**Q.1** Following figures are available in the books Tirupati Ltd.

| | |
|---|---|
| Fixed assets turnover ratio | 8 times |
| Capital turnover ratio | 2 times |
| Inventory Turnover | 8 times |
| Receivable turnover | 4 times |
| Payable turnover | 6 times |
| G P Ratio | 25% |

Gross profit during the year amounts to ₹ 8,00,000. There is no long-term loan or overdraft. Reserve and surplus amount to ₹ 2,00,000. Ending inventory of the year is ₹ 20,000 above the beginning inventory.

**Required:**

CALCULATE various assets and liabilities and PREPARE a Balance sheet of Tirupati Ltd.

Ans:

**(a)** $\text{G.P. ratio} = \frac{\text{Gross Profit}}{\text{Sales}} = 25\%$

$$\text{Sales} = \frac{\text{Gross Profit}}{25} \times 100 = \frac{₹\,8,00,000}{25} \times 100 = ₹\,32,00,000$$

**(b)** Cost of Sales = Sales – Gross profit

= ₹ 32,00,000 - ₹ 8,00,000

= ₹ 24,00,000

**(c)** Receivable turnover $= \frac{\text{Sales}}{\text{Receivables}} = 4$

$$= \text{Receivables} = \frac{\text{Sales}}{4} \quad 4 = \frac{₹32,00,000}{} = ₹\,8,00,000$$

**(d)** Fixed assets turnover $= \frac{\text{Cost of Sales}}{\text{Fixed Assets}} = 8$

$$\text{Fixed assets} = \frac{\text{Cost of Sales}}{8} \quad 8 = \frac{₹\,24,00,000}{} = ₹\,3,00,000$$

**(e)** Inventory turnover $= \frac{\text{Cost of Sales}}{\text{Average Stock}} = 8$

$$\text{Average Stock} = \frac{\text{Cost of Sales}}{8} \quad 8 = \frac{₹\,24,00,000}{} = ₹\,3,00,000$$

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

$$\text{Average Stock} = \frac{\text{Opening Stock} + \text{Opening Stock} + 20,000}{2}$$

Average Stock = Opening Stock + ₹ 10,000

Opening Stock = Average Stock - ₹ 10,000

= ₹ 3,00,000 - ₹10,000

= ₹ 2,90,000

Closing Stock = Opening Stock + ₹ 20,000

= ₹ 2,90,000 + ₹ 20,000

= ₹ 3,10,000

**(f)** Payable turnover = $\frac{\text{Purchases}}{\text{Payables}} = 6$

Purchases = Cost of Sales + Increase in Stock

= ₹ 24,00,000 + ₹ 20,000

= ₹ 24,20,000

Payables = $\frac{\text{Purchase}}{6} \quad \frac{}{6} = \frac{₹\,24,20,000}{} = ₹\,4,03,333$

**(g)** Capital turnover = $\frac{\text{Cost of Sales}}{\text{Capital Employed}} = 2$

Capital Employed = $\frac{\text{Cost of Sales}}{2} \quad \frac{}{2} = \frac{₹\,24,00,000}{} = ₹\,12,00,000$

**(h)** Share Capital = Capital Employed – Reserves & Surplus

= ₹ 12,00,000 – ₹ 2,00,000 = ₹ 10,00,000

**Balance Sheet of Tirupati Ltd as on.....**

| Liabilities | Amount (₹) | Assets | Amount (₹) |
|---|---|---|---|
| Share Capital | 10,00,000 | Fixed Assets | 3,00,000 |
| Reserve & Surplus | 2,00,000 | Closing Inventories | 3,10,000 |
| Payables | 4,03,333 | Receivables | 8,00,000 |
| | | Other Current Assets | 1,93,333 |
| | 16,03,333 | | 16,03,333 |

(Fixed Asset turnover, inventory turnover capital turnover is calculated on cost of sales)

**Q.2** Assuming the current ratio of a Company is 2, STATE in each of the following cases whether the ratio will improve or decline or will have no change:

(i) Payment of current liability

(ii) Purchase of fixed assets by cash

(iii) Cash collected from Customers

(iv) Bills receivable dishonoured

(v) Issue of new shares

Ans:

Current Ratio = $\frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}} = 2$ i.e. 2 : 1

| S. No. | Situation | Improve/ Decline/ No Change | Reason |
|---|---|---|---|
| (i) | Payment of Current liability | Current Ratio will improve | Let us assume CA is ₹ 2 lakhs & CL is ₹ 1 lakh. If payment of Current Liability = ₹10,000 then, CA = 1, 90,000 CL = 90,000. Current Ratio = $\frac{1,90,000}{90,000}$ = 2.11 : 1. When Current Ratio is 2:1 Payment of Current liability will reduce the same amount in the numerator and denominator. Hence, the ratio will improve. |
| (ii) | Purchase of Fixed Assets by cash | Current Ratio will decline | Since the cash being a current asset converted into fixed asset, current assets reduced, thus current ratio will fall. |
| (iii) | Cash collected from Customers | Current Ratio will not change | Cash will increase and Debtors will reduce. Hence No Change in Current Asset. |
| (iv) | Bills Receivable dishonoured | Current Ratio will not change | Bills Receivable will come down and debtors will increase. Hence no change in Current Assets. |
| (v) | Issue of New Shares | Current Ratio will improve | As Cash will increase, Current Assets will increase and current ratio will increase. |

**Q.3** From the following table of financial ratios of R. Textiles Limited, comment on various ratios given at the end:

| Ratios | 2017 | 2018 | Average of Textile Industry |
|---|---|---|---|
| **Liquidity Ratios** | | | |
| Current ratio | 2.2 | 2.5 | 2.5 |
| Quick ratio | 1.5 | 2 | 1.5 |
| Receivable turnover ratio | 6 | 6 | 6 |
| Inventory turnover | 9 | 10 | 6 |
| Receivables collection period | 87 days | 86 days | 85 days |
| **Operating profitability** | | | |
| Operating income –ROI | 25% | 22% | 15% |
| Operating profit margin | 19% | 19% | 10% |
| **Financing decisions** | | | |
| Debt ratio | 49.00% | 48.00% | 57% |
| **Return** | | | |
| Return on equity | 24% | 25% | 15% |

