

Problem 1:

The following is the Balance Sheet of a company as on 31st March:

<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
Share Capital	2,00,000	Land and Buildings	1,40,000
Profit & Loss Account	30,000	Plant and Machinery	3,50,000
General Reserve	40,000	Stock	2,00,000
12% Debentures	4,20,000	Sundry Debtors	1,00,000
Sundry Creditors	1,00,000	Bills Receivable	10,000
Bills Payable	50,000	Cash at Bank	40,000
	8,40,000		8,40,000

Calculate :

- (1) Current Ratio
- (2) Quick Ratio
- (3) Inventory to working Capital
- (4) Debt to Equity Ratio
- (5) Proprietary Ratio
- (6) Capital Gearing Ratio
- (7) Current Assets to Fixed Assets

SOLUTION :

$$\begin{aligned} (1) \text{ Current Ratio} &= \frac{\text{Current assets}}{\text{Current Liabilities}} \\ &= \frac{\text{Rs. 3,50,000}}{\text{Rs. 1,50,000}} = 2.33 : 1 \end{aligned}$$

$$\begin{aligned} (2) \text{ Quick Ratio} &= \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} \\ &= \frac{\text{Rs. 1,50,000}}{\text{Rs. 1,50,000}} = 1 : 1 \end{aligned}$$

$$\begin{aligned} (3) \text{ Inventory to Working Capital} &= \frac{\text{Inventory}}{\text{Working Capital}} \\ &= \frac{\text{Rs. 2,00,000}}{\text{Rs. 2,00,000}} = 1 : 1 \end{aligned}$$

$$\begin{aligned} (\text{Working Capital} &= \text{Current Assets} - \text{Current Liabilities}) \\ &= \text{Rs. 3,50,000} - \text{Rs. 1,50,000} = \text{Rs. 2,00,000} \end{aligned}$$

$$(4) \text{ Debt to Equity Ratio} = \frac{\text{Long Term Debts}}{\text{Shareholders' Fund}}$$

$$= \frac{\text{Rs. } 4,20,000}{\text{Rs. } 2,70,000} = 1.56 : 1$$

(Or)

$$= \frac{\text{Long Term Debts}}{\text{Shareholders' Fund} + \text{Long Term Debts}}$$

$$= \frac{\text{Rs. } 4,20,000}{\text{Rs. } 2,70,000 + 4,20,000} = 0.6 : 1$$

(5) Proprietary Ratio = $\frac{\text{Shareholders' Fund}}{\text{Total Assets}}$

$$= \frac{\text{Rs. } 2,70,000}{\text{Rs. } 8,40,000} = 0.32 : 1$$

(6) Capital Gearing Ratio = $\frac{\text{Fixed Interest Bearing Securities}}{\text{Equity Share Capital}}$

$$= \frac{\text{Rs. } 4,20,000}{\text{Rs. } 2,00,000} = 2.1 : 1$$

(7) Current Assets to Fixed Assets Ratio = $\frac{\text{Current Assets}}{\text{Fixed Assets}}$

$$= \frac{\text{Rs. } 3,50,000}{\text{Rs. } 4,90,000} = 0.71 : 1$$

Problem 2:

From the following particulars found in the Trading, Profit and Loss Account of A Company Ltd., work out the operation ratio of the business concern:

**TRADING ACCOUNT OF A COMPANY LTD.
for the period ending December 31**

<i>Dr.</i>	<i>Rs.</i>	<i>Cr.</i>	<i>Rs.</i>
<i>Expenses</i>		<i>Incomes</i>	
To Opening Stock	1,400	By Net Sales	10,000
To Purchases	6,400	By Closing Stock	600
To Direct Expenses	300		
To Gross Profit	2,500		
	10,600		10,600

Problem 3:

The following is the summarised Profit and Loss Account of Taj Products Ltd. for the year ended 31st December:

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
Opening Stock of Materials	99,500	Sales	8,50,000
Purchase of Materials	3,20,000	Stock of Materials (Closing)	89,000
Direct Wages	2,25,250		
Manufacturing Expenses	14,250	Stock of Finished Goods (Closing)	60,000
Selling & Distribution Expenses	30,000	Non-operating Income Interest	3,000
Administrative Expenses	1,50,000	Profit on Sale of Shares	6,000
Finance Charges	15,000		
Non-operating Expenses:			
Loss on Sale of Assets	4,000		
Net Profit	1,50,000		
	10,08,000		10,08,000

Work out the following ratios :

- (1) Gross Profit Ratio
- (2) Net Profit Ratio
- (3) Operating Ratio
- (4) Cost Ratios (to cost of Production)
 - (i) Materials Consumed Ratio
 - (ii) Labour Cost Ratio
 - (iii) Production Overhead Cost Ratio.

