CHAPTER 1

RATIO ANALYSIS

Concept #1 Liquidity Ratios

1. Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$
2. Quick Ratio = $\frac{\text{CA} - \text{Stock}}{\text{CL} - \text{Bank O/D}}$
3. Net Working Capital = CA − CL

Concept #2 Solvency Ratios

1. Equity Ratio = $\frac{\text{Shareholder's Equity}}{\text{Capital Employed}}$
2. Debt Ratio = $\frac{\text{Long-term Debt}}{\text{Cap. Employed}}$
3. Debt-to-Equity Ratio = $\frac{\text{Long-term Debt}}{\text{Shareholder's funds}}$
4. Capital Gearing Ratio = $\frac{\text{P/S Cap} + \text{L.T. Debt}}{\text{E/S Cap} + \text{Res \& Surplus}}$
5. Proprietary Ratio = $\frac{\text{Proprietor's fund}}{\text{Total or Fixed Assets}}$

Concept #3 Coverage Ratios

1. Interest Coverage Ratio = $\frac{\text{EBIT}}{\text{Interest}}$
2. Pref Dividend Coverage = $\frac{\text{PAT}}{\text{PD}}$
3. Eq. Dividend Coverage = $\frac{\text{PAFESH}}{\text{Eq. Dividend}}$

Concept #4 Activity Ratios

1. Fixed Asset Turnover Ratio = $\frac{\text{Turnover}}{\text{Avg. fixed Assets}}$

2. Inventory Turnover Ratio = $\frac{\text{COGS}}{\text{Avg. Inventory}}$

3. Receivables Turnover Ratio = $\frac{\text{Cr. Sales}}{\text{Avg. Receivables}}$

4. Payables Turnover Ratio = $\frac{\text{Cr. Purchase}}{\text{Avg. Payables}}$

5. Debtors = Accounts Receivable – Bills Receivable.
   Creditors = Accounts Payable – Bills Payable.

6. Avg. Collection Period = $\frac{\text{Avg Receivables}}{\text{Cr. Sales}} \times 365$

7. Avg. Payment Lag = $\frac{\text{Avg. Payables}}{\text{Cr. Purchases}} \times 365$

Concept #5 Profitability Ratios

1. GP Margin = $\frac{\text{Gross Profit}}{\text{Sales}} \times 100.$

2. NP Margin = $\frac{\text{Net Profit}}{\text{Sales}} \times 100.$

3. Operating Profit Margin = $\frac{\text{EBIT}}{\text{Sales}} \times 100.$

4. Operating Ratio = $\frac{\text{COGS} + \text{Admn} + \text{S\&D}}{\text{Sales}} \times 100$

5. Earnings per share = $\frac{\text{PAFESH}}{\text{No. of shares}}$

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

7. Dividend Pay-out = $\frac{\text{DPS}}{\text{EPS}} \times 100$

8. P/E Ratio = $\frac{\text{Price per share}}{\text{Earnings per share}}$

9. Dividend Yield = $\frac{\text{DPS}}{\text{CMP}} \times 100$

10. Earnings Yield = $\frac{\text{EPS}}{\text{CMP}} \times 100$.

Question #1 **MQP J23** *Ans:* *60%; 75%; 60%*

A company has a profit margin of 20% and asset turnover of 3 times. What is the company's return on investment? How will this return on investment vary if:

(i) Profit margin is increased by 5%?
(ii) Profit margin is decreased by 5% and asset turnover is increase to 4 times?

If value of fixed assets as on 31-3-2022 amounted to ₹ 26 lakhs, prepare a balance sheet of the company for the year ended 31-3-2023.