COMMENT on the following aspect of R. Textiles Limited

(i) Liquidity

(ii) Operating profits

(iii) Financing

(iv) Return to the shareholders

Ans:

| Ratios | Comment |
|---|---|
| Liquidity | Current ratio has improved from last year and matching the industry average.<br>Quick ratio also improved than last year and above the industry average. This may happen due to reduction in receivable collection period and quick inventory turnover. However, this also indicates idleness of funds.<br>Overall it is reasonably good. All the liquidity ratios are either better or same in both the year compare to the Industry Average. |
| Operating Profits | Operating Income-ROI reduced from last year but Operating Profit Margin has been maintained. This may happen due to variability of cost on turnover. However, both the ratio are still higher than the industry average. |
| Financing | The company has reduced its debt capital by 1% and saved operating profit for equity shareholders. It also signifies that dependency on debt compared to other industry players (57%) is low. |
| Return to the shareholders | R's ROE is 24 per cent in 2017 and 25 per cent in 2018 compared to an industry average of 15 per cent. The ROE is stable and improved over the last year. |

**Q.4** The following is the Profit and loss account and Balance sheet of KLM LLP.

**Trading and Profit & Loss Account**

| Particulars | Amount (₹) | Particulars | Amount (₹) |
|---|---|---|---|
| To Opening stock | 12,46,000 | By Sales | 1,96,56,000 |
| To Purchases | 1,56,20,000 | By Closing stock | 14,28,000 |
| To Gross profit c/d | 42,18,000 | | |
| | 2,10,84,000 | | 2,10,84,000 |
| | | By Gross profit b/d | 42,18,000 |
| To Administrative expenses | 18,40,000 | By Interest on investment | 24,600 |
| To Selling & distribution expenses | 7,56,000 | By Dividend received | 22,000 |
| To Interest on loan | 2,60,000 | | |
| To Net profit | 14,08,600 | | |
| | 42,64,600 | | 42,64,600 |

**Balance Sheet as on.....**

| Capital & Liabilities | Amount (₹) | Assets | Amount (₹) |
|---|---|---|---|
| Capital | 20,00,000 | Plant & machinery | 24,00,000 |
| Retained earnings | 42,00,000 | Building | 42,00,000 |
| General reserve | 12,00,000 | Furniture | 12,00,000 |
| Term loan from bank | 26,00,000 | Sundry receivables | 13,50,000 |
| Sundry Payables | 7,20,000 | Inventory | 14,28,000 |
| Other liabilities | 2,80,000 | Cash & Bank balance | 4,22,000 |
| | 1,10,00,000 | | 1,10,00,000 |

You are required to COMPUTE:

(i) Gross profit ratio (ii) Net profit ratio (iii) Operating cost ratio

(iv) Operating profit ratio (v) Inventory turnover ratio (vi) Current ratio

(vii) Quick ratio (viii) Interest coverage ratio (ix) Return on capital employed

(x) Debt to assets ratio.

Ans:

(i) Gross profit ratio = $\frac{\text{Gross profit}}{\text{Sales}} \times 100 = \frac{₹42,18,000}{₹1,96,56,000} \times 100 = 21.46\%$

(ii) Net profit ratio = $\frac{\text{Net profit}}{\text{Sales}} \times 100 = \frac{₹14,08,600}{₹1,96,56,000} \times 100 = 7.17\%$

(iii) Operating ratio = $\frac{\text{Operating cost}}{\text{Sales}} \times 100$

Operating cost = Cost of goods sold + Operating expenses

Cost of goods sold = Sales – Gross profit

= 1,96,56,000 - 42,18,000 = 1,54,38,000

Operating expenses = Administrative expenses + Selling & distribution expenses

= 18,40,000 + 7,56,000 = 25,96,000

Therefore, Operating ratio = $\frac{1,54,38,000 + 25,96,000}{1,96,56,000} \times 100$

$= \frac{1,80,34,000}{1,96,56,000} \times 100 = 91.75\%$

(iv) Operating profit ratio = 100 – Operating cost ratio

= 100 – 91.75% = 8.25%

(v) Inventory turnover ratio = $\frac{\text{Cost of goods sold}}{\text{Average stock}}$

$= \frac{1,54,38,000}{(14,28,000 + 12,46,000)/2}$

$= \frac{1,54,38,000}{13,37,000} = 11.55 \text{ times}$

(vi) Current ratio = $\frac{\text{Current assets}}{\text{Current liablities}}$

Current assets = Sundry receivables + Inventory + Cash & Bank balance

= 13,50,000 + 14,28,000 + 4,22,000 = 32,00,000

Current liabilities = Sundry Payables + Other liabilities

= 7,20,000 + 2,80,000 = 10,00,000

Current ratio = $\frac{32,00,000}{10,00,000}$ = 3.2 times

(vii) Quick Ratio = $\frac{\text{Current assets} - \text{Inventories}}{\text{Current liablities}}$

= $\frac{32,00,000 - 14,28,000}{10,00,000}$ =1.77 times

(viii) Interest coverage ratio = $\frac{\text{EBIDT}}{\text{Interest}} = \frac{\text{Net profit} + \text{Interest}}{\text{Interest}}$

= $\frac{14,08,600 + 2,60,000}{2,60,000}$ = 6.42 times

(ix) Return on capital employed (ROCE) = $\frac{\text{EBIT}}{\text{Capital employed}} \times 100$

Capital employed = Capital + Retained earnings + General reserve + Term loan

= 20,00,000 + 42,00,000 + 12,00,000 + 26,00,000

= 1,00,00,000

Therefore, ROCE = $\frac{16,68,600}{1,00,00,000} \times 100$ = 16.69%

(x) Debt to assets ratio = $\frac{\text{Debts}}{\text{Total assets}} \times 100 = \frac{26,00,000}{1,10,00,000} \times 100$ =23.64%

**Q.5** MT Limited has the following Balance Sheet as on March 31, 2019 and March 31, 2020:

Balance Sheet

| | ₹ in lakhs | |
|---|---|---|
| | **March 31, 2019** | **March 31, 2020** |
| Sources of Funds: | | |
| Shareholders' Funds | 2,500 | 2,500 |
| Loan Funds | 3,500 | 3,000 |
| | 6,000 | 5,500 |
| Applications of Funds: | | |
| Fixed Assets | 3,500 | 3,000 |
| Cash and bank | 450 | 400 |
| Receivables | 1,400 | 1,100 |
| Inventories | 2,500 | 2,000 |
| Other Current Assets | 1,500 | 1,000 |
| Less: Current Liabilities | (1,850) | (2,000) |
| | 6,000 | 5,500 |

The Income Statement of the MT Ltd. for the year ended is as follows:

| | ₹ in lakhs | |
|---|---|---|
| | **March 31, 2019** | **March 31, 2020** |
| Sales | 22,500 | 23,800 |
| Less: Cost of Goods sold | (20,860) | (21,100) |
| Gross Profit | 1,640 | 2,700 |
| Less: Selling, General and Administrative expenses | (1,100) | (1,750) |
| Earnings before Interest and Tax (EBIT) | 540 | 950 |
| Less: Interest Expense | (350) | (300) |
| Earnings before Tax (EBT) | 190 | 650 |
| Less: Tax | (57) | (195) |
| Profits after Tax (PAT) | 133 | 455 |

Required:

CALCULATE for the year 2019-20-

(a) Inventory turnover ratio

(b) Financial Leverage

(c) Return on Capital Employed (ROCE)

(d) Return on Equity (ROE)

(e) Average Collection period.