SOLUTION:

<i>Gross Sales (a)</i>		Rs.
<i>Less : Cost of Goods Sold :</i>		8,50,000
Opening Stock of Materials	Rs.	
<i>Add : Materials Purchased</i>	99,500	
	3,20,000	
	4,19,500	
<i>Less : Stock of Materials (Closing)</i>	89,000	

<i>Materials Consumed : (b)</i>	3,30,500	
Direct Wages	2,25,250	
Manufacturing Expenses	14,250	
<i>Cost of Production (c)</i>	5,70,000	
Less : Closing Stock of Finished Products	60,000	
<i>Cost of Goods Sold (d)</i>		5,10,000
<i>Gross Profit (e)</i>		3,40,000
Less : Administrative Expenses	1,50,000	
Selling and Distribution	30,000	
<i>Net Operating Profit before Interest and Taxation : (f)</i>		1,60,000
<i>Add : Non-operating Incomes (g)</i>		
Interest	3,000	
Profit on Sale of Shares	6,000	
		9,000
		1,69,000
Less : Loss on Sale of Assets	4,000	
Finance Charges	15,000	
<i>Income before Taxation (h)</i>		1,50,000

$$(1) \text{ Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{\text{Rs. } 3,40,000}{\text{Rs. } 8,50,000} \times 100 = 40\%$$

$$(2) \text{ Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

$$= \frac{1,60,000}{\text{Rs. } 8,50,000} \times 100 = 18.82\%$$

$$(3) \text{ Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Net Sales}} \times 100$$

$$= \frac{\text{Rs. } 5,10,000 + \text{Rs. } 1,80,000}{\text{Rs. } 8,50,000} \times 100 = 81.18\%$$

$$(4) (i) \text{ Material Consumed Ratio} = \frac{\text{Material Consumed}}{\text{Cost of Product}} \times 100$$

$$= \frac{\text{Rs. } 3,30,500}{\text{Rs. } 5,70,000} \times 100 = 57.98\%$$

$$\begin{aligned} \text{(iii) Production Overhead Ratio} &= \frac{\text{Production Overhead}}{\text{Cost of Production}} \times 100 \\ &= \frac{\text{Rs. 14,250}}{\text{Rs. 5,70,000}} \times 100 = 2.5\% \end{aligned}$$

Problem 4:

From the following Balance Sheet and additional information, you are required to calculate:

- (i) Return on Total Resources
- (ii) Return on Capital Employed
- (iii) Return on Shareholders' Fund

BALANCE SHEET as on 31st Dec.

	Rs.		Rs.
Share Capital (Rs. 10)	8,00,000	Fixed Assets	10,00,000
Reserves	2,00,000	Current Assets	3,60,000
8% Debentures	2,00,000		
Creditors	1,60,000		
	13,60,000		13,60,000

Net operating profit before tax is Rs. 2,80,000. Assume tax rate at 50%. Dividend declared amounts to Rs. 1,20,000. (B.Com. MS.)

SOLUTION:

$$(i) \text{ Return on Total Resources} = \frac{\text{Profit after Tax}}{\text{Total Assets}} \times 100$$

$$= \frac{\text{Rs. 1,40,000}}{\text{Rs. 13,60,000}} \times 100 = 10.29\%$$

(ii) Return on Capital Employed

$$= \frac{\text{Profit before Tax \& Interest}}{\text{Capital Employed}} \times 100$$

$$= \frac{\text{Rs. 2,96,000}}{\text{Rs. 12,00,000}} \times 100 = 24.7\%$$

(iii) Return on Shareholders' Fund

$$= \frac{\text{Profit after Tax}}{\text{Shareholders Fund}} \times 100$$

$$= \frac{\text{Rs. 1,40,000}}{\text{Rs. 10,00,000}} \times 100 = 14\%$$

Problem 5:

A company has capital of Rs. 10,00,000; its turnover is 3 times the capital and the margin on sales is 6%. What is the return on investment.

