NCERT Solutions for Class 12 Accountancy

Company Accounts and Analysis of Financial Statements Chapter 5

Accounting Ratios

Short answerslong answers : Solutions of Questions on Page Number : 272

Q1 :

What do you mean by Ratio Analysis?

Answer :

Ratio Analysis is a technique of financial analysis. It describes the relationship between various items of Balance Sheet and Income Statements. It helps us in ascertaining profitability, operational efficiency, solvency, etc. of a firm. It may be expressed as a fraction, proportion, percentage and in times. It enables budgetary controls by assessing qualitative relationship among different financial variables. Ratio Analysis provides vital information to various accounting users regarding the financial position and viability and performance of a firm. It also lays down the basic framework for decision making and policy designing by management.

Q2 :

Who are the users of financial ratio analysis? Explain the significance of ratio analysis to them?

Answer :

The users of financial ratio analysis are as follows:

1. Investors

2. Management

3. Short term Creditors

4. Long term Creditors.

The following points signify the importance of ratio analysis for these users.

1. ***Investors***- The main concern for the investors is the security of the funds invested by them in the business and returns on their investments. The security of the funds is directly related to the profitability and operational efficiency of the business. Consequently, they are interested in knowing Earnings Per Share, Return on Investment and Return on Equity.

2. ***Management***- They uses ratio analysis to determine how effectively the assets are being used. They are interested in future growth and prospects. They design various policy measures and draft future plans. Consequently, they are interested in Activity Ratios and Profitability Ratios like, Net Profit Ratio, Debtors Turnover Ratio, Fixed Assets Turnover Ratios, etc.

3. ***Short-term Creditors***- Short-term creditors are interested in timely payment of their debts in short run. Consequently, they are interested in Liquidity Ratios like, Current Ratio, Quick Ratios etc. These ratios reveal the current financial position of the business.

4. ***Long-term Creditors***- Long-term creditors provide funds for more than one year, so they are interested in long term solvency of the firm and in assessing the ability of the firm to pay timely interests. Consequently, they are interested in calculating Solvency Ratios like, Debt-Equity Ratio, Proprietary Ratio, Total Assets to Debt Ratio, Interest Coverage Ratio, etc.

Q3 :

What are the various types of ratios?

Answer :

Accounting ratios are classified in the following two ways.

I. Traditional Classification

II. Functional Classification

I. **Traditional Classification:** This classification is based on the financial statements, i.e. Profit and Loss Account and Balance Sheet. The Traditional Classification further bifurcates accounting ratios on the basis of the accounts to which the elements of a ratio belong. On the basis of accounts of financial statements, the Traditional Classification bifurcate accounting ratios as:

a. ***Income Statement Ratios***: These are those ratios whose all the elements belong only to the Trading and Profit and Loss Account, like Gross Profit Ratio, etc.

b. ***Balance Sheet Ratios***: These are those ratios whose all the elements belong only to the Balance Sheet, like Current Ratio, Debt Equity Ratio, etc.

c. ***Composite Ratios***: These are those ratios whose elements belong both to the Trading and Profit and Loss Account as well as to the Balance Sheet, like Debtors Turnover Ratio, etc.

II. **Functional Classification:** This classification reflects the functional need and the purpose of calculating ratio. The basic rationale to compute ratio is to ascertain liquidity, solvency, financial performance and profitability of a business. Consequently, the Functional Classification classifies various accounting ratios as:

a. ***Liquidity Ratio***: These ratios are calculated to determine short term solvency.

b. ***Solvency Ratio***: These ratios are calculated to determine long term solvency.

c. ***Activity Ratio***: These ratios are calculated for measuring the operational efficiency and efficacy of the operations. These ratios relate to sales or cost of goods sold.

d. ***Profitability Ratio***: These ratios are calculated to assess the financial performance and the financial viability of the business.

Q4 :

What are liquidity ratios? Discuss the importance of current and liquid ratio.

Answer :

Liquidity ratios are calculated to determine the short-term solvency of a business, i.e. the ability of the business to pay back its current dues. Liquidity means easy conversion of assets into cash without any significant loss and delay.

Short-term creditors are interested in ascertaining liquidity ratios for timely payment of their debts.

Liquidity ratio includes

1. Current Ratio

2. Liquid Ratio or Quick Ratio

1. **Current Ratio**- It explains the relationship between current assets and current liabilities. It is calculated as:

$$\text{CurrentRatio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Currents Assets are those assets that can be easily converted into cash within a short period of time like, cash in hand, cash at bank, marketable securities, debtors, stock, bills receivables, prepaid expenses. etc.

Current Liabilities are those liabilities that are to be repaid within a year like, bank overdraft, bills payables, Short-term creditors, provision for tax, outstanding expenses etc.

Importance of Current Ratio

It helps in assessing the firm's ability to meet its current liabilities on time. The excess of current assets over current liabilities provide a sense of safety and security to the creditors. The ideal ratio of current assets over current liabilities is 2:1. It means that the firm has sufficient funds to meet its current liabilities. A higher ratio indicates poor investment policies of management and low ratio indicates shortage of working capital and lack of liquidity.

2. **Liquid Ratio**- It explains the relationship between liquid assets and current liabilities. It indicates whether a firm has sufficient funds to pay its current liabilities immediately. It is calculated as:

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$\text{Liquids Assets} = \text{Current Assets} - \text{Stock} - \text{Prepaid Expenses}$$

Importance of Liquid Ratio

It helps in determining whether a firm has sufficient funds if it has to pay all its current liabilities immediately.

It does not include stock, since it takes comparatively more time to convert the stock into cash. Further prepaid expenses are also not included in liquid assets, since these cannot be converted into cash. The ideal Liquidity Ratio is considered to be 1:1. It means that the firm has a rupee in form of liquid assets for every rupee of current liabilities.

Q5 :

What relationships will be established to study:

a. Inventory Turnover

b. Debtor Turnover

c. Payables Turnover

d. Working Capital Turnover.