[Take 1 year = 365 days]

Ans:

**1. Ratios for the year 2019-2020**

**(a) Inventory turnover ratio**

$$= \frac{\text{COGS}}{\text{Average Inventory}} = \frac{₹\,21,100}{\frac{₹\,(2,500 + 2,000)}{2}} = 9.4$$

**(b) Financial leverage**

$$= \frac{\text{EBIT}}{\text{EBT}} = \frac{₹\,950}{₹\,650} = 1.46$$

**(c) ROCE**

$$= \frac{\text{EBIT}\,(1-t)}{\text{Average Capital Employed}} = \frac{₹\,950\,(1-0.3)}{₹\left(\frac{6,000 + 5,500}{2}\right)} = \frac{₹\,665}{₹\,5,750} \times 100 = 11.56\,\%$$

[Here Return on Capital Employed (ROCE) is calculated after Tax]

**(d) ROE**

$$= \frac{\text{Profits after tax}}{\text{Average shareholders' funds}} = \frac{₹\,455}{₹\,2,500} \times 100 = 18.2\%$$

**(e) Average Collection Period**

$$\text{Average Sales per day} = \frac{₹\,23,800}{365} = ₹\,65.20\ \text{lakhs}$$

$$\text{Average collection period} = \frac{\text{Average Receivables}}{\text{Average sales per day}}$$

$$= \frac{\frac{₹\,(1,400 + 1,100)}{2}}{₹\,65.2} = \frac{₹\,1,250}{₹\,65.2} = 19.17\text{days}$$

**Q.6** Following information has been provided from the books of M/s Laxmi & Co. for the year ending on 31st March, 2020:

| | |
|---|---|
| Net Working Capital | ₹ 4,80,000 |
| Bank overdraft | ₹ 80,000 |
| Fixed Assets to Proprietary ratio | 0.75 |
| Reserves and Surplus | ₹ 3,20,000 |
| Current ratio | 2.5 |
| Liquid ratio (Quick Ratio) | 1.5 |

You are required to PREPARE a summarised Balance Sheet as at 31st March, 2020.

Ans:

**1. Working notes:**

**(i) Current Assets and Current Liabilities computation:**

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

| | | |
|---|---|---|
| Or Current assets | = | 2.5 Current liabilities |
| Now, Working capital | = | Current assets – Current liabilities |
| Or ₹ 4,80,000 | = | 2.5 Current liability – Current liability |
| Or 1.5 Current liability | = | ₹ 4,80,000 |
| ∴ Current Liabilities | = | ₹ 3,20,000 |
| So, Current Assets | = | ₹ 3,20,000 × 2.5 = ₹ 8,00,000 |

**(ii) Computation of stock**

| | | |
|---|---|---|
| Liquid ratio | = | $\frac{\text{Liquid assets}}{\text{Current liabilities}}$ $\frac{\text{Liquid assets}}{\text{Current liabilities}} \quad \frac{\text{Liquid assets}}{\text{Current liabilities}}$ |
| Or 1.5 | = | $\frac{\text{Current assets - Inventories}}{₹\ 3,20,000}$ |
| Or 1.5 × ₹ 3, 20,000 | = | ₹ 8,00,000 – Inventories |
| Or Inventories | = | ₹ 8,00,000 – ₹ 4, 80,000 |
| Or Stock | = | ₹ 3,20,000 |

**(iii) Computation of Proprietary fund; Fixed assets; Capital and Sundry creditors**

| | | |
|---|---|---|
| Fixed Asset to Proprietary ratio | = | $\frac{\text{Fixed assets}}{\text{Proprietary fund}} = 0.75$ |
| ∴ 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 ₹ 4,80,000/0.25 | = | Proprietary fund |
| Or Proprietary fund | = | ₹ 19,20,000 |
| and Fixed Assets | = | 0.75 proprietary fund |
| | = | 0.75 × ₹ 19,20,000 = ₹ 14,40,000 |
| Capital | = | Proprietary fund – Reserves & Surplus |
| | = | ₹ 19,20,000 – ₹ 3,20,000 = ₹ 16,00,000 |
| Sundry Creditors | = | (Current liabilities – Bank overdraft) |
| | = | (₹ 3,20,000 – ₹ 80,000) = ₹ 2,40,000 |

**Balance Sheet as at 31st March, 2020**

| Liabilities | ₹ | Assets | ₹ |
|---|---|---|---|
| Capital | 16,00,000 | Fixed Assets | 14,40,000 |
| Reserves & Surplus | 3,20,000 | Stock | 3,20,000 |
| Bank overdraft | 80,000 | Other Current Assets | 4,80,000 |
| Sundry creditors | 2,40,000 | | |
| | 22,40,000 | | 22,40,000 |

**Q.7** Given below are the estimations for the next year by Niti Ltd.:

| Particulars | (₹ in crores) |
|---|---|
| Fixed Assets | 5.20 |
| Current Liabilities | 4.68 |
| Current Assets | 7.80 |
| Sales | 23.00 |
| EBIT | 2.30 |

The company will issue equity funds of ₹ 5 crores in the next year. It is also considering the debt alternatives of ₹ 3.32 crores for financing the assets. The company wants to adopt one of the policies given below:

**(₹ in crores)**

| Financing Policy | Short term debt @ 12% | Long term debt @ 16% | Total |
|---|---|---|---|
| Conservative | 1.08 | 2.24 | 3.32 |
| Moderate | 2.00 | 1.32 | 3.32 |
| Aggressive | 3.00 | 0.32 | 3.32 |

Assuming corporate tax rate at 30%, CALCULATE the following for each of the financing policy:

(i) Return on total assets

(ii) Return on owner's equity

(iii) Net Working capital

(iv) Current Ratio

Also advise which Financing policy should be adopted if the company wants high returns.