SOLUTION :

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

$$3 = \frac{\text{Sales}}{\text{Rs. 10,00,000}}$$

$$\text{Sales} = \text{Rs. 30,00,000}$$

$$\text{Rate of Return on Investment} = \frac{\text{Gross Profit}}{\text{Investment}} \times 100$$

$$= \frac{\text{Rs. 1,80,000}}{\text{Rs. 10,00,000}} \times 100$$

$$= 18\%$$

Gross Profit = 6% of Rs. 30,00,000

$$= \text{Rs. 1,80,000}$$

Problem 6:

Ram & Company supplies you the following information regarding the year ended 31st

December:

Cash Sales	Rs. 80,000
Credit Sales	Rs. 2,00,000
Return Inward	Rs. 10,000
Opening Stock	Rs. 25,000
Closing Stock	Rs. 30,000

Gross Profit Ratio is 25%

Find out Inventory Turnover.

(B.Com. Madurai)

SOLUTION :

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory at Cost}}$$

$$\text{Net Sales} = \text{Rs. 80,000} + \text{Rs. 2,00,000} - \text{Rs. 10,000}$$

$$\text{Rs.} = 270,000$$

Cost of Goods Sold

$$= \text{Sales} - \text{Gross Profit}$$

$$= \text{Rs. 2,70,000} - (25\% \text{ of Rs. 2,70,000})$$

$$= \text{Rs. 2,70,000} - \text{Rs. 67,500}$$

$$= \text{Rs. 2,02,500}$$

Average Inventory

$$= \frac{\text{Rs. 25,000} + \text{Rs. 30,000}}{2}$$

$$= \text{Rs. 27,500}$$

Inventory Turnover

$$= \frac{\text{Rs. 2,02,500}}{\text{Rs. 27,500}} = 7.36 \text{ Times}$$

Significance:

A high Inventory turnover ratio is better than a low ratio. A high ratio implies good inventory management and an indication of under-investment. It will adversely affect the ability of a firm to meet customers' demand. At the same time, a higher ratio reflects efficient business activities.

A low inventory turnover ratio is dangerous. It is an indication of excessive inventory and over investment in inventory. A low ratio may be result of inferior quality goods, stock of un-saleable and absolute goods. A lower ratio reflects dull business and suggests that some steps should be taken to push up sales.

Problem 7:

The following is the Profit and Loss Account of Burn Ltd.

	Rs.		Rs.
To Opening Stock :			
Materials	60,000	By Sales	12,70,000
Finished Goods	80,000	By Closing Stock :	
		Materials	70,000
To Purchase (Raw Materials)	6,00,000	Finished Goods	1,00,000
To Wages	3,00,000		
To Factory Expenses	1,00,000		
To Other Expenses	2,00,000		
To Net Profit	1,00,000		
	14,40,000		14,40,000

You are required to calculate the following :

- (i) Stock Turnover
- (ii) Raw Materials Turnover
- (iii) Average Material Holding

(B.Com. Bhopal, Agra, Madurai)

SOLUTION :

$$(i) \text{ Stock Turnover} = \frac{\text{Cost of Sales}}{\text{Average Stock}} = \frac{\text{Rs. } 11,70,000}{\text{Rs. } 90,000} = \mathbf{13 \text{ times}}$$

$$(ii) \text{ Raw Materials Turnover} = \frac{\text{Raw Material Consumed}}{\text{Average Stock of Raw Materials}}$$

$$= \frac{\text{Rs. } 5,90,000}{\text{Rs. } 65,000} = \mathbf{9.08 \text{ times}}$$

$$(iii) \text{ Average Material Holding} = \frac{365}{\text{Raw Material Turnover}}$$

$$(\text{Turnover Period}) = \frac{365}{9.08} = \mathbf{40 \text{ days}}$$

Workings :

$$(1) \text{ Cost of Sales} = \text{Total Cost} + \text{Opening Stock of Finished Goods} - \text{Closing Stock of Finished Goods}$$

$$= \text{Rs. } 11,90,000 + \text{Rs. } 80,000 - \text{Rs. } 1,00,000 = \text{Rs. } 11,70,000$$

