ &= 5,40,000 - 40,000 \\ &= 5,00,000 \\ \text{Gross Profit} &= \text{Net Sales} - \text{Cost of Goods Sold} \\ &= 5,00,000 - 3,40,000 \\ &= ₹ 1,60,000 \\ \text{Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100 \\ &= \frac{1,60,000}{5,00,000} \times 100 = 32\%\end{aligned}$$

7 : (Gross Profit Ratio)

Compute Gross Profit Ratio from the following information sales ₹ 5,00,000, Gross Profit Ratio 25% on cost.

Solution : Gross Profit is 25% on cost

Therefore Goods costing ₹ 100 must have been sold for ₹ 125.

Hence, if sales are ₹ 125. G.P. is ₹ 25.

If sales are ₹ 5,00,000, then G.P. will be as follows :

$$\text{G.P.} = 5,00,000 \times \frac{25}{125} = ₹ 1,00,000$$

$$\begin{aligned}\text{Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100 \\ &= \frac{1,00,000}{5,00,000} \times 100 = 20\%\end{aligned}$$

8 : Net Profit Ratio

Calculate the net profit ratio from the following data

Sales = ₹ 7,60,000

Cost of goods sold = ₹ 5,20,000.:

Indirect Expenses = ₹ 1,20,000

Solution : Sales = ₹ 7,60,000

Less cost of goods sold = ₹ 5,20,000

Gross Profit = ₹ 2,40,000

Less Indirect Expenses = ₹ 1,20,000

Net profit = ₹ 1,20,000,

$$\begin{aligned}\text{Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Sales}} \times 100 \\ &= \frac{1,20,000}{7,60,000} \times 100 = 15.79 \%\end{aligned}$$

9 : Net Profit Ratio

Gross Profit of Komal Limited for the year 2019-20 is ₹ 5,60,000 from the following information. Calculate Net Profit Ratio.

Administrative Expenses = ₹ 1,60,000

Selling and Distribution Expense = ₹ 1,20,000

Interest on Debentures = ₹ 80,000

Income Tax = ₹ 60,000

Sales = ₹ 20,00,000

Calculation of Net Profit

Gross Profit	₹	5,60,000 (₹)
Less : Administrative Expenses	1,60,000	
Selling and Distribution Expenses	1,20,000	
Interest on Debentures	80,000	3,60,000
Net Profit		2,00,000

$$\begin{aligned}\text{Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Sales}} \times 100 \\ &= \frac{2,00,000}{20,00,000} \times 100 = 10\%\end{aligned}$$

10 : Operating Ratio Calculate Operating Ratio

Cost of goods sold	₹ 7,00,000
Operating Expenses	₹ 60,000
Sales	₹ 10,00,000
Sales Return	₹ 60,000

$$\begin{aligned}\text{Operating Ratio :} &= \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100 \\ \text{Net Sales} &= \text{Sales} - \text{Sales Return} \\ &= 10,00,000 - 60,000 \\ &= ₹ 9,40,000 \\ &= \frac{7,00,000 + 60,000}{9,40,000} \times 100 = 80.85\%\end{aligned}$$

11 : From the following details Calculate Operating Ratio

Sales	₹ 5,00,000
Sales Return	₹ 50,000
Opening stock	₹ 60,000
Purchases	₹ 2,20,000
Closing Stock	₹ 40,000
Office and Administrative Expenses	₹ 34,000
Selling and Distribution Expenses	₹ 36,000

$$\begin{aligned}\text{Operating Ratio} &= \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100 \\ \text{Cost of goods sold} &= \text{Opening Stock} + \text{Purchases} - \text{Closing Stock} \\ &= 60,000 + 2,20,000 - 40,000 \\ &= 2,40,000 \\ \text{Net Sales} &= \text{Sales} - \text{Sales Return} \\ &= 5,00,000 - 50,000 \\ &= ₹ 4,50,000\end{aligned}$$

$$\begin{aligned}
 \text{Operating Expense} &= \text{Office and Admin. Expense} + \text{Selling and Distribution Expenses} \\
 &= 34,000 + 36,000 = ₹ 70,000 \\
 \text{Operating Ratio} &= \frac{2,40,000 + 70,000}{4,50,000} \times 100 = 68.89 \%
 \end{aligned}$$

12 : Operating Ratio

Following is the Trading and Profit and Loss account of Noha firm for the year ending 31 March 2020.