Ans: **1. (i) Return on total assets**

$$\text{Return on total assets} = \frac{\text{EBIT}(1-T)}{\text{Total assets (FA + CA)}}$$

$$= \frac{₹\,2.30 \text{ crores}(1-0.3)}{₹\,5.20 \text{ crores} + ₹\,7.80 \text{ crores}}$$

$$= \frac{₹\,1.61 \text{crores}}{₹\,13 \text{ crores}} = 0.1238 \text{ or } 12.38\%$$

**(ii) Return on owner's equity**

(Amount in ₹)

| | Financing policy (₹) | | |
|---|---|---|---|
| | Conservative | Moderate | Aggressive |
| Expected EBIT | 2,30,00,000 | 2,30,00,000 | 2,30,00,000 |
| *Less:* Interest | | | |
| Short term Debt @ 12% | 12,96,000 | 24,00,000 | 36,00,000 |
| Long term Debt @ 16% | 35,84,000 | 21,12,000 | 5,12,000 |
| Earnings before tax (EBT) | 1,81,20,000 | 1,84,88,000 | 1,88,88,000 |
| *Less:* Tax @ 30% | 54,36,000 | 55,46,400 | 56,66,400 |
| Earnings after Tax (EAT) | 1,26,84,000 | 1,29,41,600 | 1,32,21,600 |

| | | | |
|---|---|---|---|
| Owner's Equity | 5,00,00,000 | 5,00,00,000 | 5,00,00,000 |
| Return on owner's equity $= \frac{\text{Net Profit after taxes (EAT)}}{\text{Owners' equity}}$ | $= \frac{1,26,84,000}{5,00,00,000}$ = 0.2537 or 25.37% | $= \frac{1,29,41,600}{5,00,00,000}$ = 0.2588 or 25.88% | $= \frac{1,32,21,600}{5,00,00,000}$ = 0.2644 or 26.44% |

**(iii) Net Working capital**

(₹ in crores)

| | Financing policy | | |
|---|---|---|---|
| | **Conservative** | **Moderate** | **Aggressive** |
| Current Liabilities (Excluding Short Term Debt) | 4.68 | 4.68 | 4.68 |
| Short term Debt | 1.08 | 2.00 | 3.00 |
| Total Current Liabilities | 5.76 | 6.68 | 7.68 |
| Current Assets | 7.80 | 7.80 | 7.80 |
| Net Working capital = Current Assets - Current Liabilities | 7.80 - 5.76 = 2.04 | 7.80 - 6.68 = 1.12 | 7.80 - 7.68 = 0.12 |

**(iv) Current ratio**

(₹ in crores)

| | Financing policy | | |
|---|---|---|---|
| | **Conservative** | **Moderate** | **Aggressive** |
| Current Ratio $= \frac{\text{Current Assets}}{\text{Current Liabilities}}$ | $= \frac{7.80}{5.76} = 1.35$ | $= \frac{7.80}{6.68} = 1.17$ | $= \frac{7.80}{7.68} = 1.02$ |

**Advise**: It is advisable to adopt aggressive financial policy, if the company wants high return as the return on owner's equity is maximum in this policy i.e. 26.44%.

**Q.8** Following information has been gathered from the books of Cram Ltd. for the year ended 31st March 2021, the equity shares of which is trading in the stock market at ₹ 28:

| **Particulars** | **Amount (₹)** |
|---|---|
| Equity Share Capital (Face value @ ₹ 20) | 20,00,000 |
| 10% Preference Share capital | 4,00,000 |
| Reserves & Surplus | 16,00,000 |
| 12.5% Debentures | 12,00,000 |
| Profit before Interest and Tax for the year | 8,00,000 |

CALCULATE the following when company falls within 25% tax bracket:

(i) Return on Capital Employed

(ii) Earnings Per share

(iii) P/E Ratio

Ans:

**(i) Return on Capital Employed (ROCE)**

$$\text{ROCE (Pre-tax)} = \frac{\text{Profit before interest and taxes (PBIT)}}{\text{Capital Employed}} \times 100$$

$$= \frac{₹\ 8,00,000}{₹\ 52,00,000} \times 100$$

**= 15.38% (approx.)**

$$\text{ROCE (Post-tax)} = \frac{\text{PBIT}(1 - t)}{\text{Capital Employed}} \times 100$$

$$= \frac{₹\ 8,00,000\ (1 - 0.25)}{₹\ 52,00,000} \times 100$$

**= 11.54% (approx.)**

**(ii) Earnings Per share (EPS)**

$$= \frac{\text{Profit available to equity share holders}}{\text{Number of equity shares outstanding}}$$

$$= \frac{₹\ 4,47,500}{1,00,000}$$

**= ₹ 4.475**

**(iii) P/E Ratio**

$$= \frac{\text{Market Price per Share (MPS)}}{\text{Earning per Share (EPS)}}$$

$$= \frac{₹\ 28}{₹\ 4.475}$$

**= 6.26 times (approx.)**

**Workings:**

**(a) Income Statement**

| Particulars | Amount (₹) |
|---|---|
| Profit before Interest and Tax (PBIT) | 8,00,000 |
| Interest on Debentures (12.5% of ₹ 12,00,000) | (1,50,000) |
| Profit before Tax (PBT) | 6,50,000 |
| Tax @ 25% | (1,62,500) |
| Profit after Tax (PAT) | 4,87,500 |
| Preference Dividend (10% of ₹ 4,00,000) | (40,000) |
| Profit available to Equity shareholders | 4,47,500 |

**(b) Calculation of Capital Employed**

= Equity Shareholder's Fund + Preference share Capital + Debentures

= (₹ 20,00,000 + ₹ 16,00,000) + ₹ 4,00,000 + ₹ 12,00,000 = ₹ 52,00,000

**Q.9** FM Ltd. is in a competitive market where every company offers credit. To maintain the competition, FM Ltd. sold all its goods on credit and simultaneously received the goods on credit. The company provides the following information relating to current financial year:

| | |
|---|---|
| Debtors Velocity | 3 months |
| Creditors Velocity | 2 months |
| Stock Turnover Ratio (on Cost of Goods Sold) | 1.5 |
| Fixed Assets turnover Ratio (on Cost of Goods Sold) | 4 |
| Gross Profit Ratio | 25% |
| Bills Receivables | ₹ 75,000 |
| Bills Payables | ₹ 30,000 |
| Gross Profit | ₹ 12,00,000 |

FM Ltd. has the tendency of maintaining extra stock of ₹ 30,000 at the end of the period than that at the beginning.

