

7. RATIO ANALYSIS

ASSIGNMENT PROBLEMS

PROBLEM NO: 1

$$\text{Given} = \frac{\text{Fixed Assets}}{\text{Proprietor's Funds Ratio}} = 0.60$$

Since no debt fixed assets + net working capital = equity since fixed assets to proprietor's funds is 0.60 then net working capital to proprietor's fund = 1 – 0.60 = 0.40

$$\text{So} = \frac{\text{NWC}}{\text{Proprietor's Funds}} = \frac{2,40,000}{\text{Proprietor's Funds}} = 0.40$$

$$\text{Proprietor's Funds} = \frac{2,40,000}{0.40} = 6,00,000$$

Proprietor's funds = fixed assets + working capital

$$6,00,000 = \text{fixed assets} + 2,40,000$$

$$\text{Fixed Assets} = 6,00,000 - 2,40,000 = 3,60,000$$

$$\text{Working capital turnover ratio} = \frac{\text{Sales}}{\text{NWC}} = \frac{\text{Sales}}{2,40,000} = 8 \text{ times}$$

$$\text{Sales} = 8 \times 2,40,000 = 19,20,000$$

Net profit = 20% on proprietor's funds (equity)

$$= 20\% \text{ of } 6,00,000 = 1,20,000$$

$$\text{Net profit ratio} = \frac{1,20,000}{19,20,000} \times 100 = 6.25\%$$

PROBLEM NO: 2**i) Computation of Average Inventory**

$$\text{Gross Profit} = 25\% \text{ of Rs. } 30,00,000 = \text{Rs. } 7,50,000$$

$$\begin{aligned} \text{Cost of goods sold (COGS)} &= \text{Sales} - \text{Gross Profit} = \text{Rs. } 30,00,000 - \text{Rs. } 7,50,000 \\ &= \text{Rs. } 22,50,000 \end{aligned}$$

$$\begin{aligned} \text{Inventory Turnover Ratio} &= \text{COGS} / \text{Average Inventory} \\ 6 &= 22,50,000 / \text{Average inventory} \end{aligned}$$

$$\text{Average inventory} = \text{Rs. } 3,75,000$$

ii) Computation of Purchases

$$\text{Purchases} = \text{COGS} + (\text{Closing Stock} - \text{Opening Stock}) = \text{Rs. } 22,50,000 + 80,000^*$$

$$\text{Purchases} = \text{Rs. } 23,30,000$$

$$* \text{ Increase in Stock} = \text{Closing Stock} - \text{Opening Stock} = \text{Rs. } 80,000$$

iii) Computation of Average Debtors

$$\text{Let Credit Sales be Rs. } 100, \text{ Cash sales} = 25/100 \times 100 = \text{Rs. } 25$$

$$\text{Total Sales} = 100 + 25 = \text{Rs. } 125$$

$$\text{Total sales is Rs. } 125 \text{ credit sales is Rs. } 100$$

$$\text{If total sales is Rs. } 30,00,000, \text{ then credit sales is} = 30,00,000 \times 100/125$$

$$\text{Credit Sales} = \text{Rs. } 24,00,000$$

$$\text{Cash Sales} = (\text{Rs. } 30,00,000 - \text{Rs. } 24,00,000) = \text{Rs. } 6,00,000$$

$$\begin{aligned} \text{Debtors Turnover Ratio} &= \text{Net Credit Sales} / \text{Average debtors} = \\ &= 24,00,000 / \text{Average debtors} \end{aligned}$$

$$\text{Average Debtors} = \text{Rs. } 3,00,000$$

iv) Computation of Average Creditors

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

$$= \text{Rs. } 23,30,000 - \text{Rs. } 2,30,000 = \text{Rs. } 21,00,000$$

$$\begin{aligned} \text{Creditors Turnover Ratio} &= \text{Credit Purchases} / \text{Average Creditors} \\ 10 &= 21,00,000 / \text{Average Creditors} \end{aligned}$$

$$\text{Average Creditors} = \text{Rs. } 2,10,000$$

v) Computation of Average Payment Period

$$\text{Average Payment Period} = \text{Average Creditors} / \text{Average Daily Credit Purchases}$$

$$= \frac{2,10,000}{\frac{\text{Credit Purchases}}{365}} = \frac{2,10,000}{\frac{21,00,000}{365}} = 36.5 \text{ days}$$