Question #2 **MQP D23** *Ans:* *10.29%; 24.7%; 14%*

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

Particulars	₹	Particulars	₹
Share Capital (₹ 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 ₹ 2,80,000. Assume tax rate at 50%. Dividend declared amounts to ₹ 1,20,000/-

Question #3 **MQP J23** *Ans:* *B/S total – ₹ 60L*

Using the following data, find as many items as possible to prepare the Balance Sheet as at the end of the year:

Gross profits	₹ 5,40,000
Shareholders' Funds	₹ 40,00,000
Gross Profit Margin	30%
Credit Sales to Total Sales	80%
Total Assets Turnover Ratio (based on Sales Value)	0.3 times
Inventory Turnover Ratio (Based on cost)	4 times
Average collection period (360 days in a year)	20 days
Current ratio	1.8
Long-term Debt to Equity	40%

Question #4 **MQP D23** *Ans:* *B/s Total ₹ 1,189, 000*

From the following details, prepare statement of proprietary Funds with as many details as possible:

Stock velocity	6
Capital Turnover ratio (on cost of sales)	2
Fixed Assets Turnover ratio (on cost of sales)	4
Debtor's velocity	2 months
Gross profit turnover ratio	20%
Creditors velocity	73days

The gross profit was ₹ 60,000. Reserves and surplus amounts to ₹ 20,000. Closing stock was ₹ 5,000 in excess of opening stock.

Question #5 **MQP D23** *Ans:* *₹ 16,00,000; ₹ 3,75,000; ₹ 8,05,000; ₹ 1,91,667*

Following are the ratios to the trading activities of National Traders Ltd:

Debtors velocity	3 months
Stock velocity	8 months
Creditors velocity	2 months
Gross profit ratio	25%

Gross profit for a year ended 31st December, 2022 amounts to ₹ 4,00,000
Closing stock of the year is ₹ 10,000 above the opening stock.
Bills receivable amount to ₹ 25,000 and Bills payable to ₹ 10,000.

Compute:
(A) Sales

(B) Sundry Debtors
(C) Closing stock &
(D) Sundry creditor

Question #6 **MQP D24** *Ans:* *B/S total 48,00,000*

The following accounting information and financial ratios of Star Sunshine Ltd. relate to the year ended 31-03-2024:

(i) Accounting information:

Direct wages	10% of works cost
Stock of raw material	3 months' usage
Stock of finished goods	6% of works cost
Raw material consumed	20% of works cost
Debt collection period	60 days
Gross profit	15% of sales
Net profit	8% of sales

All sales are on credit

(ii) Ratios

Fixed asset to sales	1:3
Fixed assets to current assets	13:11
Current ratios	2
Long term loan to current liability	2:1
Capital to reserve and surplus	1:4

If value of fixed assets as on 31-3-2024 amounted to ₹26 lakhs, prepare a balance sheet of the company for the year ended 31-3-2024.

Question #7 **PTP J17/D17; MQP J24** *Ans:* *B/S total ₹ 5,60,000*

From the following information, prepare a summarized Statement of Assets and Liabilities as on 31st March, 2017:

Working Capital	₹1,20,000
Reserves & Surplus	₹ 80,000
Bank Overdraft	₹ 20,000
Proprietary Ratio	0.75
Current Ratio	2.50
Liquid Ratio	1.50

Your workings should form a part of your answer.

Question #8 **PTP J18; MQP D24** *Ans:* *B/S total ₹ 24,34,782*

The following is the summary of Financial Ratios and form of a TEXTILE COMPANY having a sale of ₹ 32 lakh.

Sales to net worth (times)	2.3
Current debt to net worth (%)	42
Total debt to net worth (%)	75
Current ratio (times)	2.9
Net sales to inventory (times)	4.7
Fixed assets to net worth (%)	53.2

Proforma Balance Sheet

Net worth	---	Fixed assets	---
Long-term debt	---	Cash	---
Current debt	---	Stock	---
		Sundry debtors	5,68,889

You are required to Complete the Proforma Balance Sheet.

Question #9 **PTP D18** *Ans:* *B/S Total ₹ 15L*

Complete the Balance Sheet in the table below for TANISH LTD. using the following financial data:

(i) Total Debt to Net Worth = 1:2
(ii) Total Assets Turnover = 2
(iii) Gross Profit on Sales = 30%
(iv) Average Collection Period (Assume 360 days in a year) = 40 days
(v) Inventory Turnover Ratio on COGs and year-end inventory = 3
(vi) Acid Test Ratio = 0.75