DETERMINE:

(i) Sales and cost of goods sold

(ii) Sundry Debtors

(iii) Closing Stock

(iv) Sundry Creditors

(v) Fixed Assets

Ans:

**(i) Determination of Sales and Cost of goods sold:**

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

$$\text{Or, } \frac{25}{100} = \frac{₹\ 12,00,000}{\text{Sales}}$$

$$\text{Or, Sales} = \frac{12,00,00,000}{25} = ₹\ 48,00,000$$

Cost of Goods Sold = Sales – Gross Profit

= ₹ 48,00,000 - ₹ 12,00,000 = ₹ 36,00,000

**(ii) Determination of Sundry Debtors:**

Debtors' velocity is 3 months or Debtors' collection period is 3 months,

$$\text{So, Debtors' turnover ratio} = \frac{12\text{months}}{3\text{months}} = 4$$

$$\text{Debtors' turnover ratio} = \frac{\text{Credit Sales}}{\text{Average Accounts Receivable}}$$

$$= \frac{₹\ 48,00,000}{\text{Bills Receivable + Sundry Debtors}} = 4$$

Or, Sundry Debtors + Bills receivable = ₹ 12,00,000

Sundry Debtors = ₹ 12,00,000 – ₹ 75,000 = ₹ 11,25,000

**(iii) Determination of Closing Stock**

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}} = \frac{₹\ 36,00,000}{\text{Average Stock}} = 1.5$$

So, Average Stock = ₹ 24,00,000

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

$$\text{Or } \frac{\text{Opening Stock} + (\text{Opening Stock} + ₹\ 30,000)}{2} = ₹\ 24,00,000$$

Or 2 Opening Stock + ₹ 30,000= ₹48,00,000

Or 2 Opening Stock = ₹47,70,000

Or, Opening Stock = ₹ 23,85,000

So, Closing Stock = ₹ 23,85,000 + ₹ 30,000 = ₹ 24,15,000

**(iv) Determination of Sundry Creditors:**

Creditors' velocity of 2 months or credit payment period is 2 months.

$$\text{So, Creditors' turnover ratio} = \frac{12 \text{ months}}{2 \text{ months}} = 6$$

$$\text{Creditors turnover ratio} = \frac{\text{Credit Purchases}^*}{\text{Average Accounts Payables}}$$

$$= \frac{₹\ 36,30,000}{\text{Sundry Creditors + Bills Payables}} = 6$$

So, Sundry Creditors + Bills Payable = ₹ 6,05,000

Or, Sundry Creditors + ₹ 30,000 = ₹ 6,05,000

Or, Sundry Creditors = ₹ 5,75,000

**(v) Determination of Fixed Assets**

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Fixed Assets}} = 4$$

$$\text{Or, } \frac{₹\ 36,00,000}{\text{Fixed Assets}} = 4$$

Or, Fixed Asset = ₹ 9,00,000

**Workings:**

***Calculation of Credit purchases:**

Cost of goods sold = Opening stock + Purchases – Closing stock

₹ 36,00,000 = ₹ 23,85,000 + Purchases – ₹ 24,15,000

Purchases (credit) = ₹ 36,30,000

Calculation of credit purchase also can be done as below:

Or Credit Purchases =Cost of goods sold +Difference in Opening Stock

Or Credit Purchases =36,00,000 +30,000=₹ 36,30,000

**Q.10** The following information of ASD Ltd. relate to the year ended 31st March, 2022:

| | |
|---|---|
| Net profit | 8% of sales |
| Raw materials consumed | 20% of Cost of Goods Sold |
| Direct wages | 10% of Cost of Goods Sold |
| Stock of raw materials | 3 months' usage |
| Stock of finished goods | 6% of Cost of Goods Sold |
| Gross Profit | 15% of Sales |
| Debt collection period | 2 Months |
| (All sales are on credit) | |
| Current ratio | 2 : 1 |
| Fixed assets to Current assets | 13 : 11 |
| Fixed assets to sales | 1 : 3 |
| Long-term loans to Current liabilities | 2 : 1 |
| Capital to Reserves and Surplus | 1 : 4 |

You are required to PREPARE-

(a) Profit & Loss Statement of ASD Limited for the year ended 31st March, 2022 in the following format.

| Particulars | (₹) | Particulars | (₹) |
|---|---|---|---|
| To Direct Materials consumed | ? | By Sales | ? |
| To Direct Wages | ? | | |
| To Works (Overhead) | ? | | |
| To Gross Profit c/d | ? | | |
| | ? | | ? |
| To Selling and Distribution Expenses | ? | By Gross Profit b/d | ? |
| To Net Profit | ? | | |
| | ? | | ? |

(b) Balance Sheet as on 31st March, 2022 in the following format.

| Liabilities | (₹) | Assets | (₹) |
|---|---|---|---|
| Share Capital | ? | Fixed Assets | 1,30,00,000 |
| Reserves and Surplus | ? | Current Assets: | |
| Long term loans | ? | Stock of Raw Material | ? |
| Current liabilities | ? | Stock of Finished Goods | ? |
| | | Debtors | ? |
| | | Cash | ? |
| | ? | | ? |

Ans:

**Working Notes:**

(i) Calculation of Sales

$$\frac{\text{Fixed Assets}}{\text{Sales}} = \frac{1}{3}$$

$$\therefore \frac{1,30,00,000}{\text{Sales}} = \frac{1}{3} \Rightarrow \text{Sales} = ₹\ 3,90,00,000$$

(ii) Calculation of Current Assets

$$\frac{\text{Fixed Assets}}{\text{Current Assets}} = \frac{13}{11}$$

$$\therefore \frac{1,30,00,000}{\text{Current Assets}} = \frac{13}{11} \Rightarrow \text{Current Assets} = ₹\ 1,10,00,000$$

(iii) Calculation of Raw Material Consumption and Direct Wages

| | ₹ |
|---|---|
| Sales | 3,90,00,000 |
| *Less:* Gross Profit (15 % of Sales) | 58,50,000 |
| Cost of Goods sold | 3,31,50,000 |

Raw Material Consumption (20% of Cost of Goods Sold) ₹ 66,30,000

Direct Wages (10% of Cost of Goods Sold) ₹ 33,15,000

(iv) Calculation of Stock of Raw Materials (= 3 months usage)

$$= 66,30,000 \times \frac{3}{12} = ₹\ 16,57,500$$

(v) Calculation of Stock of Finished Goods (= 6% of Cost of Goods Sold)

$$= 3,31,50,000 \times \frac{6}{100} = ₹\ 19,89,000$$

(vi) Calculation of Current Liabilities

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = 2$$

$$\frac{1,10,00,000}{\text{Current Liabilities}} = 2 \Rightarrow \text{Current Liabilities} = ₹\ 55,00,000$$

(vii) Calculation of Debtors

$$\text{Average collection period} = \frac{\text{Debtors}}{\text{Credit Sales}} \times 12 \text{ months}$$

$$\frac{\text{Debtors}}{3,90,00,000} \times 12 = 2 \Rightarrow \text{Debtors} = ₹\ 65,00,000$$