Answer :

a. **Inventory Turnover Ratio**: This ratio is computed to determine the efficiency with which the stock is used. This ratio is based on the relationship between cost of goods sold and average stock kept during the year.

$$\text{Inventory / Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\text{Cost of Goods Sold} = \text{Opening Stock} + \text{Purchases} + \text{Direct Expenses} - \text{Closing Stock}$$

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

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$

b. **Debtors Turnover Ratio**: This ratio is computed to determine the rate at which the amount is collected from the debtors. It establishes the relationship between net credit sales and average accounts receivables.

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Accounts Receivables}}$$

$$\text{Net Credit Sales} = \text{Total Sales} - \text{Cash Sales}$$

$$\text{Average Accounts Receivables} = \frac{(\text{Opening Debtors} + \text{Opening B/R}) + (\text{Closing Debtors} + \text{Closing B/R})}{2}$$

c. **Payable Turnover Ratio**: This ratio is known as Creditors Turnover Ratio. It is computed to determine the rate at which the amount is paid to the creditors. It establishes the relationship between net credit purchases and average accounts payables.

$$\text{Payable Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Accounts Payable}}$$

$$\text{Net Credit Purchases} = \text{Total Purchases} - \text{Cash Purchases}$$

$$\text{AverageAccounts Payable} = \frac{(\text{Opening Creditors} + \text{Opening B/P}) + (\text{Closing Creditors} + \text{Closing B/P})}{2}$$

d. **Working Capital Turnover Ratio**: This ratio is computed to determine how efficiently the working capital is utilised in making sales. It establishes the relationship between net sales and working capital.

$$\text{Working Capital Turnover Ratio} = \frac{\text{Net Sales}}{\text{Working Capital}}$$

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

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

Q6 :

How would you study the solvency position of the firm?

Answer :

Solvency position of a firm is studied with the help of the Solvency Ratios. Solvency ratios are the measures of the long-term financial position of the firm in terms of its ability to pay its long-term liabilities. In other words, the solvency of the firm is measured by its ability to pay its long term obligation on the due date. The long term obligations include payments of principal amount on the due date and payments of interests on the regular basis. Long term solvency of any business can be calculated on the basis of the following ratios.

a. **Debt-Equity Ratio**- It depicts the relationship between the borrowed fund and owner's funds. The lower the debt-equity ratio higher will be the degree of security to the lenders. A low debt-equity ratio implies that the company can easily meet its long term obligations.

$$\text{Debt-Equity Ratio} = \frac{\text{Long-term Debt}}{\text{Equity/ Share holders Fund}}$$

Equity or the Shareholders Fund includes Preference Share Capital, Equity Share Capital, Capital Reserve, Securities Premium, General Reserve *less* Accumulated Loss and Fictitious Assets

b. **Total Assets to Debt Ratio**- It shows the relationship between the total assets and the long term loans. A high Total Assets to Debt Ratio implies that more assets are financed by the owner's fund and the company can easily meet its long-term obligations. Thus, a higher ratio implies more security to the lenders.

$$\text{Total Assets to Debt Ratio} = \frac{\text{Total Assets}}{\text{Long-term Debt}}$$

Total Assets includes all fixed and current assets except fictitious assets like, Preliminary Expenses, Underwriting Commission, etc.

Debt includes all long-term loans that are to be repaid after one year. It includes debentures, mortgage loans, bank loans, loans from other financial institutions, etc.

c. **Interest Coverage Ratio**- This ratio depicts the relationship between amount of profit utilise for paying interest and amount of interest payable. A high Interest Coverage Ratio implies that the company can easily meet all its interest obligations out of its profit.

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before Interest and Tax}}{\text{Interest on Long-term Loans}}$$

d. **Proprietary Ratio**- It shows the relationship between the Shareholders Fund and the Total Assets. This ratio reveals the financial position of a business. The higher the ratio the higher will be the degree of safety for the creditors. It is calculated as:

$$\text{Proprietary Ratio} = \frac{\text{Shareholders Fund}}{\text{Total Assets}} \text{ or } \frac{\text{Equity}}{\text{Total Assets}}$$

Total Assets includes all fixed and current assets except fictitious assets like, Preliminary Expenses, Underwriting Commission, etc.

Q7 :

Why would the inventory turnover ratio be more important when analysing a grocery store than an insurance company?

Answer :

Grocery store is a trading concern and involved in business of buying and selling of grocery. It keeps stock of various groceries to meet the requirement of the customers and it should calculate the inventory turnover ratio. Hence, this ratio is more important for a grocery store then it is for an insurance company as the latter does not need to maintain any stock of goods sold. The insurance company is engaged in delivering service that is intangible and, thus, cannot be stored.

Q8 :

What are important profitability ratios? How are they worked out?

Answer :

Profitability ratios are calculated on the basis of profit earned by a business. This ratio gives a percentage measure to assess the financial viability, profitability and operational efficiency of the business. The various important Profitability Ratios are as follows:

1. Gross Profit Ratio

2. Operating Ratio

3. Operating Profit Ratio

4. Net Profit Ratio

5. Return on Investment or Capital Employed

6. Earnings per Share Ratio

7. Dividend Payout Ratio

8. Price Earnings Ratio

1. **Gross Profit Ratio**- It shows the relationship between Gross Profit and Net Sales. It depicts the trading efficiency of a business. A higher Gross Profit Ratio implies a better position of a business, whereas a low Gross Profit Ratio implies an inefficient unfavourable sales policy.

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

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

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

$$\text{Cost of Goods Sold} = \text{Opening Stock} + \text{Purchases} + \text{Direct Expenses} - \text{Closing Stock}$$

2. **Operating Ratio-** It shows the relationship between Cost of Operation and Net Sales. This ratio depicts the operational efficiency of a business. A low Operating Ratio implies higher operational efficiency of the business. A low Operating Ratio is considered better for the business as it enables the business to be left with a greater amount after covering its operation costs to pay for interests and dividends.

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

$$\text{Operating Cost} = \text{Cost of Goods Sold} + \text{Operating Expenses}$$

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

3. **Operating Profit Ratio-** It shows the relationship between the Operating Profit and Net Sales. It helps in assessing the operational efficiency and the performance of the business.