Balance Sheet as on 31st March 2018

Liabilities	₹	Assets	₹
Equity Share Capital	4,00,000	Plant & Machinery &	-------
Reserves and Surplus	6,00,000	Other Fixed Assets	
Total Debt:		Current Assets:	
Current Liabilities	-------	Inventory	-------
		Debtors	-------
		Cash	-------

Assume that there is no Bank OD in this Balance Sheet format

Question #10 **PTP J19** *Ans:* *1.72; 0.54*

The Balance Sheet of VASUDHA LTD. as on March 31, 2019 is as given below:

Equity and Liabilities	₹ Lakhs	Assets	₹ Lakhs
Equity Share Capital	250	Fixed Assets	400
General Reserve	280	Investment	50
Profit & Loss a/c (Current Yr.)	30	Stock	460
Secured Loans - Long Term	300	Debtors	460
Secured Loans - Short Term	360	Cash and cash equivalents	10
Creditors	150	Miscellaneous Expenditure	20
Other Liabilities	30	(not Written off)	

Additional information:

(i) From the P&L A/c, ₹ 90 Lakhs was transferred to General Reserve during the year
(ii) Interest Cost amounted to ₹ 120 lakhs
(iii) Taxation @ 40%

You are required to calculate:

(i) Current Ratio
(ii) Debt-Equity Ratio

Question #11 **PTP D19** *Ans:* ***B/S total ₹ 1,60,000***

With the help of the following information, complete the Balance Sheet of MENWOOD LTD. as at 31st March, 2019.

Equity share capital	₹ 1,00,000
The relevant ratios of the company are as follows:	
Current debt to total debt	0.40
Total debt to owner's equity (Equity Shares Capital)	0.60
Fixed assets to owner's equity (Equity Shares Capital)	0.60
Total assets turnover	2 Times
Inventory turnover	8 Times

Question #12 **PTP D22** *Ans:* ***246%***

VRP provides you with the following information:

Operating Profit (before tax) Ratio	50%
Capital Turnover Ratio	2 times
15% Debt-Shareholders' Funds Ratio	2:1
Capital Gearing Ratio	3:1
18% Preference Share Capital	?
Tax Rate	30%

Calculate Return on Equity Shareholders' Funds.

Question #13 **PTP D23** *Ans:* ***₹ 1,40,000; ₹ 10L; ₹ 9L; 2,48,000***

The following Financial Parameters are extracted from the records of VOTEX Ltd. for the year ended March 31, 2023

Working Capital	₹ 3,00,000
Fixed Assets to Net worth	0.75
Other Equity (Reserves & Surplus)	₹ 2,00,000
Bank overdraft	₹ 60,000
Trade Payables	?
Current Ratio	2.50
Quick Ratio	1.80

Required:

(i) Assess the amount of Trade payables.
(ii) Assess the value of Equity Share Capital.
(iii) The value of Fixed Assets would be how much?
(iv) Analyze the value of Inventories of VOTEX Ltd.

Question #14 PTP J23

Ans: 5 times; 2L; 7.5 times; 33.33%

10% Debt-Equity Ratio	2:1,
Net Profit (after Tax) Ratio	16.8%
Operating Profit Ratio	30%
Operating Expenses Ratio	10%
Inventory Velocity	1 month
Tax Rate	30%
Land & building	₹ 6,75,000
Plant & Machinery	₹ 6,00,000
Capital Work-in-Progress	₹ 3,00,000
Inventory: Finished Goods	₹ 1,00,000
Inventory: Raw Materials	₹ 15,000
Inventory: Work-in-Progress	₹ 20,000
Inventory: Stores & Spares	₹ 5,000
Trade Receivables	₹ 2,20,000
Provision for doubtful debts	₹ 20,000

Credit Sales are ₹ 2,00,000 more than Cash Sales.

Calculate: Interest Coverage Ratio, Trade Receivables Turnover Ratio & ROI.

Question #15 PTP J23

Ans: 16:9

Current Ratio 8:5, Quick Ratio 6:5, Inventory Velocity 4 months, Gross Profit @ 33.33% on Cost was ₹ 10,00,000, Inventory at the end was 3 times more than that in the beginning.

Calculate: Working Capital Turnover Ratio.