Alternatively

$$\text{Average Payment Period} = 365 / \text{Creditors Turnover Ratio} = *365/10 = 36.5 \text{ days}$$

vi) Computation of Average Collection Period

$$\text{Average Collection Period} = \text{Average Debtors} / \text{Net Credit Sales} \times *365 = 3,00,000 / 24,00,000 \times 365 = 45.265 \text{ days}$$

Alternatively

$$\text{Average collection period} = 365 / \text{Debtors Turnover Ratio} = *365/8 = 45.625 \text{ days}$$

* 1 year is taken as 365 days

vii) Computation of Current Assets

$$\text{Current Ratio} = \text{Current Assets (CA)} / \text{Current Liabilities (CL)} = 2.4$$

$$2.4 \text{ Current Liabilities} = \text{Current Assets or CL} = \text{CA} / 2.4$$

$$\text{Further, Working capital} = \text{Current Assets} - \text{Current liabilities}$$

$$\text{So, Rs. } 2,80,000 = \text{CA} - \text{CA} / 2.4$$

$$\text{Rs. } 2,80,000 = 1.4 \text{ CA} / 2.4 \text{ Or, } 1.4 \text{ CA} = \text{Rs. } 16,72,000$$

$$\text{CA} = \text{Rs. } 4,80,000$$

viii) Computation of Current Liabilities

$$\text{Current liabilities} = 4,80,000 / 2.4 = \text{Rs. } 2,00,000$$

PROBLEM NO: 3

$$\text{Sales (credit)} = 8,00,000$$

$$\text{GP\%} = 20\%$$

$$\text{Current Ratio} = 3 : 1$$

$$\text{Current liabilities} = 1,00,000$$

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

$$3 = \frac{\text{Current Assets}}{1,00,000}$$

$$\text{Current Assets} = 3,00,000$$

Notes:

(1) Determination of deb closing debtors

$$\text{C.A} = \text{Debtors} + \text{Inventory} + \text{Cash}$$

$$3,00,000 = \text{Debtors} + 1,00,000 + 50,000$$

$$\text{Debtors at the end} = 1,50,000$$

(2) Determination of cost of goods sold

$$GP\% = 20\%$$

$$\text{Logs \%} = 100 - 20 = 80\%$$

$$\text{Cost of goods sold} = 8,00,000 \times 80\% = 6,40,000$$

(3) Determination of Average Inventory

$$\text{Inventory turnover} = \frac{\text{logs}}{\text{Average Inventory}}$$

$$4 = \frac{6,40,000}{\text{Average Inventory}}$$

$$\text{Average Inventory} = \frac{6,40,000}{4} = 1,60,000$$

$$\begin{aligned} \text{(4) Average Debtors} &= \frac{\text{Closing Debtors} + \text{Opening Debtors}}{2} \\ &= \frac{1,50,000 + 72,222}{2} = 1,11,111 \end{aligned}$$

$$\begin{aligned} \text{(5) Debtors turnover} &= \frac{\text{Credit Sales}}{\text{Average Debtors}} \\ &= \frac{8,00,000}{1,11,111} = 7.2 \text{ times} \end{aligned}$$

$$\text{Average collection period} = \frac{360}{7.2} = 50 \text{ days}$$

PROBLEM NO: 4

WORKING NOTES:

1. Current assets and Current liabilities computation:

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \frac{2.5}{1}$$

$$\text{Or Current assets} = 2.5 \text{ Current liabilities}$$

$$\text{Now Working capital} = \text{Current assets} - \text{Current liabilities}$$

$$\text{Or } 1.5 \text{ Current liabilities} = \text{Rs. } 2,40,000$$

$$\therefore \text{Current liabilities} = \text{Rs. } 1,60,000$$

$$\text{So, Current assets} = \text{Rs. } 1,60,000 \times 2.5 = \text{Rs. } 4,00,000$$