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

$$\text{Operating Profit Ratio} = 100 - \text{Operating Ratio}$$

$$\text{Operating Profit} = \text{Sales} - \text{Operation Cost}$$

4. **Net Profit Ratio**- It shows the relationship between net profit and sales. Higher ratio is better for firm. It depicts the overall efficiency of a business and acts as an important tool to the investors for analysing and measuring the viability and performance of the business.

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

$$\text{or, Net Profit Ratio} = \frac{\text{Profit Before Tax}}{\text{Net Sales}} \times 100$$

$$\text{or, Net Profit Ratio} = \frac{\text{Profit After Tax}}{\text{Net Sales}} \times 100$$

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

5. **Return on Investment or Capital Employed-** It shows the relationship between the profit earned and the capital employed to earn that profit. It is calculated as:

$$\text{Return on Investment or Capital Employed} = \frac{\text{Profit before Interest and Tax}}{\text{Capital Employed}} \times 100$$

$$\text{Capital Employed} = \text{Fixed Assets} + \text{Current Assets} - \text{Current Liabilities}$$

$$\text{Or, Capital Employed} = \text{Share Capital} + \text{Reserve and Surplus} + \text{Long-term Funds} - \text{Fictitious Assets}$$

This ratio depicts the efficiency with which the business has utilised the capital invested by the investors. It is an important yardstick to assess the profit earning capacity of the business.

6. **Earning per Shares**- It shows the relationship between the amount of profit available to distribute as dividend among the equity shareholders and number of equity shares.

$$\text{Earning per Share} = \frac{\text{Profit available for equity shareholders}}{\text{Number of equity shares}}$$

$$\text{Profit available for equity shareholders} = \text{Net Profit after Tax} - \text{Preference Share Dividend}$$

7. **Dividend Payout Ratio**- It shows the relationship between the dividend per share and earnings per share. This ratio depicts the amount of earnings that is distributed in the form of dividend among the shareholders. A high Dividend Payout Ratio implies a better position and goodwill of the business for the shareholders.

$$\text{Dividend Payout ratio} = \frac{\text{Dividend per share}}{\text{Earning per share}}.$$

$$\text{Dividend per share} = \frac{\text{Dividend paid}}{\text{No. of shares}}$$

8. **Price Earning Ratio**- It shows the relationship between the market price of a share and the earnings per share. This ratio is the most common tool that is used in the stock markets. This ratio depicts the degree of reliance and trust that the shareholders have on the business. This ratio reflects the expectation of the shareholders regarding the rise in the future prices of the company's shares. A higher Price Earning Ratio definitely enables a company to enjoy favourable position in the market.

$$\text{Price Earning Ratio} = \frac{\text{Market Price of a Share}}{\text{Earnings Per Share}}$$

Q9 :

The liquidity of a business firm is measured by its ability to satisfy its long-term obligations as they become due? Comment.

Answer :

The liquidity of a business firm is measured by its ability to pay its long term obligations. The long term obligations include payments of principal amount on the due date and payments of interests on the regular basis. Long term solvency of any business can be calculated on the basis of the following ratios.

a. **Debt-Equity Ratio**- It depicts the relationship between the borrowed fund and owner's funds. The lower the debt-equity ratio higher will be the degree of security to the lenders. A low debt-equity ratio implies that the company can easily meet its long term obligations.

$$\text{Debt-Equity Ratio} = \frac{\text{Long-term Debt}}{\text{Equity/ Share holders Fund}}$$

b. **Total Assets to Debt Ratio-** It shows the relationship between the total assets and the long term loans. A high Total Assets to Debt Ratio implies that more assets are financed by the owner's fund and the company can easily meet its long-term obligations. Thus, a higher ratio implies more security to the lenders.

$$\text{Total Assets to Debt Ratio} = \frac{\text{Total Assets}}{\text{Long-term Debt}}$$

c. **Interest Coverage Ratio**- This ratio depicts the relationship between amount of profit utilised for paying interest and amount of interest payable. A high Interest Coverage Ratio implies that the company can easily meet all its interest obligations out of its profit.

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before Interest and Tax}}{\text{Interest on Long-term Loans}}$$

Q10 :

Financial ratio analysis is conducted by four groups of analysts: managers, equity investors, long-term creditors, and short-term creditors. What is the primary emphasis of each of these groups in evaluating ratios?

Answer :

Financial ratio analysis is conducted by four groups of analysts: managers, equity investors, long term creditors and short term creditors. The primary emphasis of each of these groups in evaluating ratios are:-

1. ***Management***- They use ratio analysis to determine how effectively the assets are being used. They are interested in future growth and prospects. They design various policy measures and draft future plans. Consequently, they are interested in Activity Ratios and Profitability Ratios like Net Profit Ratio, Debtors Turnover Ratio, Fixed Assets Turnover Ratios, etc.

2. ***Equity Investors***- The main concern for the investors is the security of the funds invested by them in the business and returns on their investments. The security of the funds is directly related to the profitability and operational efficiency of the business. Consequently, they are interested in knowing Earnings Per Share, Return on Investment and Return on Equity.

3. ***Long-term Creditors***- Long-term creditors provide funds for more than one year, so they are interested in long term solvency of the firm and in assessing the ability of the firm to pay timely interests. Consequently, they are interested in calculating Solvency Ratios like, Debt-Equity Ratio, Proprietary Ratio, Total Assets to Debt Ratio, Interest Coverage Ratio, etc.

4. ***Short-term Creditors***- Short-term creditors are interested in timely payment of their debts in short run. Consequently, they are interested in Liquidity Ratios like, Current Ratio, Quick Ratios etc. These ratios reveal the current financial position of the business.

Q11 :

The average age of inventory is viewed as the average length of time inventory is held by the firm or as the average number of day's sales in inventory. Explain.

Answer :

Inventory Turnover Ratio: This ratio is computed to determine the efficiency with which the stock is used. This ratio is based on the relationship between cost of goods sold and average stock kept during the year.

$$\text{Inventory / Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\text{Cost of Goods Sold} = \text{Opening Stock} + \text{Purchases} + \text{Direct Expenses} - \text{Closing Stock}$$

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

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$

$$\text{Average Age of Inventory} = \frac{\text{Days in a year}}{\text{Inventory Turnover Ratio}}$$

It shows the rate with which the stock is turned into sales or the number of times the stock in turned into sales during the year. In other words, this ratio reveals the average length of time for which the inventory is held by the firm.