Trading and Profit and Loss Account :

Particulars	(₹)	Particulars	(₹)
To Opening Stock	40,000	By Sales	4,20,000
To Purchases	2,30,000	By Closing Stock	60,000
To Wages	8000		
To Gross Profit c/d	2,02,000		
	4,80,000		4,80,000
To Admin Exp.	12,000	By Gross Profit b/d	2,02,000
To Selling and Distribution Expense	14,000		
To Loss on sale of plant	40,000		
To Net Profit	1,36,000		
	2,02,000		2,02,000

Calculate Operating Ratio

$$\text{Solution : Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100$$

$$\begin{aligned}
 \text{Cost of goods sold} &= \text{Sales} - \text{Gross profit} \\
 &= 4,20,000 - 2,02,000 \\
 &= ₹ 2,18,000 \\
 &= \frac{2,18,000 + (12,000 + 14,000)}{4,20,000} \times 100 \\
 &= \frac{2,44,000}{4,20,000} \times 100 \\
 &= 58.09 \%
 \end{aligned}$$

C) Combined Ratio/Mixed Ratio /Composite Ratios.

13 : Return on Investment/Return on Capital Employee from following details you are required to calculate Return on investment

$$\begin{aligned}
 \text{Profit earned} &= ₹ 50,000 \\
 \text{Capital} &= ₹ 2,00,000 \\
 \text{Reserve} &= ₹ 1,00,000 \\
 \text{Loan} &= ₹ 2,00,000
 \end{aligned}$$

$$\begin{aligned}\text{ROI} &= \frac{\text{Net Profit}}{\text{Capital Employed}} \times 100 \\ \text{Capital Employed} &= 2,00,000 + 1,00,000 + 2,00,000 \\ &= 5,00,000 \\ &= \frac{50,000}{5,00,000} \times 100 = 10\%\end{aligned}$$

14 : Calculate Return on Capital Employed from following information.

Sales - 10,00,000

Cost of goods Sold = 5,00,000

Operating Exp. = 3,00,000

Capital Employed = 5,00,000

$$\begin{aligned}\text{ROCE} &= \frac{\text{Net Profit}}{\text{Capital Employed}} \times 100 \\ \text{Net Profit} &= 10,00,000 - 5,00,000 - 3,00,000 = 2,00,000 \\ &= \frac{2,00,000}{5,00,000} \times 100 = 40\%\end{aligned}$$

Comparative Balance Sheet

From the following Balance Sheet of Noha Textiles Limited prepare comparative Balance Sheet and comment upon the changes.

Balance Sheet as on 31.3.2018 & 31.3.2019

Liabilities	31.3.2018 (₹)	31.3.2019 (₹)	Assets	31.3.2018 (₹)	31.3.2019 (₹)
Current Liabilities	2,00,000	4,00,000	Fixed Assets Less Accumulated	12,00,000	18,00,000
Reserves	3,00,000	2,00,000	depreciation	20,000	3,00,000
12% Bank loan	5,00,000	8,00,000		10,00,000	15,00,000
Share Capital	5,00,000	10,00,000	current assets	5,00,000	9,00,000
	15,00,000	24,00,000		15,00,000	24,00,000

Solution :

Comparative Balance sheet of Noha Textiles Ltd. as on 31.3.2018 & 31.3.2019.

Particulars	31.3.2018 (₹)	31.3.2019 (₹)	Absolute increase or decrease (₹)	Product increase and decrease
Fixed Assets	12,00,000	18,00,000	6,00,000	50%
Less : Accumulated depreceation	2,00,000	3,00,000	1,00,000	50%
(A) Net Fixed Assets	10,00,000	15,00,000	5,00,000	50%
Current Assets	5,00,000	9,00,000	4,00,000	80%
Less : Current Liabilities	2,00,000	4,00,000	2,00,000	100%
(B) Working Capital	3,00,000	5,00,000	2,00,000	66.67%
(C) Capital Employed	13,00,000	20,00,000	7,00,000	53.84%
(D) Less : 12% Bank Loan	5,00,000	8,00,000	3,00,000	60%
(E) Share holders Fund	8,00,000	12,00,000	4,00,000	50%
C-D				
Share Capital	5,00,000	10,00,000	5,00,000	100%
Reserves	3,00,000	2,00,000	(1,00,000)	33.33%
Share holders fund	8,00,000	12,00,000	4,00,000	50%

Working Note : Calculation of percentage of increase or decrease is as follows

Absolute change over 2019

Absolute figure of 2018

- $\frac{6,00,000}{12,00,000} \times 100 = 50\% \text{ increase}$
- $\frac{1,00,000}{2,00,000} \times 100 = 50\% \text{ increase}$

Comments : The analysis of above comparative Balance Sheet gives the following conclusions.