(viii) Calculation of Long-term Loan

$$\frac{\text{Long term Loan}}{\text{Current Liabilities}} = \frac{2}{1}$$

$$\frac{\text{Long term loan}}{55,00,000} = \frac{2}{1} \Rightarrow \text{Long term loan} = ₹\ 1,10,00,000$$

(ix) Calculation of Cash Balance

| | | ₹ |
|---|---|---|
| Current assets | | 1,10,00,000 |
| *Less:* Debtors | 65,00,000 | |
| Raw materials stock | 16,57,500 | |
| Finished goods stock | 19,89,000 | 1,01,46,500 |
| Cash balance | | 8,53,500 |

(x) Calculation of Net worth

| | | |
|---|---|---|
| Fixed Assets | | 1,30,00,000 |
| Current Assets | | 1,10,00,000 |
| Total Assets | | 2,40,00,000 |
| *Less:* Long term Loan | 1,10,00,000 | |
| Current Liabilities | 55,00,000 | 1,65,00,000 |
| Net worth | | 75,00,000 |

Net worth = Share capital + Reserves = ₹ 75,00,000

$$\frac{\text{Capital}}{\text{Reserves and Surplus}} = \frac{1}{4} \Rightarrow \text{Share Capital} = ₹\ 75,00,000 \times \frac{1}{5} = ₹\ 15,00,000$$

$$\text{Reserves and Surplus} = ₹\ 75,00,000 \times \frac{4}{5} = ₹\ 60,00,000$$

**Profit and Loss Statement of ASD Ltd.**
**for the year ended 31st March, 2022**

| Particulars | (₹) | Particulars | (₹) |
|---|---|---|---|
| To Direct Materials consumed | 66,30,000 | By Sales | 3,90,00,000 |
| To Direct Wages | 33,15,000 | | |
| To Works (Overhead) (Bal. fig.) | 2,32,05,000 | | |
| To Gross Profit c/d (15% of Sales) | 58,50,000 | | |
| | 3,90,00,000 | | 3,90,00,000 |
| To Selling and Distribution Expenses (Bal. fig.) | 27,30,000 | By Gross Profit b/d | 58,50,000 |
| To Net Profit (8% of Sales) | 31,20,000 | | |
| | **58,50,000** | | **58,50,000** |

**Balance Sheet of ASD Ltd.**
**as at 31st March, 2022**

| Liabilities | (₹) | Assets | (₹) |
|---|---|---|---|
| Share Capital | 15,00,000 | Fixed Assets | 1,30,00,000 |
| Reserves and Surplus | 60,00,000 | Current Assets: | |
| Long term loans | 1,10,00,000 | Stock of Raw Material | 16,57,500 |
| Current liabilities | 55,00,000 | Stock of Finished Goods | 19,89,000 |
| | | Debtors | 65,00,000 |
| | | Cash | 8,53,500 |
| | **2,40,00,000** | | **2,40,00,000** |

**Q.11** From the following information, find out missing figures and REWRITE the balance sheet of Mukesh Enterprise.

Current Ratio = 2:1

Acid Test ratio = 3:2

Reserves and surplus = 20% of equity share capital

Long term debt = 45% of net worth

Stock turnover velocity = 1.5 months

Receivables turnover velocity = 2 months

You may assume closing Receivables as average Receivables.

Gross profit ratio = 20%

Sales is ₹ 21,00,000 (25% sales are on cash basis and balance on credit basis)

Closing stock is ₹ 40,000 more than opening stock.

Accumulated depreciation is 1/6 of original cost of fixed assets.

Balance sheet of the company is as follows:

| Liabilities | (₹) | Assets | (₹) |
|---|---|---|---|
| Equity Share Capital | ? | Fixed Assets (Cost) | ? |
| Reserves & Surplus | ? | Less: Accumulated. Depreciation | ? |
| Long Term Loans | 6,75,000 | Fixed Assets (WDV) | ? |
| Bank Overdraft | 60,000 | Stock | ? |
| Creditors | ? | Debtors | ? |
| | | Cash | ? |
| Total | ? | Total | ? |

Ans:

| Liabilities | (₹) | Assets | (₹) |
|---|---|---|---|
| Equity Share Capital | 12,50,000 | Fixed Assets (cost) | 20,58,000 |
| Reserves & Surplus | 2,50,000 | Less: Acc. Depreciation | (3,43,000) |
| Long Term Loans | 6,75,000 | Fixed Assets (WDV) | 17,15,000 |
| Bank Overdraft | 60,000 | Stock | 2,30,000 |
| Payables | 4,00,000 | Receivables | 2,62,500 |
| | | Cash | 4,27,500 |
| **Total** | **26,35,000** | **Total** | **26,35,000** |

**Working Notes:**

(i) Sales ₹ 21,00,000

Less: Gross Profit (20%) ₹ 4,20,000

Cost of Goods Sold (COGS) ₹ 16,80,000

(ii) $\text{Receivables Turnover Velocity} = \frac{\text{Average Receivables}}{\text{Credit Sales}} \times 12$

$2 = \frac{\text{Average Receivables}}{₹\,21,00,000 \times 75\%} \times 12$

$\text{Average Receivables} = \frac{₹\,21,00,000 \times 75\% \quad 2}{12}$

Average Receivables = ₹ 2,62,500

Closing Receivables = ₹ 2,62,500

(iii) $\text{Stock Turnover Velocity} = \frac{\text{Average Stock}}{\text{COGS}} \times 12$

$\text{Or } 1.5 = \frac{\text{Average Stock}}{₹\,16,80,000} \times 12$

Or $\text{Average Stock} = \frac{₹\,16,80,000 \times 1.5}{12}$

Or Average Stock = ₹ 2,10,000

$\frac{\text{Opening Stock} + \text{Closing Stock}}{2} = ₹\,2,10,000$

Opening Stock + Closing Stock = ₹ 4,20,000.....(1)

Also, Closing Stock-Opening Stock = ₹ 40,000.....(2)

Solving (1) and (2), we get **closing stock = ₹ 2,30,000**

(iv) $\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\text{Stock + Receivables + Cash}}{\text{Bank Overdraft + Creditors}}$

$\text{Or } 2 = \frac{₹\,2,30,000 + ₹\,2,62,500 + \text{Cash}}{₹\,60,000 + \text{Creditors}}$

Or ₹ 1,20,000 + 2 Payables = ₹ 4,92,500 + Cash

Or 2 Payables – Cash.= ₹ 3,72,500

Or Cash = 2 Payables – ₹ 3,72,500.....(3)

$$\text{Acid Test Ratio} = \frac{\text{Current Assests - Stock}}{\text{Current Liabilities}} = \frac{\text{Debtor + Cash}}{\text{Current Liabilities}}$$

$$\text{Or } \frac{3}{2} = \frac{₹\,2,62,500 + \text{Cash}}{60,000 + \text{Creditors}}$$