Q12 :

The current ratio provides a better measure of overall liquidity only when a firm's inventory cannot easily be converted into cash. If inventory is liquid, the quick ratio is a preferred measure of overall liquidity. Explain.

Answer :

Current Ratio- It explains the relationship between current assets and current liabilities. It is calculated as:

$$\text{CurrentRatio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Currents Assets are those assets that are easily converted into cash within a short period of time like cash in hand, cash at bank, marketable securities, debtors, stock, bills receivables, prepaid expenses. etc.

Current Liabilities are those liabilities that are to be repaid within a year like bank overdraft, bills payables, Short-term creditors, provision for tax, outstanding expenses etc.

Liquid Ratio- It explains the relationship between liquid assets and current liabilities. It indicates whether a firm has sufficient funds to pay its current liabilities immediately. It is calculated as:

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$\text{Liquids Assets} = \text{Current Assets} - \text{Stock} - \text{Prepaid Expenses}$$

Generally, Current Ratio is preferable for such type of business where the stock or the inventories cannot easily be converted into cash like heavy machinery manufacturing companies, locomotive companies, etc. This is because, the heavy stocks like machinery, heavy tools etc. cannot be easily sold off. But on the other hand, the businesses where the stock can be easily realised or sold off regard Liquid Ratio to be more suitable measure to reveal their liquidity position. For example, the inventories of a service sector company is very liquid as there are no stock kept for sale, so they prefer Liquid Ratio as a measure of overall liquidity**.**

Moreover, sometimes companies prefer to resort to Liquid Ratio instead of Current Ratio, if the prices of the stock held are prone to fluctuate. This is because if the prices of the inventories fluctuate more, then this may affect their liquidity position of the business and may reduce (or overcast) the Current Ratio. Consequently, they prefer Liquid Ratio as it excludes inventories and stocks.

Thirdly, if the stock forms the major portion of a company's current assets, then they would prefer Current Ratio and not Liquid Ratio. This is because their current assets mostly consist of stock. The Liquid Ratio of such company will be very low as liquid assets exclude stock. This will reduce their Liquid Ratio and may create a bad image for the creditors. In such a case, Current Ratio provides better measure of overall liquidity.

Numerical questions : Solutions of Questions on Page Number : 273

Q1 :

Following is the Balance Sheet of Rohit and Co. as on March 31, 2006

Liabilities	Amount Rs	Assets	Amount Rs
Share Capital	1,90,000	Fixed Assets	1,53,000
Reserves	12,500	Stock	55,800
Profit and Loss	22,500	Debtors	28,800

Bills Payables	18,000	Cash at Bank	59,400
Creditors	54,000		
	2,97,000		2,97,000

Calculate Current Ratio

Answer :

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Cirrent liabilities}}$$

$$\begin{aligned}\text{Current Assets} &= \text{Stock} + \text{Debtors} + \text{Cash at bank} \\ &= 55,800 + 28,800 + 59,400 \\ &= 1,44,000\end{aligned}$$

$$\begin{aligned}\text{Current liabilities} &= \text{Bills Payable} + \text{Creditors} \\ &= 18,000 + 54,000 \\ &= 72,000\end{aligned}$$

$$\text{Current Ratio} = \frac{1,44,000}{72,000} = \frac{2}{1} = 2:1$$

Q2 :

Following is the Balance Sheet of Title Machine Ltd. as on March 31, 2006.

Liabilities	**Amount Rs**	**Assets**	**Amount Rs**
Equity Share Capital	24,000	Buildings	45,000
8% Debentures	9,000	Stock	12,000
Profit and Loss	6,000	Debtors	9,000
Bank Overdraft	6,000	Cash in Hand	2,280

Creditor	23,400	Prepaid Expenses	720
Provision for Taxation	600		
	69,000		69,000

Calculate Current Ratio and Liquid Ratio.

Answer :

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

$$\begin{aligned}\text{Current Assets} &= \text{Stock} + \text{Debtors} + \text{Cash in hand} + \text{Prepaid Expenses}\\ &= 12{,}000 + 9{,}000 + 2{,}280 + 720\\ &= 24{,}000\end{aligned}$$

$$\begin{aligned}\text{Current Liabilities} &= \text{Bank overdraft} + \text{Creditors} + \text{Provision for Taxation}\\ &= 6{,}000 + 23{,}400 + 600\\ &= 30{,}000\end{aligned}$$

$$\text{Current Ratio} = \frac{24{,}000}{30{,}000} = \frac{0.8}{1} = 0.8:1$$

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$\begin{aligned}\text{Liquid Assets} &= \text{Current Assets} - (\text{Stock} + \text{Prepaid Expenses})\\ &= 24{,}000 - (12{,}000 + 720)\\ &= 11{,}280\end{aligned}$$

$$\text{Liquid Ratio} = \frac{11{,}280}{30{,}000} = \frac{0.376}{1} = 0.376:1$$

Q3 :

Current Ratio is 3:5. Working Capital is Rs 9,00,000. Calculate the amount of Current Assets and Current Liabilities.

Answer :

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

$$\text{or, } 3.5 = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

or, Current Assets = 3.5 Current Liabilities (**1**)

Working Capital = Current Assets - Current Liabilities

Working Capital = 90,000

or, Current Assets - Current Liabilities = 90,000

or, 3.5 Current Liabilities - Current Liabilities = 90,000 (from **1**)

or, 2.5 Current Liabilities = 90,000

$$\text{or, Current Liabilities} = \frac{90{,}000}{2.5} = 36{,}000$$

$$\begin{aligned}\text{or, Current Assets} &= 3.5 \text{ Current Liabilities} \\ &= 3.5 \times 36{,}000 \\ &= 1{,}26{,}000\end{aligned}$$

Q4 :

Shine Limited has a current ratio 4.5:1 and quick ratio 3:1; if the stock is 36,000, calculate current liabilities and current assets.