2. Computation of stock

$$\text{Liquid ratio} = \frac{\text{Liquid assets}}{\text{Current liabilities}}$$

$$\text{Or } 1.5 = \frac{\text{Current assets} - \text{Inventories}}{\text{Rs. } 1,60,000}$$

$$\text{Or Inventories} = \text{Rs. } 4,00,000 - \text{Rs. } 2,40,000$$

$$\text{Or Stock} = \text{Rs. } 1,60,000$$

3. Computation of Proprietary fund, Fixed assets, Capital and Sundry creditors

$$\text{Fixed Asset to Proprietary ratio} = \frac{\text{Fixed assets}}{\text{Proprietary fund}} = 0.75$$

\therefore Fixed assets = 0.75 Proprietary fund (PF) [FA + NWC = PF or NWC = PF - FA (i.e. 75 PF)] and Net working capital (NWC) = 0.25 Proprietary fund

Or Rs. 2,40,000/0.25 = Proprietary fund

Or Proprietary fund = Rs. 9,60,000

And Fixed assets = 0.75 proprietary fund = 0.75 x Rs. 9,60,000 = Rs. 7,20,000

Capital = Proprietary fund - Reserves & Reserves & Surplus = Rs. 9,60,000 - Rs. 1,60,000 = Rs. 8,00,000

Sundry creditors = (Current liabilities - Bank overdraft) = (Rs. 1,60,000 - Rs. 40,000) = Rs. 1,20,000

Balance Sheet

Liabilities	Rs.	Assets	Rs.
Capital	8,00,000	Fixed assets	7,20,000
Reserves & Surplus	1,60,000	Stock	1,60,000
Bank overdraft	40,000	Current assets	2,40,000
Sundry creditors	1,20,000		
	<u>11,20,000</u>		<u>11,20,000</u>

PROBLEM NO: 5

Gross Profit Rs. 54,000

Gross Profit Margin 20%

$$\therefore \text{Sales} = \frac{\text{Gross Profit}}{\text{Gross Profit Margin}} = \text{Rs. } 54,000 / 0.20 = \text{Rs. } 2,70,000$$

Credit Sales to Total Sales = 80%

$$\therefore \text{Credit Sales} = \text{Rs. } 2,70,000 \times 0.80 = \text{Rs. } 2,16,000$$

Total Assets Turnover = 0.3 times

$$\therefore \text{Total Assets} = \frac{\text{Sales}}{\text{Total Assets Turnover}} = \frac{\text{Rs. } 2,70,000}{0.3} = \text{Rs. } 9,00,000$$

Sales - Gross Profit = COGS

$$\therefore \text{COGS} = \text{Rs. } 2,70,000 - 54,000 = \text{Rs. } 2,16,000$$

Inventory turnover = 4 times

$$\text{Inventory} = \frac{\text{COGS}}{\text{Inventory turnover}} = \frac{2,16,000}{4} = \text{Rs. } 54,000$$

Average collection Period = 20 Days.

$$\therefore \text{Debtors turnover} = \frac{360}{\text{Average Collection Period}} = 360 / 20 = 18$$

$$\therefore \text{Debtors} = \frac{\text{Credit Sales}}{\text{Debtor turnover}} = \frac{2,16,000}{18} = \text{Rs. } 12,000$$

Current ratio = 1.8

$$1.8 = \frac{\text{Debtors} + \text{Inventory} + \text{Cash (Current Assets)}}{\text{Creditors (Current Liabilities)}}$$

$$1.8 \text{ Creditors} = (\text{Rs. } 12,000 + \text{Rs. } 54,000 + \text{Cash})$$

$$1.8 \text{ Creditors} = \text{Rs. } 66,000 + \text{Cash} \text{ -----(i)}$$

$$\text{Long-term Debt to Equity} = 40\%$$

$$\text{Shareholders' Funds (Equity)} = \text{Rs. } 6,00,000$$

$$\therefore \text{Long-term Debt} = \text{Rs. } 6,00,000 \times 40\% = \text{Rs. } 2,40,000$$

$$\text{Creditors} = \text{Rs. } 9,00,000 - (6,00,000 + 2,40,000) = \text{Rs. } 60,000$$

$$\therefore \text{Cash} = (\text{Rs. } 60,000 \times 1.8) - \text{Rs. } 66,000 = \text{Rs. } 42,000 \text{ [From equation (i)]}$$