- Total fixed assets have increased by ₹ 6,00,000, 50% increase.
- Purchased of fixed assets was financed partly by issue of shares for ₹ 5,00,000 and partly by increase in loan.
- Share Capital has increased by ₹ 5,00,000 i.e. 100% increase it has strengthened in financial position of the company.
- Reserve have decreased by ₹ 1,00,000 i.e. 33.33% decrease, which reflect loss in the business during the current year.
- Current Liabilities have increased by ₹ 2,00,000 i.e. 100% interest but current Assets have also increased by 4,00,000 i.e. 80% increase. It has resulted in the increase of working capital of the firm by ₹ 2,00,000 which has been financed by increase in loan.

Comparative Income Statement

15 : From the following information, prepare comparative income statement of Shri Shalini LTD

Particulars	2018 (₹)	2019 (₹)
Sales	6,00,000	4,50,000
Sales Return	1,00,000	50,000
Gross Profit ratio	40%	50%
Office and Admin Expenses	50,000	40,000
Selling and Distribution Expenses	50,000	40,000
Other income	25,000	15,000
Other Expenses	5,000	5,000
Tax rate	50%	50%

Solution : Shri Shalini LTD

Comparative income statement

Particulars	2018 (₹)	2019 (₹)	Absolute change (₹)	Percentage change (₹)	Increase and Decrease
Gross Sales	6,00,000	4,50,000	(1,50,000)	25%	Decrease
Less : Sales Return	1,00,000	50,000	(50,000)	50%	Decrease
	5,00,000	4,00,000	(1,00,000)	(20%)	Decrease
Less : Cost of goods sold	3,00,000	2,00,000	(1,00,000)	33.33%	Decrease
A Gross Profit	2,00,000	2,00,000	-	-	
Less : Opearting Expense	2,00,000				
Office and Admin.Expenses	50,000	40,000	10,000	20%	Decrease
Selling and Distribution Expenses	50,000	40,000	10,000	33.33%	Decrease
B	1,00,000	80,000	20,000	20%	Decrease
Operating profit	1,00,000	1,20,000	20,000	20%	Decrease
Add : Operating income Expenses	25,000	15,000	(10,000)	40%	Decrease
Less : Non Operating Expenses	5,000	5,000	-	-	
Expenses	1,20,000	1,30,000	10,000	8.33	Decrease
Less : Tax 50%	60,000	65,000	5,000	8.33	Decrease
Net Profit after Tax	60,000	65,000	5,000	8.33	Decrease

At a Glance of Formulas

I. Comparative Statement

1. Absolute Change = Current Year – Previous Year

2. % Change = $\frac{\text{Absolute Change}}{\text{Previous Year}} \times 100$

II. Common Size Statement

1. Balance Sheet

Formula = $\frac{\text{Amount of Individual Item}}{\text{Total Fund Available}} \times 100$

2. Income Statement

Formula = $\frac{\text{Amount of Individual Item}}{\text{Net Sales}} \times 100$

III. Ratio Analysis

1. Balance Sheet Ratios

a) Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

b) Quick Ratio = $\frac{\text{Quick Assets}}{\text{Quick Liabilities}}$

2. Income Statement Ratios

a) Gross Profit Ratio = $\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$

b) Operating Profit Ratio = $\frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$

c) Net Profit Ratio = $\frac{\text{Net Profit Before Tax}}{\text{Net Sales}} \times 100$

Alternate Formula = $\frac{\text{Net Profit Before Tax}}{\text{Net Sales}} \times 100$

d) Operating Ratio = $\frac{\text{Cost of Goods Sold} + \text{Operating Expense}}{\text{Net Sales}} \times 100$

3. Combine Ratios / Mixed Ratios

a) Return on Capital Employed = $\frac{\text{Net Profit Before Interest and Tax}}{\text{Net Capital Employed}} \times 100$

b) Return on Investment = $\frac{\text{Net Profit Before Tax}}{\text{Capital Employed}} \times 100$

8. Statement showing changes in cash and cash equivalent during a particular period.
9. Activity related to acquisition of long term assets and investment.
10. The ratio that establishes relationship between Quick Assets and Current Liabilities

C. State true or false with reasons.

1. Financial Statement includes only Balance Sheet.
2. Analysis of financial statement is a tool but not a remedy.
3. Purchase of Fixed Assets is operating cash flow.
4. Dividend paid is not a source of fund.
5. Gross Profit depends upon Net Sales. ,
6. Payment of cash against purchase of stock is use of fund.
7. Ratio Analysis is useful for inter firm comparison.
8. The short term deposits are considered as cash equivalent.
9. Activity Ratios Turnover Ratios are the same.
10. Current Ratio measures the liquidity of the business.
11. Ratio analysis measures profitability efficiency and financial soundness of the business.
12. Usually current ratio should be 3:1.