Answer :

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

$$\text{or, } \frac{4.5}{1} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

or, 4.5 Current Liabilities = Current Assets

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

$$\text{or, } 3:1 = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

or, 3Current Liabilities = Quick Assets

$$\begin{aligned}\text{Quick Assets} &= \text{Current Assets} - \text{Stock} \\ &= \text{Current Assets} - 36{,}000\end{aligned}$$

or, 4.5 Current Liabilities - 3 Current Liabilities = 36,000

or, 1.5 Current Liabilities = 36,000

or, Current Liabilities = 24,000

Current Assets = 4.5 Current Liabilities

$$\begin{aligned}\text{or, Current Assets} &= 4.5 \times 24{,}000 \\ &= 1{,}08{,}000\end{aligned}$$

Q5 :

Current liabilities of a company are Rs 75,000. If current ratio is 4:1 and liquid ratio is 1:1, calculate value of current assets, liquid assets and stock.

Answer :

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

$$\text{or, } 4 = \frac{\text{Current Assets}}{75{,}000}$$

or, 4 × 75,000 = Current Assets

or, Current Assets = 3,00,000

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

or, $$1 = \frac{\text{Liquid Assets}}{75,000}$$

Liquid Assets = 75,000

$$\begin{aligned}\text{Stock} &= \text{Current Assets} - \text{Liquid Assets}\\ &= 3,00,000 - 75,000\\ &= 2,25,000\end{aligned}$$

Q6 :

Handa Ltd.has stock of Rs 20,000. Total liquid assets are Rs 1,00,000 and quick ratio is 2:1. Calculate current ratio.

Answer :

$$\text{Quick Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilties}}$$

or, $$2 = \frac{1,00,000}{\text{Current Liabilities}}$$

$$\text{or, Current Liabilities} = \frac{1,00,000}{2}$$
$$= 50,000$$

$$\begin{aligned}\text{Current Assets} &= \text{Liquid Assets} + \text{Stock}\\ &= 1,00,000 + 20,000\\ &= 1,20,000.\end{aligned}$$

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilties}}$$
$$= \frac{1,20,000}{50,000}$$
$$= \frac{2.4}{1} = 2.4:1$$

Q7 :

Calculate debt equity ratio from the following information:

	Rs
Total Assets	15,00,000
Current Liabilities	6,00,000
Total Debts	12,00,000

Answer :

$$\text{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$\text{Equity} = \text{Total Assets} - \text{Total Debts}$$
$$= 15,00,000 - 12,00,000$$
$$= 3,00,000$$

Long Term Debts = Total Debts - Current Liabilities

$$\text{Debt Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Equity}}$$

or, $$\text{Debt Equity Ratio} = \frac{6,00,000}{3,00,000} = \frac{2}{1} = 2:1$$

Q8 :

Calculate Current Ratio if:

Stock is Rs 6,00,000; Liquid Assets Rs 24,00,000; Quick Ratio 2:1.

Answer :

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

or, $$2 = \frac{24,00,000}{\text{Current Liabilities}}$$

$$\text{Current Liabilities} = \frac{24,00,000}{2}$$
$$= 12,00,000$$

$$\text{Current Assets} = \text{Liquid Assets} + \text{Stock}$$
$$= 24,00,000 + 6,00,000$$
$$= 30,00,000.$$

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$
$$= \frac{30,00,000}{12,00,000} = \frac{2.5}{1} = 2.5:1$$

Q9 :

Compute Stock Turnover Ratio from the following information:

	Rs
Net Sales	2,00,000
Gross Profit	50,000
Closing Stock	60,000
Excess of Closing Stock over Opening Stock	20,000

Answer :

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\begin{aligned}\text{Cost of Goods sold} &= \text{Net Sales} - \text{Gross Profit}\\ &= 2,00,000 - 50,000\\ &= 1,50,000\end{aligned}$$

$$\begin{aligned}\text{Opening Stock} &= \text{Closing Stock} - 20,000\\ &= 60,000 - 20,000\\ &= 40,000\end{aligned}$$

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$

$$\begin{aligned}\text{Average Stock} &= \frac{40,000 \ + \ 60,000}{2}\\ &= \frac{1,00,000}{2}\\ &= 50,000\end{aligned}$$

$$\text{Stock Turnover Ratio} = \frac{1,50,000}{50,000} = \frac{3}{1} = 3:1$$

Q10 :

Calculate following ratios from the following information:

(i) Current ratio (ii) Acid test ratio (iii) Operating Ratio (iv) Gross Profit Ratio

	Rs
Current Assets	35,000
Current Liabilities	17,500
Stock	15,000
Operating Expenses	20,000

Sales	60,000
Cost of Goods Sold	30,000

Answer :

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

$$\text{Current Ratio} = \frac{35,000}{17,500} = 2:1$$

ii) $$\text{Acid Test Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$\begin{aligned}\text{Liquid Assets} &= \text{Current Assets} - \text{Stock} \\ &= 35,000 - 15,000 \\ &= 20,000\end{aligned}$$

$$\text{Acid Test Ratio} = \frac{20,000}{17,500} = \frac{1.143}{1} = 1.143:1$$

iii)

$$\begin{aligned}\text{Operating Ratio} &= \frac{(\text{Cost of Goods Sold} + \text{Operating Expenses})}{\text{Net Sales}} \times 100 \\ &= \frac{(30,000 + 20,000)}{60,000} \times 100 \\ &= \frac{50,000}{60,000} \times 100 = 83.33\%\end{aligned}$$

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

$$\begin{aligned}\text{Gross Profit} &= \text{Sales} - \text{Cost of Goods Sold} \\ &= 60,000 - 30,000 \\ &= 30,000\end{aligned}$$

$$\text{Gross profit} = \frac{30,000}{60,000} \times 100 = 50\%$$

Q11 :

From the following information calculate:

(i) Gross Profit Ratio (ii) Inventory Turnover Ratio (iii) Current Ratio (iv) Liquid Ratio (v) Net Profit Ratio (vi) Working capital Ratio:

	Rs
Sales	25,20,000
Net Profit	3,60,000
Cast of Sales	19,20,000
Long-term Debts	9,00,000
Creditors	2,00,000
Average Inventory	8,00,000
Current Assets	7,60,000
Fixed Assets	14,40,000
Current Liabilities	6,00,000
Net Profit before Interest and Tax	8,00,000

Answer :