Or ₹ 1,80,000 + 3 Payables = ₹ 5,25,000 + 2 Cash

Or 3 Payables – 2 Cash = ₹ 3,45,000 ..... (4)

Substitute (3) in (4)

Or 3 Payables – 2(2 Payables – ₹ 3,72,500) = ₹ 3,45,000

Or 3 Payables – 4 Payables + ₹ 7,45,000= ₹ 3,45,000

(Payables) = ₹ 3,45,000 - ₹ 7,45,000

**Payables = ₹ 4,00,000**

So, Cash = 2 x ₹ 4,00,000 – ₹ 3,72,5000

**Cash = ₹ 4,27,500**

(v) Long term Debt = 45% of Net Worth

Or ₹ 6,75,000 = 45% of Net Worth

**Net Worth = ₹ 15,00,000**

(vi) Equity Share Capital (ESC) + Reserves = ₹ 15,00,000

Or ESC + 0.2ESC = ₹ 15,00,000

Or 1.2 ESC = ₹ 15,00,000

**Equity Share Capital (ESC) = ₹ 12,50,000**

(vii) Reserves = 0.2 x ₹ 12,50,000

**Reserves = ₹ 2,50,000**

(viii) Total of Liabilities=Total of Assets

Or ₹ 12,50,000 + ₹ 2,50,000 + ₹ 6,75,000 +₹ 60,000 + ₹ 4,00,000 + Fixes Assets(FA) (WDV) + ₹ 2,30,000 + ₹ 2,62,000 +₹ 4,27,500

Or ₹ 26,35,000 = ₹ 9,20,000 + FA(WDV)

**FA (WDV) =₹ 17,15,000**

Now FA(Cost) – Depreciation = FA(WDV)

Or FA(Cost) – FA(Cost)/6 = ₹ 17,15,000

Or 5 FA(Cost)/6 = ₹ 17,15,000

Or FA(Cost) = ₹ 17,15,000x 6/5

**So, FA(Cost) = ₹ 20,58,000**

**Depreciation = ₹ 20,58,000/6 = ₹ 3,43,000**

**Q.12** From the following table of financial ratios of Prabhu Chemicals Limited, comment on various ratios given at the end:

| Ratios | 2021 | 2022 | Average of Chemical Industry |
|---|---|---|---|
| **Liquidity Ratios** | | | |
| Current ratio | 2.1 | 2.3 | 2.4 |
| Quick ratio | 1.4 | 1.8 | 1.4 |
| Receivable turnover ratio | 8 | 9 | 8 |
| Inventory turnover | 8 | 9 | 5 |
| Receivables collection period | 46 days | 41 days | 46 days |
| **Operating profitability** | | | |
| Operating income –ROI | 24% | 21% | 18% |
| Operating profit margin | 18% | 18% | 12% |
| **Financing decisions** | | | |
| Debt ratio | 45% | 44% | 60% |
| **Return** | | | |
| Return on equity | 26% | 28% | 18% |

COMMENT on the following aspect of Prabhu Chemicals Limited

(i) Liquidity

(ii) Operating profits

(iii) Financing

(iv) Return to the shareholders

Ans:

| Ratios | Comment |
|---|---|
| Liquidity | Current ratio has improved from last year and matching the industry average.<br>Quick ratio also improved than last year and above the industry average.<br>The reduced inventory levels (evidenced by higher inventory turnover ratio) have led to better quick ratio in FY 2022 compared to FY 2021.<br>Further the decrease in current liabilities is greater than the collective decrease in inventory and debtors as the current ratio have increase from FY2021 to FY 2022. |
| Operating Profits | Operating Income-ROI reduced from last year, but Operating Profit Margin has been maintained. This may happen due to decrease in operating cost. However, both the ratios are still higher than the industry average. |
| Financing | The company has reduced its debt capital by 1% and saved earnings for equity shareholders. It also signifies that dependency on debt compared to other industry players (60%) is low. |
| Return to the shareholders | Prabhu's ROE is 26 per cent in 2021 and 28 per cent in 2022 compared to an industry average of 18 per cent. The ROE is stable and improved over the last year. |

**Q.13** Following are the data in respect ofLP enterprises for the year ended 31st March, 2024:

| | | |
|---|---|---|
| Debt to Total assets ratio | : | 0.40 |
| Long-term debts to equity ratio | : | 30% |
| Gross profit margin on sales | : | 20% |
| Accounts receivables period | : | 36 days |
| Quick ratio | : | 0.9 |
| Inventory holding period | : | 60 days |
| Cost of goods sold | : | ₹ 64,00,000 |

| Liabilities | ₹ | Assets | ₹ |
|---|---|---|---|
| Equity Share Capital | 20,00,000 | Fixed assets | |
| Reserves & surplus | | Inventories | |
| Long-term debts | | Accounts receivable | |
| Accounts payable | | Cash | |
| Total | 50,00,000 | Total | |

**Required:**

COMPLETE the Balance Sheet ofLP enterprises as on 31st March, 2024. All calculations should be in nearest Rupee. Assume 360 days in a year.

Ans:

**4. Working Notes:**

(1) Total liability = Total Assets = ₹ 50,00,000

Debt to Total Asset Ratio = 0.40

$\frac{\text{Debt}}{\text{Total Assets}}$ = 0.40

$\frac{\text{Debt}}{50,00,000}$ = 0.40

So, **Debt** **= 20,00,000**

(2) Total Liabilities = ₹ 50,00,000

Equity share Capital + Reserves + Debt = ₹ 50,00,000

So, Reserves = ₹ 50,00,000 - ₹ 20,00,000 - ₹ 20,00,000

**So, Reserves & Surplus** **= ₹ 10,00,000**

(3) $\frac{\text{Long term Debt}}{\text{Equity Shareholders' Fund}}$ = 30%

$\frac{\text{Long term Debt}}{(20,00,000+10,00,000)}$ = 30%

**Long Term Debt** **= ₹ 9,00,000**

(4) So, Accounts Payable = ₹ 20,00,000 – ₹ 9,00,000

**Accounts Payable** **= ₹ 11,00,000**

(5) Gross Profit to sales = 20%

Cost of Goods Sold = 80% of Sales = ₹ 64,00,000

**Sales** $= \frac{100}{80} \times 64,00,000$ **= 80,00,000**

(6) Inventory Turnover $= \frac{360}{60}$

$\frac{\text{COGS}}{\text{Closing inventory}} = \frac{360}{60}$

$\frac{64,00,000}{\text{Closing inventory}} = \frac{360}{60}$

**Closing inventory** **= 10,66,667**

(7) Accounts Receivable period = 36 days

$\frac{\text{Accounts Receivable}}{\text{Credit sales}} \times 360 = 36$

Accounts Receivable $= \frac{36}{360} \times$ credit sales

$= \frac{36}{360} \times 80,00,000$ (assumed all sales are on credit)