D. Answer in one sentence only.

1. Mention two objectives of comparative statement.
2. State three examples of cash in flows.
3. State three examples of cash out flows.
4. Give the formula of Gross Profit Ratio.
5. Give the formula of gross profit
6. State any three examples of current assets.
7. Give the formula of current ratio.
8. Give the formula of quick assets.
9. State the formula of cost of goods sold.
10. State the formula of Average Stock.

 Practical Problems

1. From the Balance Sheet of Amar Traders as on 31st March 2018 and 31st March 2019 prepare comparative Balance Sheet.

Liabilities	31.3.2018 (₹)	31.3.2019 (₹)	Assets	31.3.2018 (₹)	31.3.2019 (₹)
Capital	60,000	72,000	Fixed Assets	1,20,000	1,50,000
Reserves and Surplus	24,000	30,000	Current Assets	28,000	27,000
Loans					
Creditors	34,000	51,000			
	30,000	24,000			
	1,48,000	1,77,000		1,48,000	1,77,000

2. From the following Balance Sheet of Alpha Limited prepare a comparative Balance Sheet as on 31st March 2018 and 31st March 2019.

Balance Sheet
As on 31st March 2018 and 31st March 2019

Liabilities	31.3.2018 (₹)	31.3.2019 (₹)	Assets	31.3.2018 (₹)	31.3.2019 (₹)
Equity Share Capital	2,00,000	2,50,000	Land	80,000	1,00,000
12% Preference Shares	80,000	80,000	Building	60,000	90,000
Reserves and Surplus	1,00,000	1,40,000	Plant and Machinery	73,000	1,73,000
15% Debentures	60,000	51,000	Stock	1,50,000	1,10,000
Creditors	50,000	80,000	Debtors	1,28,000	1,40,000
Bills Payable	10,000	6,000	Bank	34,000	37,000
Provision for Taxation	25,000	43,000			
	5,25,000	6,50,000		5,25,000	6,50,000

3. Prepare Comparative Balance Sheet for the year ended 31.3.18 and 31.3.19

Assets & Liabilities as follows

Particulars	31.3.18 (₹)	31.3.19 (₹)
1) Fixed Assets	120,000	1,50,000
2) Share Capital	60,000	72,000
3) Current Assets	28,000	27,000
4) Reserve & Surplus	24,000	30,000
5) Loan	34,000	57,000
6) Current liabilities	30,000	24,000

4. Prepare Comparative Balance Sheet for the year ended 31.3.17 and 31.3.18

Particulars	31.3.17 (₹)	31.3.18 (₹)
1) Current liabilities	60,000	48,000
2) Fixed Assets	2,40,000	3,00,000
3) Loan	68,000	1,02,000
4) Share Capital	1,20,000	1,44,000
5) Reserve & Surplus	48,000	60,000
6) Current Assets	56,000	54,000

5. Prepare Comparative Income Statement of Noha Limited for the year ended 31.3.17 and 31.3.18

Particulars	31.3.17 (₹)	31.3.18 (₹)
Sales	2,00,000	3,00,000
Income Tax	50%	50%
Cost of Sales	1,20,000	80,000
Indirect Expenses	8,000	12,000

6. Prepare comparative Income Statement of Sourabh Limited for the year ended 31.3.17 and 31.3.18

Particulars	31.3.17 (₹)	31.3.18 (₹)
Sales	4,00,000	6,00,000
Indirect Expenses	16,000	24,000
Cost of Sales	24,000	56,000
Income Tax	50%	50%