(i) $$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$\begin{aligned}\text{Gross Profit} &= \text{Sales} - \text{Cost of Sales} \\ &= 25,20,000 - 19,20,000 \\ &= 6,00,000\end{aligned}$$

$$\text{Gross Profit Ratio} = \frac{6,00,000}{25,20,000} \times 100 = 23.81$$

(ii)

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Average Inventory}} \times 100$$
$$= \frac{19,20,000}{8,00,000}$$
$$= \frac{2.4}{1}$$
$$= 2.4:1$$

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

$$\text{Current Asset} = \text{Liquid Assets} + \text{Stock}$$
$$= 7,60,000 + 8,00,000$$
$$= 15,60,000$$

$$\text{Current Ratio} = \frac{15,60,000}{6,00,000} = \frac{2.6}{1} = 2.6:1$$

(iv)

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$
$$= \frac{7,60,000}{6,00,000}$$
$$= \frac{1.27}{1}$$
$$= 1.27.$$

(v)

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$
$$= \frac{3,60,000}{25,20,000} \times 100$$
$$= 14.28\%$$

(vi) $$\text{Working Capital Ratio} = \frac{\text{Sales}}{\text{Working Capital}}$$

$$\begin{aligned}\text{Working Capital} &= \text{Current Assets} - \text{Current Liabilities}\\ &= 15,60,000 - 6,00,000\\ &= 9,60,000\end{aligned}$$

$$\begin{aligned}\text{Working Capital Ratio} &= \frac{25,20,000}{9,60,000}\\ &= 2.625 \text{ times}\end{aligned}$$

Q12 :

Compute Gross Profit Ratio, Working Capital Turnover Ratio, Debt Equity Ratio and Proprietary Ratio from the following information:

	Rs
Paid-up Capital	5,00,000
Current Assets	4,00,000
Net Sales	10,00,000
13% Debentures	2,00,000
Current Liability	2,80,000
Cost of Goods Sold	6,00,000

Answer :

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

$$\begin{aligned}\text{Gross Profit} &= \text{Net Sales} - \text{Cost of Goods Sold}\\ &= 10,00,000 - 6,00,000\\ &= 4,00,000\end{aligned}$$

$$\text{Gross Profit Ratio} = \frac{4,00,000}{10,00,000} \times 100 = 40\%$$

$$\text{Working Capital Ratio} = \frac{\text{Net Sales}}{\text{Working Capital}}$$

$$\begin{aligned}\text{Working Capital} &= \text{Current Assets} - \text{Current Liabilities} \\ &= 4,00,000 - 2,80,000 \\ &= 1,20,000\end{aligned}$$

$$\begin{aligned}\text{Working Capital Ratio} &= \frac{10,00,000}{1,20,000} \\ &= 8.33 \text{ times.}\end{aligned}$$

$$\begin{aligned}\text{Debt Equity Ratio} &= \frac{\text{Debt}}{\text{Equity}} \\ &= \frac{2,00,000}{5,00,000} = 2:5 = 0.4:1\end{aligned}$$

$$\text{Proprietary Ratio} = \frac{\text{Shareholders Funds}}{\text{Total Assets}}$$

$$\begin{aligned}\text{Total Assets} &= \text{Paid up Capital} + \text{Debentures} + \text{CurrentLiabilities} \\ &\quad (\because \text{ Total Liabilities } = \text{ Total Assets}) \\ &= 5,00,000 + 2,00,000 + 2,80,000 \\ &= 9,80,000\end{aligned}$$

$$\text{Proprietary Ratio} = \frac{5,00,000}{9,80,000} = 25:49 = 0.51:1$$

Q13 :

Calculate Stock Turnover Ratio if:

Opening Stock is Rs 76,250, Closing Stock is 98,500, Sales is Rs 5,20,000, Sales Return is Rs 20,000, Purchases is Rs 3,22,250.

Answer :

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\begin{aligned}\text{Cost of Goods Sold} &= \text{Opening Stock} + \text{Purchases} - \text{ClosingStock} \\ &= 76{,}250 + 3{,}22{,}250 - 98{,}500 \\ &= 3{,}00{,}000\end{aligned}$$

$$\begin{aligned}\text{Average Stock} &= \frac{\text{Opening Stock} + \text{Closing Stock}}{2} \\ &= \frac{76{,}250 + 98{,}500}{2} = 87{,}375\end{aligned}$$

$$\text{Stock Turnover Ratio} = \frac{3{,}00{,}000}{87{,}375} = 3.43 \text{ times}$$

Q14 :

Calculate Stock Turnover Ratio from the data given below:

	Rs
Stock at the beginning of the year	10,000
Stock at the end of the year	5,000
Carriage	2,500
Sales	50,000
Purchases	25,000

Answer :

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\begin{aligned}\text{Cost of Goods Sold} &= \text{Opening Stock} + \text{Purchases} + \text{Carriage} - \text{Closing Stock} \\ &= 10{,}000 + 25{,}000 + 2{,}500 - 5{,}000 \\ &= 32{,}500\end{aligned}$$

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$
$$= \frac{10,000 + 5,000}{2}$$
$$= \frac{15,000}{2} = 7,500$$

$$\text{Stock Turnover Ratio} = \frac{32,500}{7,500} = 4.33 \text{ times}$$

Q15 :

A trading firm's average stock is Rs 20,000 (cost). If the stock turnover ratio is 8 times and the firm sells goods at a profit of 20% on sale, ascertain the profit of the firm.

Answer :

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\text{or, } 8 = \frac{\text{Cost of Goods Sold}}{20,000}$$
$$\text{or, Cost of Goods Sold} = 20,000 \times 8$$
$$\text{or, Cost of Goods Sold} = 1,60,000$$

Let Sale Price be Rs 100

Then Profit is Rs 20

Hence, the Cost of Goods Sold = Rs 100 - Rs 20 = Rs 80

If the Cost of Goods Sold is Rs 80, then Sales = 100

If the Cost of Goods Sold is Rs 1, then Sales = $\frac{100}{80}$

If the Cost of Goods Sold is $1,60,000$ then Sales $= \frac{100}{80} \times 1,60,000$

$= 2,00,000$

Profit $=$ Sales $-$ Cost of Goods Sold

$= 2,00,000 - 1,60,000$

$=$ Rs. $40,000$

Q16 :

You are able to collect the following information about a company for two years:

	2004	**2005**
Book Debts on Apr. 01	Rs 4,00,000	Rs 5,00,000
Book Debts on Mar. 30		Rs 5,60,000
Stock in trade on Mar. 31	Rs 6,00,000	Rs 9,00,000
Sales (at gross profit of 25%)	Rs 3,00,000	Rs 24,00,000

Calculate Stock Turnover Ratio and Debtor Turnover Ratio if in the year 2004 stock in trade increased by Rs 2,00,000.