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

$$\text{Average Stock of Finished Goods} = \frac{\text{Rs. } 80,000 + \text{Rs. } 1,00,000}{2} = \text{Rs. } 90,000$$

$$\text{Average Stock of Raw Materials} = \frac{\text{Rs. } 60,000 + \text{Rs. } 70,000}{2} = \text{Rs. } 65,000$$

$$(3) \text{ Raw Materials Consumed} = \text{Opening Stock} + \text{Purchase} - \text{Closing Stock}$$

$$= \text{Rs. } 60,000 + \text{Rs. } 6,00,000$$

= Rs. 5,90,000

Problem 8:

Calculate Debtors Velocity from the following details:

Opening Balance of Debtors Rs. 10,000

Credit Sales during the year Rs. 20,000

Sales Returns Rs. 1,000

Discount on Sales Rs. 50

Cash collected from Debtors during the year Rs, 5,000

Bad Debts Rs. 500

Bad Debt Provision at 10%

SOLUTION :

The following components are needed to find Debtors Velocity :

1. Net Sales = Gross Sales – (Sales Returns + Discount on Sales)
= Rs. 20,000 – (Rs. 1,000 + Rs. 50)
= Rs. 18,950

2. Net Debtors on Closing = Opening Debtors
Add : Credit Sales
Less : Cash Collection
Less : Sales Returns
Less : Sales Discount

Rs. 10,000 + Rs. 20,000 – (Rs. 5,000 + Rs. 1,000 + Rs. 50) = Rs. 23,950

3. Average Debtors = $\frac{\text{Opening Debtors} + \text{Closing Debtors}}{2}$
= $\frac{\text{Rs. 10,000} + \text{Rs. 23,950}}{2}$ = Rs. 16,975

$$4. \text{ Average Daily Sales (credit)} = \frac{\text{Rs. 18,950}}{365} = \text{Rs. 52}$$

1. Debtors Turnover (Time)

$$= \frac{\text{Net Sales}}{\text{Average Debtors}} = \frac{\text{Rs. 18,950}}{\text{Rs. 16,975}} = 1.12 \text{ Times}$$

$$2. \text{ Collection Period} = \frac{365}{1.12} = 326 \text{ days}$$

3. Debtors Turnover (Percentage)

$$= \frac{\text{Average Debtors}}{\text{Net Sales}} = \frac{\text{Rs. 16,975}}{\text{Rs. 18,950}} \times 100 = 89.58\%$$

4. Collection Period (Days)

$$= \text{Debtors Turnover (percentage)} \times 365 = 89.58 \times 365 = 326 \text{ Days}$$

(or) 5. Collection Period

$$= \frac{\text{Average Debtors}}{\text{Average Daily Sales}} = \frac{\text{Rs. 16,975}}{\text{Rs. 52}} = 326 \text{ Days}$$

Note:

Bills Receivable from the buyer of fixed assets, should be excluded.

Bad and doubtful debts and their provisions are not deducted from the total debtors in order to avoid the impression that a larger amount of receivables have been collected.

Significance:

A turnover ratio of 8 signifies that debtors get converted into cash 8 times in a year. The average collection period of 1.5 months implies that debtors are collected in 45 days. The average collection period ratio measures the quality of debtors since it indicates the rapidity or slowness of their collectability. The shorter the average collection period, the better the quality of debtors.

The higher the Turnover Ratio and the shorter the average collection period, the better the trade credit management and the better the liquidity of debtors. That is, high Turnover Ratio and short collection period imply prompt payment on the part of debtors. On the other hand, low Turnover Ratio and long collection period reflects that payments by debtors are delayed.

Problem 9:

The Capital of a Company is as follows:

	Rs.
9% Preference Shares of Rs.10 each	3,00,000
Equity Shares of Rs.10 each	8,00,000
	<u>11,00,000</u>

The Accountant has ascertained the following information :

Profit (after tax at 60%) Rs. 2,70,000.

Depreciation Rs. 60,000

Equity Dividend Paid 20%

Market Price of equity share Rs. 40.