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Balance Sheet

Liabilities	Amount (Rs.)	Assets	Amount (Rs.)
Creditors	60,000	Cash	42,000
Long-term debt	2,40,000	Debtors	12,000
Shareholders' funds	6,00,000	Inventory	54,000
		Fixed Assets (Balancing figure)	<u>7,92,000</u>
	<u>9,00,000</u>		<u>9,00,000</u>

PROBLEM NO: 6

a) Preparation of Balance Sheet of a Company

Working Notes:

- i) Cost of Goods Sold = Sales - Gross Profit (= 25% of Sales)
= Rs. 30,00,000 - Rs. 7,50,000 = Rs. 22,50,000
- ii) Closing Stock = Cost of Goods Sold / Stock Turnover
= Rs. 22,50,000/6 = Rs. 3,75,000
- iii) Fixed Assets = Cost of Goods Sold / Fixed Assets Turnover
= Rs. 22,50,000/1.5 = Rs. 15,00,000
- iv) Current Assets = Current Ratio = 1.5 and Liquid Ratio = 1
Stock = 1.5 - 1 = 0.5
Current Assets = Amount of Stock x 1.5/0.5 = Rs. 3,75,000 x 1.5/0.5 = Rs. 11,25,000
- v) Liquid Assets (Debtors and Cash) = Current Assets - Stock
= Rs. 11,25,000 - Rs. 3,75,000 = Rs. 7,50,000
- vi) Debtors = Sales x Debtors Collection period / 12 = Rs. 30,00,000 x 2 / 12 = Rs. 5,00,000
- vii) Cash = Liquid Assets - Debtors = Rs. 7,50,000 - Rs. 5,00,000 = Rs. 2,50,000
- viii) Net worth = Fixed Assets / 1.2 = Rs. 15,00,000/1.2 = Rs. 12,50,000
- ix) Reserves and Surplus
Reserves and Share Capital = 0.6 + 1 = 1.6
Reserves and Surplus = Rs. 12,50,000 x 0.6/1.6 = Rs. 4,68,750
- x) Share Capital = Net worth - Reserves and Surplus = Rs. 12,50,000 - Rs. 4,68,750 = Rs. 7,81,250
- xi) Current Liabilities = Current Assets/ Current Ratio = Rs. 11,25,000/1.5 = Rs. 7,50,000
- xii) Long-term Debts
Capital Gearing Ratio = Long-term Debts / Equity Shareholders' Fund
Long-term Debts = Rs. 12,50,000 x 0.5 = Rs. 6,25,000

Balance Sheet of a Company

Liabilities	Amount (Rs.)	Assets	Amount (Rs.)
Equity Share Capital	7,81,250	Fixed Assets	15,00,000
Reserves and Surplus	4,68,750	Current Assets	
Long-term debts	6,25,000	Stock	3,75,000
		Debtors	5,00,000
		Cash	<u>2,50,000</u>
	<u>26,25,000</u>		<u>26,25,000</u>

b) Statement Showing Working Capital Requirement

A.	Current Assets		
	Stock	3,75,000	
	Debtors	5,00,000	

	Cash	2,50,000	11,25,000
B.	Current Liabilities		7,50,000
	Working Capital before Provision (A - B)		3,75,000
Add:	Provision for Contingencies @ 10% of Working Capital including Provision i.e. 1/9th of Working Capital before Provision: 3,75,000 x 1/9		41,667
	Working Capital Requirement including Provision		4,16,667

PROBLEM NO: 7

Statement showing calculation of operating expenses for the year ended 31-3-13

Particulars	Rs.	Rs.
Net Profit (@9% of sales)		9,00,000
Add Income tax @ 40%		6,00,000
	Profit before tax (PBT)	15,00,000
Add Debenture Interest		2,00,000
	Profit before interest & tax (PBIT)	17,00,000
Sales		1,00,00,000
Less cost of goods sold	40,00,000	
PBIT	17,00,000	(57,00,000)
Operating Expenses		43,00,000

Balance sheet as on 31-03-2013

Liabilities	Rs.	Assets	Rs.
Share capital	15,00,000	Fixed Assets	35,83,333
Reserves & surplus	15,00,000	Current Assets:	
15% debentures	13,33,333	Stock	4,00,000
Sundry Creditors	5,00,000	Debtors	6,00,000
		Cash	2,50,000
	48,33,333		48,33,333