Answer :

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

or, Cost of Goods sold = Sales - Gross Profit

$$\begin{aligned}\text{or, Gross Profit} &= 25\% \text{ of Sales} \\ &= 25\% \text{ of } 24,00,000 \\ &= 6,00,000\end{aligned}$$

$$\begin{aligned}\text{or, Cost of Goods sold} &= 24,00,000 - 6,00,000 \\ &= 18,00,000\end{aligned}$$

$$\begin{aligned}\text{Average Stock} &= \frac{\text{Opening Stock} + \text{Closing Stock}}{2} \\ &= \frac{6,00,000 + 9,00,000}{2} \\ &= \frac{15,00,000}{2} = 7,50,000\end{aligned}$$

$$\text{Stock Turnover Ratio} = \frac{18,00,000}{7,50,000} = 2.4 \text{ times}$$

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Debtors}}$$

$$\begin{aligned}\text{Average Debtors} &= \frac{\text{Opening Debtors} + \text{Closing Debtors}}{2} \\ &= \frac{5,00,000 + 5,60,000}{2} \\ &= \frac{10,60,000}{2} = 5,30,000\end{aligned}$$

$$\text{Debtors Turnover Ratio} = \frac{24,00,000}{5,30,000} = 4.53 \text{ times}$$

Note: It has been assumed that all sales are credit sales

Q17 :

The following Balance Sheet and other information, calculate following ratios:

(i) Debt Equity Ratio (ii) Working Capital Turnover Ratio (iii) Debtors Turnover Ratio

Liabilities	Amount Rs	Assets	Amount Rs
General Reserve	80,000	Preliminary Expenses	20,000
Profit and Loss	1,20,000	Cash	1,00,000
Loan @15%	2,40,000	Stock	80,000
Bills Payable	20,000	Bills Receivables	40,000
Creditors	80,000	Debtors	1,40,000
Share Capital	2,00,000	Fixed Assets	3,60,000
	7,40,000		7,40,000

Answer :

(i) $$\text{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$\begin{aligned}\text{Equity} &= \text{Share Capital} + \text{General Reserve} + \text{Profit and Loss} - \text{Preliminary Expenses} \\ &= 2,00,000 + 80,000 + 1,20,000 - 20,000 \\ &= 3,80,000\end{aligned}$$

Debt = 15% Loan

=2,40,000

$$\text{Debt Equity Ratio} = \frac{2,40,000}{3,80,000} = 12:19$$

(ii) Working Capital Turnover Ratio and (iii) Debtor Turnover Ratio cannot be calculated because no information about sales is given.

Q18 :

The following is the summerised Profit and Loss account and the Balance Sheet of Nigam Limited for the year ended March 31, 2007 :

Expenses/Losses	Amount Rs	Revenue/Gains	Amount Rs
Opening Stock	50,000	Sales	4,00,000
Purchases	2,00,000	Closing Stock	60,000
Direct Expenses	16,000		
Gross Profit	1,94,000		
	4,60,000		4,60,000
Salary	48,000	Gross Profit	1,94,000
Loss on Sale of Furniture	6,000		
Net Profit	1,40,000		
	1,94,000		1,94,000

Balance Sheet of Nigam Limited as on March 31, 2007

Liabilities	Amount Rs	Assets	Amount Rs
Profit and Loss	1,40,000	Stock	60,000
Creditors	1,90,000	Land	4,00,000
Equity Share Capital	2,00,000	Cash	40,000
Outstanding Expenses	70,000	Debtors	1,00,000

	6,00,000		6,00,000

Calculate:

(i) Quick Ratio

(ii) Stock Turnover Ratio

(iii) Return on Investment

Answer :

(i) $$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$\begin{aligned}\text{Quick Assets} &= \text{Cash} + \text{Debtors} \\ &= 40,000 + 1,00,000 \\ &= 1,40,000\end{aligned}$$

$$\begin{aligned}\text{Current Liabilities} &= \text{Creditors} + \text{Outstanding Expenses} \\ &= 1,90,000 + 70,000 \\ &= 2,60,000\end{aligned}$$

$$\text{Quick Ratio} = \frac{1,40,000}{2,60,000} = 7:13 = 0.54:1$$

(ii)

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\begin{aligned}\text{Cost of Goods sold} &= \text{Sales} - \text{Gross Profit} \\ &= 4,00,000 - 1,94,000 \\ &= 2,06,000.\end{aligned}$$

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$
$$= \frac{50,000 + 60,000}{2} = \frac{1,10,000}{2}$$
$$= 55,000$$

$$\text{Stock Turnover Ratio} = \frac{2,06,000}{55,000} = 3.74 \text{ times}$$

$$\text{Return on Investment} = \frac{\text{Profit before Interest and Tax}}{\text{Capital Employed}} \times 100$$

$$\text{Capital Employed} = \text{Equity Share Capital} + \text{Profit and Loss}$$
$$= 2,00,000 + 1,40,000$$
$$= 3,40,000$$

$$\text{Return on Investment} = \frac{1,40,000}{3,40,000} \times 100 = 41.17\%$$

Q19 :

From the following, calculate (a) Debt Equity Ratio (b) Total Assets to Debt Ratio (c) Proprietary Ratio.