Question #16 PTP D23

Ans: ₹ 1L; 40K; 60K

M Ltd. provides you the following information:

Current Ratio	2.5
Liquid Ratio	1.5
Proprietary Ratio (Fixed Assets/Proprietors' Funds)	0.75
Working Capital	₹ 60,000
Reserves and Surplus	₹ 40,000
Bank Overdraft	₹ 10,000

There is no long-term loan or fictitious assets. Similarly, there is no prepaid expenses and bank overdraft. Calculate Current Assets, Current Liabilities and value of Stock.

Question #17 **PTP J24** *Ans:* *₹ 12L; 2L; 1,20,000; 76,250*

The following ratio and information relate to the business of ABC Ltd.:

Credit period allowed to Debtors	2 months;
Inventories Turnover ratio	8 times;
Lag in payment to suppliers	1 month;
Gross Profit ratio	25%;
Opening inventories	₹1,05,000;
Gross Profit for the year ended 31st March, 2024 amounted to	₹ 3,00,000

Assume that all purchases and sales are on credit and closing values of debtors and creditors are not different from their opening values.
Calculate
(a) Sales;
(b) Sundry Debtors;
(c) Closing Inventories;
(d) Sundry Creditors.

Question #18 **PTP D24** *Ans:* *16 days, 7.2 times; 25%; 2.67 times; ₹ 4/ Share*

The following information is available about Boxa Company:

Accounts payable	₹ 100 lakhs
Accounts receivable	₹ 50.48 lakhs
Average inventory	₹ 300 lakhs
Buildings and land	?
Cash	₹ 50 lakhs
Cost of goods sold	₹ 800 lakhs
EBIT	₹ 180 lakhs
Long-term bonds	₹ 250 lakhs with 10% interest rate
Price per share	₹ 72
Price/Earnings ratio	18
Shareholders' equity	?
Total assets	₹ 1,000 lakhs
Total sales	₹ 1,250 lakhs
Cash sales	₹ 100 lakhs

You are required to calculate the following:
(i) Days sales outstanding
(ii) Interest coverage ratio
(iii) Debt ratio
(iv) Inventory turnover ratio
(v) Earnings per share

RATIO ANALYSIS

Q1

(a)

Net profit ratio = 20% (given)
Assets turnover ratio = 3 times (given)
Return on Investment (ROI) = Net Profit ratio x Assets turnover ratio
= 20% × 3 times = 60%

(i) If net profit ratio is increased by 5%:

Then Revised Net Profit Ratio = 20 + 5 = 25%

Asset Turnover Ratio (as before) = 3 times

∴ ROI = 25 % x 3 times = 75%

(iii) If net profit ratio falls by 5% and assets turnover ratio raises to 4 times:

Then Revised NP Ratio = 20 - 5 = 15%

Revised Asset Turnover Ratio = 4 times

∴ ROI = 15% x 4 = 60%

Q2

(i) Return on Total resources=Profit after Tax/Total Assets×100

=₹140000/₹1360000×100

=10.29%

(ii) Return on Capital Employed=Profit before Tax and Interest/Capital Employed

=₹ (280000+16000)/₹ (12,00,000) ×100

=₹296000/₹1200000×100

=24.7%

(iii)Return on Shareholders' Fund= Profit after Tax/Shareholders' Fund

=₹140000/₹1000000×100

=14%

Q3

Working notes:

1. **Total Sales:**
   GP Margin = 30%
   GP = ₹ 5,40,000
   Sales = 5,40,000/30% = ₹18,00,000
2. **Credit Sales:**
   Credit sales = 80% of total sales = 18,00,000 X 80% = ₹14,40,000
3. **Total Assets:**
   Total Assets Turnover = Sales/ Total Assets =0.3times
   Total Assets = 18,00,000/0.3 = ₹60,00,000
4. **Inventory:**
   Inventory Turnover = Cost of Goods Sold / Inventory X 100
   = 18,00,000 – 5,40,000 / Inventory
   Inventory = 12,60,000 / 4 = ₹3,15,000
5. **Debtors:**
   Debtors = Credit Sales X 20 days / 360 days
   = 14,40,000 X 20/360 days
   = ₹ 80,000
6. **Long Term Debt and Current Liabilities**
   Total Assets = 60,00,000
   Total of Balance Sheet = 60,00,000
   Now, Long Term Debt
   Long Term Debt / Equity = 40%
   Long Term Debt = 40% of Equity = 40,00,000 X 40% = ₹ 16,00,000
   Current Liabilities = 60,00,000 (Total Assets) – 40,00,000 (Equity) – 16,00,000 (Long Term Debt) = ₹ 4,00,000
7. **Cash and Bank:**
   Current ratio = Current Assets / Current Liabilities
   1.8 = (Debtors + Inventory + Cash and Bank)/ Current Liabilities
   1.8 = 80,000 + 3,15,000 + Cash and Bank / 4,00,000
   7,20,000 = 3,95,000 + Cash and Bank
   Cash and Bank = ₹ 3,25,000
8. **Fixed Assets**
   Total Assets – Current Assets = ₹ 60,00,000 – (3,15,000 + 80,000 + 3,25,000)
   = ₹ 52,80,000

Balance Sheet

Sh. funds	40,00,000	Cash	3,25,000
L.T. Liabs	16,00,000	Debtors	80,000
Current Liabs	4,00,000	Fixed Assets	52,80,000
		Inventory	3,15,000
	60,00,000		60,00,000

Q4

(a) Given Gross Profit = 60,000

G.P. Ratio = 20%

$$\text{Sales} = 60{,}000 \times \frac{100}{20} = 3{,}00{,}000$$

Cost of Sales = Sales – Gross Profit

= 3,00,000 – 60,000

= 2,40,000

Stock turnover given = 6

$$= \frac{\text{Cost of Sales}}{\text{Average Stock}}$$

$$= \frac{2{,}40{,}000}{6}$$

= 40,000

Average Stock = 40,000

Let x be the opening stock, then the closing stock will be x + 5000

$$\text{Then, Average Stock} = \frac{x + (x + 5000)}{2}$$

40,000 = x + 2500

x = 37500

Opening Stock = x = 37500

Closing Stock = x + 5000 = 37500 + 5000 = 42500

Debtors Velocity (Given) = 2 months

$$\text{Debtors} = \frac{\text{Sales} \times \text{Debtors collection period}}{12\,(\text{No. of Months})} = 3{,}00{,}000 \times \frac{2}{12} = 50{,}000$$

Purchases + Opening Stock – Closing Stock = Cost of Sales

Purchases + 37500 – 42500 = 2,40,000

Purchases – 5000 = 2,40,000

Purchase = 2,45,000

Creditors Velocity (given) = 73 days

$$\text{Creditors amount} = 2{,}45{,}000 \times \frac{73}{365} = 49{,}000$$

FA Turnover given on Cost of Sales = 4

$$\frac{\text{COS}}{\text{FA}} = 4$$

$$\frac{2{,}40{,}000}{\text{FA}} = 4$$

$$\text{FA} = \frac{2{,}40{,}000}{4}$$

FA = 60,000

Capital Turnover (Given) = 2

$$\frac{\text{COS}}{\text{Capital}} = 2$$

$$\frac{2{,}40{,}000}{\text{Capital}} = 2$$

$$\text{Capital} = \frac{2{,}40{,}000}{2}$$

Capital = 1,20,000

Balance Sheet

Liabilities	₹	Assets	₹
Capital	1,20,000	Fixed Assets	60,000
Reserves & Surplus	20,000	Current Assets:	
Creditors	49,000	Stores	42,500
		Debtors	50,000
		Cash (Bank B/F)	36,500
	1,89,000		1,89,000

Q5

(a) Computation of Sales, Sundry Debtors, Closing Stock and Sundry creditors:

Given Gross Profit ration = 25%

Gross Profit amount = ₹ 4,00,000

(A) $\text{Sales} = \text{G.P. amount} \times \frac{100}{\text{GP\%}}$

$= ₹\ 4,00,000 \times \frac{100}{25}$

$= ₹\ 16,00,000$

$\text{Debtors} = \text{Sales} \times \frac{3}{12} = ₹\ 16,00,000 \times \frac{3}{12} = ₹\ 4,00,000$