Working Notes:

The return on net worth is 30% therefore the profit after tax of 9,00,000 should be equated to 30% of the net worth

$$(i) \text{ Net worth} \times \frac{30}{100} = 9,00,000$$

$$\text{Net worth} = 9,00,000 \times \frac{100}{30} = 30,00,000$$

The ratio of share capital do reserves = 1 : 1

$$\text{Share capital} = 30,00,000 \times \frac{1}{2} = 15,00,000$$

$$\text{Reserves} = 30,00,000 \times \frac{1}{2} = 15,00,000$$

(ii) Debentures

Interest on debentures @ 15% = 2,00,000

$$\text{Debentures} = \frac{2,00,000}{15\%} = 13,33,333$$

(iii) Current Assets

Current Ratio = 2.5

Creditors = Rs. 5,00,000

$$\begin{aligned} \text{Current Assets} &= 2.5 \times \text{Current Liabilities} \\ &= 2.5 \times 5,00,000 = 12,50,000 \end{aligned}$$

(iv) Fixed Assets

Liabilities	Rs.
Share capital	15,00,000
Reserves & Surplus	15,00,000
15% Debentures	13,33,333
Payables	<u>5,00,000</u>
	48,33,333
Less: Current Assets	<u>(12,50,000)</u>
Fixed Assets	<u>35,83,333</u>

(v) Composition of Current Assets

$$\text{Inventory turnover} = 10$$

$$\frac{\text{Cost of goods sold}}{\text{Closing Stock}} = 10$$

$$\text{Closing Stock} = \frac{40,00,000}{10} = 4,00,000$$

Composition	Rs.
Stock	4,00,000
Receivables	6,00,000
Cash (Balancing figure)	<u>2,50,000</u>
	<u>12,50,000</u>

PROBLEM NO. 8

(a) Working Notes:

$$\begin{aligned} \text{(i) Calculation of sales} &= \frac{\text{Fixed Assets}}{\text{Sales}} \times \frac{1}{4} = \frac{40,00,000}{\text{Sales}} \times \frac{1}{4} \\ &= 40,00,000 \times 4 = 1,60,00,000 \end{aligned}$$

(ii) Calculation of current Assets

$$\frac{\text{Fixed Assets}}{\text{Current Assets}} = \frac{2}{1}$$

$$\text{Current Assets} = \frac{40,00,000}{2} = 20,00,000$$

(iii) Calculation of raw material consumption and direct wages.

Particulars	Rs.
Sales	1,60,00,000
Less: Gross Profit (20%)	(32,00,000)
Works Cost	1,28,00,000

Raw material consumption (30% of works cost) 38,00,000

Direct wages (20% of works cost) 25,60,000

(iv) Calculation of stock of Raw Material (1 months is usage)

$$= 38,00,000 \times \frac{1}{12} = 3,20,000$$

(v) Calculation of stock of finished goods = 5% of works cost

$$= 5\% \times 1,28,00,000 = 6,40,000$$

(vi) Calculation of Current Liabilities

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{20,00,000}{\text{Current Liabilities}} = \frac{2}{1}$$

$$\text{Current Liabilities} = \frac{20,00,000}{2} = 10,00,000$$

(vii) Calculation of debtors

$$\text{Average collection period} = \frac{\text{Debtors}}{\text{Credit Sales}} \times 365$$

$$\frac{\text{Debtors}}{1,60,00,000} \times 360 = 20$$

$$\text{Debtors} = 8,88,888 \text{ (OR) } 8,89,000$$

(viii) Calculation of long term loan = $\frac{\text{Long term loan}}{\text{Current Liabilities}} = \frac{3}{1} = \frac{\text{Long term loan}}{10,00,000} = \frac{3}{1}$

$$\text{Long term loan} = 30,00,000$$

(ix) Calculation of cash balance

Particulars	Rs.
Current Assets	20,00,000
Less Debtors	(8,89,000)
Raw Material stock	(3,20,000)
Finished Goods stock	(6,40,000)
Cash Balance	1,51,000