	Rs
Equity Share Capital	75,000
Preference Share Capital	25,000
General Reserve	50,000
Accumulated Profits	30,000
Debentures	75,000
Sundry Creditors	40,000
Outstanding Expenses	10,000
Preliminary Expenses to be written-off	5,000

Answer :

(a) $$\text{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$\begin{aligned}\text{Equity/Shareholders Funds} &= \text{Equity Share Capital} + \text{Preference Share Capital} + \text{General Reserve} \\ &\quad + \text{Accumulated Profit} - \text{Preliminary Expenses Written off} \\ &= 75,000 + 25,000 + 50,000 + 30,000 - 5,000 \\ &= 1,75,000\end{aligned}$$

Debt = Debentures = 75,000

$$\text{Debt Equity Ratio} = \frac{75,000}{1,75,000} = \frac{3}{7} = 3:7$$

(b) $$\text{Total Assets to Debt Ratio} = \frac{\text{Total Assets}}{\text{Debt}}$$

$$\begin{aligned}\text{Total Assets} &= \text{Equity Share Capital} + \text{Preference Share Capital} + \text{General Reserve} \\ &\quad + \text{Accumulated Profits} + \text{Debentures} + \text{Sundry Creditors} + \text{Outstanding Expenses} \\ &\quad - \text{Preliminary Expenses to be written off} \\ &\quad (\because \text{Total liabilities} = \text{Total Assets}) \\ &= 75,000 + 25,000 + 50,000 + 30,000 + 75,000 + 40,000 + 10,000 - 5,000 \\ &= 3,00,000\end{aligned}$$

$$\text{Total Assets to Debt Ratio} = \frac{3,00,000}{75,000} = 4:1$$

(c)

$$\text{Proprietary Ratio} = \frac{\text{Shareholder Funds}}{\text{Net Assets}}$$

$$\text{Proprietary Ratio} = \frac{1,75,000}{3,00,000} = \frac{7}{12} = 7:12$$

Q20 :

Cost of Goods Sold is Rs 1,50,000. Operating expenses are Rs 60,000. Sales is Rs 2,60,000 and Sales Return is Rs 10,000. Calculate Operating Ratio.

Answer :

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

$$\begin{aligned}\text{Net Sales} &= \text{Sales} - \text{Sales Return} \\ &= 2,60,000 - 10,000 \\ &= 2,50,000\end{aligned}$$

$$\begin{aligned}\text{Operating Ratio} &= \frac{(1,50,000 + 60,000)}{2,50,000} \times 100 \\ &= \frac{2,10,000}{2,50,000} \times 100 = 84\%\end{aligned}$$

Q21 :

The following is the summerised transactions and Profit and Loss Account for the year ending March 31, 2007 and the Balance Sheet as on that date.

Expenses/Losses	Amount Rs	Revenue/Gains	Amount Rs
Opening Stock	5,000	Sales	50,000
Purchases	25,000	Closing Stock	7,500
Direct Expenses	2,500		
Gross Profit	25,000		
	57,500		57,500
Administrative Expenses	7,500	Gross Profit	25,000
Interest	1,500		
Selling Expenses	6,000		
Net Profit	10,000		
	25,000		25,000

Liabilities	Amount Rs	Assets	Amount Rs
Share Capital	50,000	Land and Building	25,000
Current Liabilities	20,000	Plant and Machinery	15,000
Profit and Loss	10,000	Stock	7,500
		Sundry Debtors	7,500
		Bills Receivables	6,250
		Cash in Hand and at Bank	8,750
		Furniture	10,000
	80,000		80,000

Calculate (i) Gross Profit Ratio (ii) Current Ratio (iii) Acid Test Ratio (iv) Stock Turnover Ratio (v) Fixed Assets Turnover Ratio.

Answer :

(i)

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$
$$= \frac{25,000}{50,000} \times 100 = 50\%$$

(ii)

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

$$\text{Current Assets} = \text{Stock} + \text{Sundry Debtors} + \text{Bills Receivable} + \text{Cash in Hand and at Bank}$$
$$= 7,500 + 7,500 + 6,250 + 8,750$$
$$= 30,000$$

$$\text{Current Ratio} = \frac{30,000}{20,000} = 1.5:1 \text{ or } 3:2$$

(iii)

$$\text{Acid Test Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$\text{Liquid Assets} = \text{Current Assets} - \text{Stock}$$
$$= 30,000 - 7,500$$
$$= 22,500$$

$$\text{Acid Test Ratio} = \frac{22,500}{20,000} = 1.125:1$$

(iv)

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\text{Cost of Goods sold} = \text{Opening Stock} + \text{Purchases} + \text{DirectExpenses} - \text{Closing Stock}$$
$$= 5,000 + 25,000 + 2,500 - 75,000$$
$$= 25,000$$

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$
$$= \frac{5,000 + 7,500}{2} = \frac{12,500}{2} = 6,250$$

$$\text{Stock Turnover Ratio} = \frac{25,000}{6,250} = 4 \text{ times}$$

(v) $$\text{Fixed Assets Turnover Ratio} = \frac{\text{Net Sales}}{\text{Net Fixed Assets}}$$

$$\text{Net Fixed Assets} = \text{Land and Building} + \text{Plant and Machinery} + \text{Furniture}$$
$$= 25,000 + 15,000 + 10,000$$
$$= 50,000$$

$$\text{Fixed Assets Turnover Ratio} = \frac{50,000}{50,000} = 1:1$$

Q22 :

From the following information calculate Gross Profit Ratio, Stock Turnover Ratio and Debtors Turnover Ratio.

	Rs
Sales	3,00,000
Cost of Gods Sold	2,40,000
Closing Stock	62,000
Gross Profit	60,000
Opening Stock	58,000
Debtors	32,000

Answer :

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

$$\text{Gross Profit} = \text{Sales} - \text{Cost of Goods Sold}$$
$$= 3,00,000 - 2,40,000$$
$$= 60,000$$

$$\text{Gross Profit Ratio} = \frac{60,000}{3,00,000} \times 100 = 20\%$$

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$
$$= \frac{58,000 + 62,000}{2} = \frac{1,20,000}{2} = 60,000$$

$$\text{Stock Turnover Ratio} = \frac{2,40,000}{60,000} = 4 \text{ times}$$

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Sales}}{\text{Average Debtors}}$$
$$= \frac{3,00,000}{32,000}$$
$$= 9.375 \text{ times}$$

Note: In the solution, the Debtors are assumed as the Average Debtors