**Accounts Receivable** **= ₹ 8,00,000**

(8) Quick Ratio = 0.9

$\frac{\text{Quick Assets}}{\text{Current liabilities}} = 0.9$

$\frac{\text{Cash + Debtors}}{11,00,000} = 0.9$

Cash + 8,00,000 = ₹ 9,90,000

**Cash** **= ₹ 1,90,000**

(9) Fixed Assets = Total Assets - Current Assets = 50,00,000 – (10,66,667 + 8,00,000 + 1,90,000)

(10) = **29,43,333**

**Balance Sheet of LP enterprises as on 31st March 2024**

| Liabilities | (₹) | Assets | (₹) |
|---|---|---|---|
| Share Capital | 20,00,000 | Fixed Assets | 29,43,333 |
| Reserved surplus | 10,00,000 | Current Assets: | |
| Long Term Debt | 9,00,000 | Inventory | 10,66,667 |
| Accounts Payable | 11,00,000 | Accounts Receivables | 8,00,000 |
| | | Cash | 1,90,000 |
| Total | 50,00,000 | Total | 50,00,000 |

(***Note:** Equity shareholders' fund represent equity in 'Long term debts to equity ratio'. The question can be solved assuming only share capital as 'equity')

**Q.14** Vardhaman Limited gives you the following information related for the year ending 31st March, 2024:

| Particulars | Amount (₹) |
|---|---|
| Current Ratio | 3:1 |
| Loan funds to Owned Funds Ratio | 1:3 |
| Gross Profit Ratio | 25% |
| Stock Turnover Ratio | 10 |
| Net Working Capital | ₹ 5,00,000 |
| Return on Total Assets (pre-tax) | 15% |
| MPS | ₹ 20 |
| Total Assets Turnover Ratio | 2.5 |
| Opening stock | ₹ 6,50,500 |
| Fixed Assets | ₹ 15,00,000 |
| 75,000 equity shares of | ₹ 10 each |
| 25,000, 12% Pref. Shares of | ₹ 10 each |
| Depreciation | ₹ 50,000 |
| Interest on Debt | 9% |
| Future Instalments | ₹ 2,00,000 |

Tax rate applicable to the company is 25%

You are required to CALCULATE:

(i) Quick Ratio

(ii) Fixed Assets Turnover Ratio

(iii) Debt Service Coverage

(iv) Earnings per Share

(v) Price Earnings Ratio

Ans: **WN 1: Calculation of Current Assets & Current Liabilities**

| | | |
|---|---|---|
| Current Ratio | = | CA / CL = 3:1 |
| Therefore, CA | = | 3CL |
| Net Working Capital | = | CA - CL = 5,00,000 |
| | = | 3CL (-) CL = 5,00,000 |
| Therefore, CL | = | 2,50,000, |
| CA | = | 7,50,000 |

**WN 2: Calculation of Average Stock Value & Closing Stock**

| | | |
|---|---|---|
| Total Assets | = | Fixed Assets + Current Assets |
| | = | 15 L + 7.5 L = **22.50 lakhs** |
| Total Assets Turnover Ratio | = | Sales / Total Assets = 2.5 (given) |
| Therefore Sales | = | 22.5 lakhs X 2.5 |
| Sales | = | **56,25,000** |
| GP Margin | = | 25%, therefore COGS = 75% of Sales |
| COGS | = | 56.25 x 75% = **42,18,750** |
| Stock Turnover Ratio | = | COGS / Average Stock = 10 (given) |
| Average Stock | = | 42,18,750 / 10 = **4,21,875** |
| Average Stock | = | Op. Stock + Cl. Stock / 2 |
| 4,21,875 | = | 6,50,500 + Cl. Stock / 2 |
| Cl Stock | = | 1,93,250 |

**WN 3: Calculation of Cash Profit before Interest & Tax**

| | |
|---|---|
| Return on Total Assets (pre-tax) | = (EBIT / Total Assets) |
| 0.15 | = EBIT / 22.50 lakhs |
| Therefore, EBIT | = **3,37,500** |
| Cash Profit before Int & Tax | = EBIT + Depreciation |
| | = 337500 + 50000 |
| Cash Profit before Int & Tax | = **3,87,500** |

**WN 4 : Calculation of Loan Funds (Debt) & Owned Funds (Equity)**

Debt to Equity = 1 : 3, which means 3 times Debt = Equity (Owned Funds)

As per the Accounting equation,

| | | |
|---|---|---|
| **Equity + Debt + Current Liab.** | **=** | **Fixed Assets + Current Assets** |
| 3 Debt + Debt + 2,50,000 | = | 15,00,000 + 7,50,000 |
| 4 Debt | = | 20,00,000 |
| Therefor Debt (Loan Funds) | = | **5,00,000** |
| Equity (Owned Funds) | = | **15,00,000** |

**WN 5: Calculation of Earnings Available to Eq. Share holders**

| Particulars | Amount (₹) |
|---|---|
| EBIT | 3,37,500 |
| (-) Int (5 lakhs x 9%) | (45,000) |
| EBT | 2,92,500 |
| (-) Tax @ 0.25 | (73,125) |
| EAT | 2,19,375 |
| (-) Pref Div. (250000 x 12%) | (30,000) |
| Earnings For Eq. Sh Holders | 1,89,375 |

1. Quick Ratio = {CA - Cl Stock}/CL

   = 7,50,000 – 1,93,250 / 2,50,000

   **Quick Ratio = 2.23 : 1**

2. Fixed Assets Turnover Ratio = Sales / Total Fixed Assets

   = 56,25,000 / 15,00,000

   **Fixed Assets Turnover Ratio = 3.75 times**

3. Debt Service Coverage Ratio = Cash profit before Int & Tax / Int + Instalments

   = 3,87,500 / (45,000+2,00,000)

   **Debt Service Coverage Ratio = 1.58 times.**

4. **EPS = Earnings for Eq. Shareholders / No of Eq. Shareholders**

   = 1,89,375/75,000

   **EPS = ₹ 2.53**

5. Price to Earnings Ratio = MPS / EPS

   = 20 / 2.53

   **Price to Earnings Ratio = 7.91 times**