You are required to state the following, showing the necessary workings :

- (a) Dividend yield on the equity shares.
- (b) Cover for the preference and equity dividends.
- (c) Earnings for equity shares.
- (d) Price-earnings ratio

(CA)

SOLUTION :

(a) *Dividend yield on the Equity Shares :*

$$\begin{aligned} &= \frac{\text{Dividend per Share}}{\text{Market Price per Share}} \times 100 \\ &= \frac{\text{Rs. 2 (i.e. 20\% of Rs. 10)}}{\text{Rs. 40}} \times 100 = 5\% \end{aligned}$$

(b) *Dividend Coverage Ratio :*

$$\begin{aligned} \text{(i) Preference Shares} &= \frac{\text{Profit After Taxes}}{\text{Dividend Payable to Pref. Shareholders}} \\ &= \frac{\text{Rs. 2,70,000}}{\text{Rs. 27,000}} = \mathbf{10 \text{ Times}} \end{aligned}$$

(Rs. 27,000 is 9% of Rs. 3,00,000)

$$\begin{aligned} \text{(ii) Equity} &= \frac{\text{Profit After Taxes} - \text{Pref. Share Dividends}}{\text{Dividend Payable to Equity Shareholders at Rs. 2 per Share}} \\ &= \frac{\text{Rs. 2,70,000} - \text{Rs. 27,000}}{\text{Rs. 1,60,000 OR (80,000} \times \text{Rs. 2)}} \\ &= \frac{\text{Rs. 2,43,000}}{\text{Rs. 1,60,000}} = \mathbf{1.518 \text{ Times}} \end{aligned}$$

(c) *Earnings for Equity Shares :*

$$\begin{aligned} &= \frac{\text{Earnings available to Equity Shareholders}}{\text{Number of Equity Shares}} \\ &= \frac{\text{Rs. 2,43,000}}{80,000} = \mathbf{\text{Rs. 3.0375 per share}} \end{aligned}$$

(d) *Price-earning Ratio :*

$$\begin{aligned} &= \frac{\text{Market Price Per Share}}{\text{Earnings per Share}} \\ &= \frac{\text{Rs. 40}}{\text{Rs. 3.0375}} \\ &= \mathbf{13.168 \text{ Times}} \end{aligned}$$

Problem 10:

Assume that a firm has owners' equity of Rs. 1, 00,000. The ratios for the firm are:

Current Debt to Total Debt	0.40
Total Debt to owners' equity	0.60
Fixed Assets to owners' equity	0.60
Total Assets Turnover	2 Times
Inventory Turnover	8 Times

Complete the following Balance Sheet, given the information above.

<i>Equities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
Current Debt	Cash
Long-Term Debt	Inventory
Total Debt	Total Current Assets
Owners' Equity	Fixed Assets
Total Equity	Total Assets

SOLUTION.

<i>Equities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
Current Debt	24,000	Cash	60,000
Long-Term Debt	36,000	Inventory	40,000
Total Debt	60,000	Total Current Assets	1,00,000
Owners' Equity	1,00,000	Fixed Assets	60,000
Total Equity	1,60,000	Total Assets	1,60,000

Workings :

- Total Debt = 0.60 × Owners' Equity
 = 0.60 × Rs.1,00,000
 = Rs. 60,000
- Fixed Assets = 0.60 × Owners' Equity
 = 0.60 × Rs.1,00,000
 = Rs. 60,000
- Total Equity = Total Debt + Owners' Equity
 Rs. 60,000 + Rs. 1,00,000
 = Rs. 1,60,000
- Total Assets = Current Assets + Fixed Assets (Must be equal to
 = Rs. 1,60,000). Fixed Assets = Rs. 60,000
 Current Assets = Rs. 1,60,000 – Rs. 60,000 = Rs. 1,00,000
- Sales :

$$\text{Asset Turnover or 2} = \frac{\text{Sales}}{\text{Assets}}$$

$$2 = \frac{\text{Sales}}{\text{Rs. 1,60,000}}$$

$$\text{Sales} = \text{Rs. 1,60,000} \times 2 = \text{Rs. 3,20,000}$$

6. Inventory :

$$\text{Inventory Turnover or } 8 = \frac{\text{Sales}}{\text{Inventory}}$$

$$8 = \frac{\text{Rs. 3,20,000}}{\text{Inventory}}$$

$$\text{Inventory} = \frac{\text{Rs. 3,20,000}}{8} = \text{Rs. 40,000}$$

7. Cash = Current Assets – Inventory

$$= \text{Rs. 1,00,000} - \text{Rs. 40,000} = \text{Rs. 60,000}$$

8. Current Debt = $0.40 \times \text{Total Debt} = 0.40 \times \text{Rs. 60,000} = \text{Rs. 24,000}$

9. Long-Term Debt = Total Debt – Current Debt = Rs. 60,000 – Rs. 24,000 = Rs. 36,000

Problem 11:

With the following ratios and further information given below, prepare a Trading, Profit and Loss Account and Balance Sheet:

Gross Profit Ratio	25%
Net Profit Ratio	20%
Stock Turnover Ratio	10
Net Profit/Capital	1/5
Capital to Total Liabilities	1/2
Fixed Assets/Capital	5/4
Fixed Assets/Total Current Assets	5/7
Fixed Assets	Rs. 10,00,000
Closing Stock	Rs. 1,00,000

SOLUTION :

TRADING AND PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Opening Stock	20,000	By Sales	8,00,000
To Purchases		By Closing Stock	1,00,000
(Balancing Figure)	6,80,000		
To Gross Profit	2,00,000		
	9,00,000		9,00,000
To Expenses	40,000	By Gross Profit	2,00,000
(Balancing Figure)			
To Net Profit	1,60,000		
	2,00,000		2,00,000

BALANCE SHEET As on.....

Liabilities	Rs.	Assets	Rs.
Capital	6,40,000	Fixed Assets	10,00,000
Net Profit	1,60,000	Closing Stock	1,00,000
Liabilities	16,00,000	Current Assets	13,00,000
	24,00,000		24,00,000

Workings :

1. *Capital :*

$$\frac{\text{Fixed Assets}}{\text{Capital}} = \frac{5}{4}$$

$$\text{Capital} = \text{Rs. } 10,00,000 \times \frac{4}{5} = \text{Rs. } 8,00,000$$

2. *Liabilities :*

$$\text{Capital} = \frac{1}{2} \text{ of Total Liabilities}$$

$$\text{Liabilities} = \text{Rs. } 8,00,000 \times \frac{2}{1} = \text{Rs. } 16,00,000$$

3. Net Profit = $\frac{1}{5}$ of Capital = Rs. 8,00,000 $\times \frac{1}{5}$ = Rs. 1,60,000

4. Net Profit = 20% of sales = Rs. 1,60,000

So, Sales = Rs. 1,60,000 $\times \frac{100}{20}$ = **Rs. 8,00,000**

5. Gross Profit = 25% of Sales = 25% of Rs. 8,00,000 = **Rs. 2,00,000**

6. *Opening Stock* :

Stock Turnover = 10

Cost of Sales = Rs. 8,00,000 – Rs. 2,00,000 = Rs. 6,00,000

Average Inventory = Rs. 60,000

Opening Stock = Rs. 60,000 $\times 2$ = Rs. 1,20,000 – Rs. 1,00,000 = **Rs. 20,000**

7. *Current Assets* :

Fixed Assets/Total Current Assets = 5/7

Current Assets = Rs. 10,00,000 $\times \frac{7}{5}$ = Rs. 14,00,000

Other Current Assets = Current Assets – Stock
= Rs. 14,00,000 – Rs. 1,00,000
= **Rs. 13,00,000**

Problem 12:

Extract from financial accounts of X, Y, Z Ltd. are:

	Year I		Year II	
	Assets Rs.	Liabilities Rs.	Assets Rs.	Liabilities Rs.
Stock	10,000		20,000	
Debtors	30,000		30,000	
Payment in Advance	2,000		—	
Cash in hand	20,000		15,000	
Sundry Creditors		25,000		30,000
Acceptances		15,000		12,000
Bank Overdraft		—		5,000
	62,000	40,000	65,000	47,000

Sales amounted to Rs.3,50,000 in the first year and Rs.3,00,000 in the second year.

You are required to comment on the solvency position of the concern with the help of accounting ratios.
(C.A. Final ;M. Com. Madras)

SOLUTION :

Short-term Solvency Analysis

$$(1) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Year I: } \frac{10,000 + 30,000 + 2,000 + 20,000}{25,000 + 15,000} = \frac{62,000}{40,000} \\ = 1.55 : 1$$

$$\text{Year II: } \frac{20,000 + 30,000 + 15,000}{30,000 + 12,000 + 5,000} = \frac{65,000}{47,000} \\ = 1.38 : 1$$

$$(2) \text{ Liquid or Quick Ratio} = \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}}$$

$$\text{Year I: } \frac{30,000 + 20,000 + 2,000}{25,000 + 15,000} = \frac{52,000}{40,000} \\ = 1.30 : 1$$