(x) Calculation of net worth

Particulars	Rs.
Fixed Assets	40,00,000
Current Assets	20,00,000
Total Assets	60,00,000
Less: Long term loans	30,00,000
Current Liabilities	10,00,000
Net worth	20,00,000

$$\text{Net worth} = \text{share capital} + \text{reserves} = 20,00,000 \text{ (1)}$$

$$\frac{\text{Capital}}{\text{Reserves \& Surplus}} = \frac{2}{3} \Rightarrow 3 \text{ Capital} = 2 \text{ reserves Surplus}$$

$$\text{Substitute (2) in (1)} = \frac{2}{3} \text{ reserves \& Surplus} + \text{Reserves} = 20,00,000$$

$$50 \text{ reserves} = 60,00,000$$

$$\text{Reserves} = 12,00,000$$

$$\text{Share capital} = 20,00,000 - 12,00,000 = 8,00,000$$

Profit and loss A/c of PQR Ltd for the year ended 31-12-2018.

Particulars	Rs.	Particulars	Rs.
To Direct materials	38,40,000	By Sales	1,60,00,000
To direct Wages	25,60,000		
To works (overheads) (b/f)	64,00,000		
To Gross Profit (20% Sales)	32,00,000		
	1,60,00,000		1,60,00,000
To Selling & Distribution expenses (Bal f/g)	16,00,000	By Gross Profit	32,00,000
To Net Profit (b/f)	16,00,000		
	32,00,000		32,00,000

Balance Sheet of PQR Ltd as at 31-12-2018

Liabilities	Rs.	Assets	Rs.
Share Capital	8,00,000	Fixed Assets	40,00,000
Reserves & Surplus	12,00,000	Current Assets	
Long term loans	30,00,000	Stock of R/M	3,20,000
Current Liabilities	10,00,000	Stock of F.G	6,40,000
		Debtors	8,89,000
		Cash	1,51,000
	60,00,000		60,00,000

PROBLEM NO: 9

The net profit is calculated as follows:

Particulars	Rs.	Rs.
Sales (150% of Rs. 4,80,000)		7,20,000
Direct costs		4,80,000
Gross profit		2,40,000
Operating expenses	80,000	
Interest charges (8% of Rs. 4,00,000)	<u>32,000</u>	<u>1,12,000</u>
Profit before taxes		1,28,000
Taxes (@ 50%)		64,000
Net profit after taxes		64,000

- Net profit margin = Profit after Taxes/Sales = $64,000/7,20,000 = 0.89$ or 8.9%
- Net profit margin = EBIT (1-t)/ Sales = $1,60,000 (1-0.5)/7,20,000 = 0.111$ or 11.1%
- Return on Assets = = EBIT (1-t)/ Assets = $1,60,000(1-0.5)/8,00,000 = 0.10$ or 10%
- Asset turnover = Sales/ Assets = $7,20,000/8,00,000 = 0.9$ times
- Return on equity = Net profit after taxes/Owners equity =Rs. $64,000 / 50\%$ of 8,00,000
= $64,000/4,00,000 = 0.16$ or 16%

PROBLEM NO: 10

- (i) Computation of cover for preference and equity dividends

Preference dividend 10% of 50,00,000 = 5,00,000

Equity dividend 10% of 70,00,000 = 7,00,000

Total dividend = 12,00,000

- (ii) Cover for preference & equity dividend =
- $\frac{\text{Preference dividend} + \text{equity dividend}}{\text{PAT}}$

= $\frac{12,00,000}{15,00,000} = 1.25$

- (iii) Earnings per shares =
- $\frac{\text{Earnings available to egshareholders}}{\text{No. of equity shares}}$

$$= \frac{15,00,000 - 5,00,000}{70,000} = 14.29$$

$$\text{Price earnings ratio} = \frac{\text{Market Price}}{\text{EPS}} = \frac{200}{14.29} = 14 \text{ times}$$