7. Following is the Balance Sheet of Sakshi Traders for the year ended 31.3.17 and 31.3.18

Liabilities	31.3.17 (₹)	31.3.18 (₹)	Assets	31.3.17 (₹)	31.3.18 (₹)
Equity Share Capital	80,000	80,000	Fixed Assets	1,20,000	1,44,000
Pref. Share Capital	20,000	20,000	Investment	20,000	20,000
Reserve & Surplus	20,000	24,000	Current Assets	60,000	48,000
Secured Loan	40,000	16,000			
Unsecured Loan	20,000	36,000			
Current Liabilities	20,000	36,000			
	2,00,000	2,12,000		2,00,000	2,12,000

Prepare common size Balance-Sheet for the year 31.3.17 and 31.3.18

8. Prepare common size Income Statement for the year ended 31.3.17 and 31.3.18

Particulars	31.3.17 (₹)	31.3.18 (₹)
Sales	2,00,000	2,50,000
Cost of goods sold	1,50,000	1,70,000
Office and Administrative Expenses	4,000	6,000
Selling and Distubution Expenses	6,000	1,000

9. Following is the Balance Sheet of Sakshi Limited. Prepare cashflow statement.:

Liabilities	31.3.17 (₹)	31.3.18 (₹)	Assets	31.3.17 (₹)	31.3.18 (₹)
Share Capital	2,00,000	3,00,000	Cash	20,000	30,000
Creditors	60,000	90,000	Debtors	1,40,000	2,50,000
Profit and Loss A/c	40,000	70,000	Stock	80,000	70,000
			Land	60,000	1,10,000
	3,00,000	4,60,000		3,00,000	4,60,000

- Answer**
- 1) Cash flow from Operational Activities ₹ 40,000
 - 2) Cash flow from Investing Activies (Land) ₹ 50,000
 - 3) Cash flow from Financing Activities ₹ 1,00,000

10. From the following Balance Sheet of Konal Traders prepare cash flow statement.

Liabilities	31.3.17 (₹)	31.3.178 (₹)	Assets	31.3.17 (₹)	31.3.18 (₹)
Share Capital	2,00,000	2,50,000	Cash	30,000	47,000
Creditors	70,000	45,000	Debtors	1,20,000	1,15,000
Profit and Loss A/c	10,000	23,000	Stock	80,000	90,000
			Land	50,000	66,000
	2,80,000	3,18,000		2,80,000	3,18,000

- Answer**
- 1) Cash flow from Operating Activities ₹ 17,000
(13,000+5,000-1000)
 - 2) Cash flow from Investing Activities (Land) ₹ 16,000
 - 3) Cash flow from Financing Activities ₹ 50,000

11. A Company had following Current Assets and Current Liabilities

Debtors	₹ 1,20,000	Creditors	₹ 60,000
Bills Payable	₹ 40,000	Stock	₹ 60,000
Loose Tools	₹ 20,000	Bank overdraft.	₹ 20,000

Calculate Current Ratio

(Answer : Current Ratio = 5:3)

12. Current Assets of Company ₹ 6,00,000 and its Current Ratio is 2:1

Find Current Liabilities

(Answer : Current Liabilities = ₹ 3,00,000)

- 13.**
- | | |
|---------------------|--------------|
| Current Liabilities | = ₹ 3,00,000 |
| Working Capital | = ₹ 8,00,000 |
| Inventory | ₹ 2,00,000 |

Calculate Quick Ratio

(Answer : Quick Ratio = 3:1)

14. Calculate the Gross Profit Ratio

Sales	= ₹ 2,70,000
Net purchases	= ₹ 1,50,000
Sales Ratio	= ₹ 20,000
Closing Stock	= ₹ 25,000
Operating Stock	= ₹ 45,000

(Answer : G. P. Ratio = 32%)

15. Calculate Net Profit Ratio

from the following

Sales	= ₹ 3,80,000
Cost of good sold	= ₹ 2,60,000
Indirect Exp.	= ₹ 60,000

(Answer : Net Profit Ratio = 15.79%)

16. Calculate Operating Ratio

Cost of good sold = ₹ 3,50,000

Operating Exp. = ₹ 30,000

Sales = ₹ 5,00,000

Sales Return = ₹ 30,000

(Answer : Operating Ratio = 80.85%)

17. Calculate

1) Current Assets = ₹ 3,00,000

2) Current Liabilities = ₹ 1,00,000

What is current Ratio

(Answer : Current Ratio = 3:1)

Activity :

1. Obtain a Balance Sheet published in Newspaper /Annual Report and prepare comparative Balance Sheet of the company.
2. Obtain a Balance Sheet and Profit & Loss Account of a company published in Newspaper / Annual Report and calculate different ratios.