$$\text{Year II: } \frac{30,000 + 15,000}{30,000 + 12,000 + 5,000} = \frac{45,000}{47,000} \\ = 0.96 : 1$$

$$(3) \text{ Inventory Turnover Ratio} = \frac{\text{Net Sales}}{\text{Average Inventory}}$$

$$\text{Year I: } \frac{3,50,000}{10,000} = 35 : 1$$

$$\text{Year II: } \frac{3,00,000}{15,000} = 20 : 1$$

$$(4) \text{ Inventory Current Assets Ratio} = \frac{\text{Inventory}}{\text{Total Current Assets}} \times 100$$

$$\text{Year I: } \frac{10,000}{62,000} \times 100 = 16\%$$

$$\text{Year II: } \frac{20,000}{65,000} \times 100 = 31\%$$

$$(5) \text{ Average Collection Period} = \frac{\text{Trade Receivables}}{\text{Net Credit Sales}} \times \text{No. of Working Days}$$

$$\text{Year I: } \frac{30,000}{3,50,000} \times 365 = 31.3 \text{ days}$$

$$\text{Year II: } \frac{30,000}{3,00,000} \times 365 = 36.5 \text{ days}$$

Long-Term Solvency Analysis

$$(1) \text{ Debt Equity Ratio} = \frac{\text{External Equities}}{\text{Internal Equities}}$$

$$\text{Year I: } \frac{25,000 + 15,000}{62,000 - 40,000} = \frac{40,000}{22,000} = 1.82 : 1$$

$$\text{Year II: } \frac{30,000 + 12,000 + 5,000}{65,000 - 47,000} = \frac{47,000}{18,000} = 2.61 : 1$$

$$(2) \text{ Proprietary Ratio is} = \frac{\text{Shareholder's Equities}}{\text{Total Equities}}$$

$$\text{Year I: } \frac{22,000}{62,000} = 0.35 : 1$$

$$\text{Year II: } \frac{18,000}{65,000} = 0.28 : 1$$

Problem 13:

Following is the summarised Balance Sheet of a concern as at 31st December:

BALANCE SHEET as on 31st December

<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
6% Preference Share		Goodwill	20,000
Capital	1,50,000	Land & Buildings	2,50,000
Equity Share Capital	2,50,000	Machinery	1,75,000
General Reserve	20,000	Furniture	10,000
Profit and Loss	15,000	Stock	90,000
5% Debentures	1,00,000	Sundry Debtors	21,000
Sundry Creditors	28,000	Cash at Bank	5,000
Bills Payable	12,000	Preliminary Expenses	4,000
	5,75,000		5,75,000

Other information :

Total sales Rs. 4,00,000 : 20% of which is made on credit. Gross Profit and Net Profit (after tax) for the year ended amounted to Rs. 80,000 and Rs. 20,000 respectively.

Comment on the Financial condition of the concern.

SOLUTION :

(1) *Current Ratio* :

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\text{Rs. 1,16,000}}{\text{Rs. 40,000}} = 2.9 : 1$$

(2) *Liquid Ratio* :

$$\frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} = \frac{\text{Rs. 26,000}}{\text{Rs. 40,000}} = 0.65 : 1$$

(3) *Proprietary Ratio* :

$$\frac{\text{Proprietors's Equity}}{\text{Total Assets}} = \frac{\text{Rs. 4,11,000}}{\text{Rs. 5,51,000}} = 0.75 : 1$$

(4) *Fixed Assets Proprietorship Ratio* :

$$\frac{\text{Fixed Assets}}{\text{Proprietors Equity}} = \frac{\text{Rs. 4,35,000}}{\text{Rs. 4,11,000}} = 1.06 : 1$$

(5) *Debt-Equity Ratio* :

$$\frac{\text{Total Debt}}{\text{Proprietors Equity}} = \frac{\text{Rs. 1,40,000}}{\text{Rs. 4,11,000}} = 0.34 : 1$$

(6) *Capital Gearing Ratio* :

$$\frac{\text{Equity Share Capital}}{\text{Pref. Share Capital + Debentures}} = \frac{\text{Rs. 2,50,000}}{\text{Rs. 2,50,000}} = 1 : 1$$

(7) *Gross Profit Ratio* :

$$\frac{\text{Gross Profit}}{\text{Sales}} \times 100 = \frac{\text{Rs. 80,000} \times 100}{\text{Rs. 4,00,000}} = 20\%$$