PROBLEM NO: 11

Ratios	Navya Ltd.	Industry Norms
1. $\frac{\text{Current Assets}}{\text{Current Liabilities}}$	$\frac{52,80,000}{19,80,000} = 2.67$	2.50
2. $\frac{\text{Sales}}{\text{Debtors}}$	$\frac{1,10,00,000}{11,00,000} = 10.0$	8.00
3. $\frac{\text{Sales}}{\text{Stock}}$	$\frac{1,10,00,000}{33,00,000} = 3.33$	9.00
4. $\frac{\text{Sales}}{\text{Total Assets}}$	$\frac{1,10,00,000}{77,00,000} = 1.43$	2.00
5. $\frac{\text{Net Profit}}{\text{Sales}}$	$\frac{2,31,000}{1,10,00,000} = 2.10\%$	3.50%
6. $\frac{\text{Net Profit}}{\text{Total Assets}}$	$\frac{2,31,000}{77,00,000} = 3.00\%$	7%
7. $\frac{\text{Net Profit}}{\text{Net Worth}}$	$\frac{2,31,000}{48,00,000} = 4.81\%$	10.5%
8. $\frac{\text{Total Debt}}{\text{Total Assets}}$	$\frac{29,00,000}{77,00,000} = 37.66\%$	60%

Comments:

- The position of Navya Ltd. is better than the industry norm with respect to Current Ratios and the Sales to Debtors Ratio.
- However, the position of sales to stock and sales to total assets is poor comparing to industry norm.
- The firm also has its net profit ratios, net profit to total assets and net profit to total worth ratio much lower than the industry norm.
- Total debt to total assets ratio suggest that, the firm is geared at lower level and debt are used to Asset.

PROBLEM NO: 12**i) Liquidity ratios:**

- Current ratio = CA/CL = Rs. 25,88,000 / Rs. 6,40,000 = 4.04 : 1 (previous year); Rs. 30,52,000 / Rs. 8,00,000 = 3.82 : 1 (current year)
- Acid test ratio = (Rs. 25,88,000 - Rs.18,68,000) / Rs. 6,40,000 = 1.125 : 1 (previous year); (Rs. 30,52,000 - Rs. 21,72,000) / Rs. 8,00,000 = 1.1 : 1 (current year)

ii) Solvency ratios:**a) Debt-equity ratios:**

- Total outside debts/Equity funds = Rs. 22,40,000/Rs. 24,68,000 = 0.91 (previous year) ; Rs. 24,00,000/Rs. 28,12,000 = 0.85 (current year)

2. Long-term debts/Equity funds = Rs. 16,00,000/Rs. 24,68,000 = 0.65 (previous year); Rs. 16,00,000/Rs. 28,12,000 = 0.57 (current year)

b) **Interest coverage ratio:**

= EBIT/Interest charges = Rs.12,00,000/Rs.1,60,000 =7.5 times (current year)

iii) **Profitability ratios (current year):**

a) Gross profit ratio = (Gross profit/sales) × 100 = (Rs. 12,00,000/Rs. 40,00,000) × 100 = 30 per cent

b) Net profit ratio = (Net profit/sales) × 100 = (Rs. 6,76,000/Rs. 40,00,000) × 100 = 16.9 per cent

c) Return on total resources = (EAT + Interest – Tax savings on interest)/Total assets) × 100 = [(Rs.6,76,000 + Rs. 1,60,000 – Rs. 56,000)/Rs. 64,00,000] × 100 = 12.2 per cent

d) Return on capital employed = [(EAT + Interest – Tax savings on interest)/Total assets] × 100 = [(Rs. 6,76,000 + Rs. 1,60,000 – Rs. 56,000)/44,12,000] × 100 = 17.7 per cent

e) Return on equity funds = (Net profit after taxes/Equity funds) × 100 = (Rs. 6,76,000/Rs. 28,12,000) × 100 = 24 per cent.

Note: Ratios (c), (d) and (e) can also be determined by taking average total assets/capital employed/equity funds.

iv) **Activity ratios:**

a) Debtors turnover = Rs. 40,00,000/Rs. 3,60,000 = 11.1 times

b) Stock turnover = Rs. 28,00,000/Rs. 20,00,000 = 1.4 times

c) Total assets turnover = Rs. 28,00,000/Rs. 64,00,000 = 0.44 times

Comment: The company's position is quite sound from the point of view of liquidity, solvency and profitability. However, its activity ratios, particularly in terms of utilization, do not seem to be satisfactory.

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To **MASTER MINDS**, Guntur

THE END