(8) *Net Profit Ratio* :

$$\frac{\text{Net Profit}}{\text{Sales}} \times 100 = \frac{\text{Rs. 20,000}}{\text{Rs. 4,00,000}} \times 100 = 5\%$$

(9) *Stock-Turnover Ratio*:

$$\frac{\text{Cost of Goods Sold}}{\text{Average Stock}} = \frac{\text{Rs. 3,20,000}}{\text{Rs. 90,000}} = 3.6 \text{ Times}$$

(10) *Debtors' Turnover Ratio* :

$$\frac{\text{Debtors}}{\text{Credit Sale}} \times 365 = \frac{\text{Rs. 21,000}}{\text{Rs. 80,000}} \times 365 = 96 \text{ Days}$$

(11) *Return on Proprietors' Fund* :

$$\frac{\text{Net Profit (after Tax)}}{\text{Proprietors - Fund}} = \frac{\text{Rs. 20,000}}{\text{Rs. 4,11,000}} = 0.05 : 1$$

(12) *Turnover to Fixed Assets Ratio* :

$$\frac{\text{Turnover}}{\text{Fixed Assets}} = \frac{\text{Rs. 4,00,000}}{\text{Rs. 4,35,000}} = 0.92 : 1$$

Workings :

1. *Current Assets:*

Stock

Debtors

Cash at Bank

Rs. 90,000

21,000

5,000

		<u>1,16,000</u>
2. <i>Current/Liquid Liabilities :</i>		
Sundry Creditors		Rs. 28,000
Bills Payable		<u>12,000</u>
		<u>40,000</u>
3. <i>Liquid Assets :</i>		
Sundry Debtors		Rs. 21,000
Cash at Bank		<u>5,000</u>
		<u>26,000</u>
4. <i>Fixed Assets :</i>		
Land and Buildings		Rs. 2,50,000
Machinery		1,75,000
Furnitures		<u>10,000</u>
		<u>4,35,000</u>
5. <i>Proprietors' Fund :</i>		
Equity Share Capital		Rs. 2,50,000
Preference Share Capital		1,50,000
General Reserve		20,000
Profit & Loss A/c.		<u>15,000</u>
		<u>4,35,000</u>
<i>Less :</i>		
Goodwill	Rs. 20,000	
Preliminary Expenses	<u>4,000</u>	<u>24,000</u>
		<u>4,11,000</u>
6. <i>Total Debts/Outside Liabilities :</i>		
5% Debentures		1,00,000
Current Liabilities		<u>40,000</u>
		<u>1,40,000</u>
7. <i>Shareholders' Equity :</i>		
Proprietors' Equity – Preference Share Capital		
		= Rs. 4,11,000 – Rs. 1,50,000 = Rs. 2,61,000
8. <i>Total Assets :</i>		
Total Fixed Assets + Total Current Assets		
		Rs. 4,35,000 + Rs.1,16,000 = Rs. 5,51,000

Comments:

1. Liquidity and Solvency Position:

Current Ratio is 2.9. It means current assets of Rs.2.90 are available against each rupee of current liability. The position is satisfactory on the basis of current ratio. However, the Liquid Ratio is 0.65: 1. It means greater part of current assets constitute stock; the stock is slow-moving. Therefore, the liquidity position is not satisfactory.

2. Credit Terms:

The collection system is faulty because debtors enjoy a credit facility for 96 days, which is beyond normal period. The performance of Debt Collection Department is poor.

3. Profitability:

Gross Profit Ratio is 20% which is a healthy sign. But the Net Profit Ratio is only 5%. It means operating expenses are higher.

4. Investment Structure:

Debt-Equity Ratio is 0.34: 1. It means the firm is not dependent on outside liabilities. The position is satisfactory. Capital Gearing Ratio is also satisfactory. However, the fixed assets to proprietorship ratio reveals that the entire fixed assets were not purchased by the proprietors' equity. It means the firm depends on outside liabilities. It is not desired.

5. Return on Proprietors' Fund:

5% of the sales is net profit and are available for the proprietors. The state of low return is not desirable.

Stock Turnover Ratio and Turnover to fixed assets indicate an unhealthy sign. Fixed assets are not used properly. It is a sign of under trading. The economic condition of the firm is not sound. The firm can increase the rate of return on investment by increasing production.