Bills Receivable = ₹ 25,000

(B) Sundry debtors = Total debtors – Bills Receivable = ₹ 4,00,000 - ₹ 25,000 = ₹ 3,75,000

(C) Stock Velocity given = 8 months

Cost of Goods Sold (COGS) = Sales –GP = ₹ 16,00,000 - ₹ 4,00,000 = ₹ 12,00,00

Let 'x' be the opening stock, then the closing stock = x +10,000

⇨ $\text{Average stock} = \frac{x + (x + 10{,}000)}{2} = \frac{2x + 10{,}000}{2}$

⇨ Average Stock = x+ 5000

$\frac{\text{COGS}}{\text{AvgStock}} = \text{InventoryTurnover}$

* $\text{Inventory Holding period (or) stock} = \frac{12\,\text{months}}{\text{InventoryTurnover}} = 8$

$\text{Inventory Turnover} = \frac{12}{8} = \frac{3}{2} = 1.5$

$\text{Avg. Stock} = \frac{12{,}00{,}000}{1.5}$

Avg. Sock = ₹ 8,00,000

Avg. Stock = x+5000

⇨ X=795000

Opening Stock = ₹ 7,95,000

Closing Stock = x+10000 =₹ 7,95,000 + ₹ 10,000 = ₹ 8,05,000

(D) Sundry creditors:

Opening Stock + Purchase – Closing Stock = COGS

7,95,000 + Purchase – 8,05,000 = 12,00,000

Purchases = 12,10,000

Creditors Velocity = 2 Months

$\text{Creditors} = 12{,}10{,}000 \times \frac{2}{12} = 2{,}01{,}667$

(-) Bill payable = 10,000

Sundry Creditors → = 1,91,667

Q6

(a) Working Notes:

(1) Calculation of Sales

Fixed asset to sales = 1.3 (given)

= sales/fixed assets = 3

= sales/26,00,000 = 3

Sales = 3× 26,00,000

= ₹78,00,000

(2) Calculation of Current Assets

Fixed asset to sales = 13:11 (given)

Current assets = fixed assets × 11/13

= 26,00,000× 11/13

= ₹22,00,000

(3) Calculation of raw material consumption

	₹
Sales	78,00,000
Less: Gross profit (78,00,000×0.15)	11,70,000
Works cost	66,30,000
Raw material consumption (20% of works cost) (given)	13,26,000
Direct wages (10% of works cost) (given)	6,63,000

(4) Calculation of stock of raw materials:

Stock of raw material = 3 months usage

= 13,26,000× 3/12

= ₹3,31,500

(5) Calculation of stock of finished goods

Stock of finished goods = 6% of works cost (given)

= 66,30,000 ×6/100

= ₹3,97,800

(6) Calculation current liabilities:

Current ratio = 2

= current asset/current liability = 2

= 22,00,000/current liabilities = 2

Current liabilities = ₹11,00,000

(7) Calculation of Debtors

Average collection period = 60 days

Debtors/ Credit sales×365 = 60 days

Debtors/78,00,000×365 = (78,00,000×60)/365

= ₹12,82,000

(8) Calculation of Long term loan:

Long term loan to current liabilities = 2:1

Long- term loan/Current liabilities = 2

Long- term loan/11,00,000 = 2

Long term loan = 2×11,00,000 = ₹22,00,000

(9) Calculation of Cash Balance

		₹
Current assets		22,00,000
Less: debtors	12,82,000	
Raw material	3,31,500	
Finished goods stock	3,97,800	(20,11,300)
Cash balance		1,88,700

(10) Calculation of Net worth

		₹
Fixed assets		26,00,000
Current assets		22,00,000
Total assets		48,00,000
Less: long term loan	22,00,000	
Current liabilities	11,00,000	33,00,000
Net worth		15,00,000

Net worth = share capital + reserves

Capital to Reserves and surplus = 1:4

Share capital = 15,00,000 ×1/5 = ₹3,00,000

Reserve & surplus = 15,00,000 ×4/5 = ₹12,00,000

Balance Sheet of Star Sunshine Ltd. as at 31-3-2024

Liabilities	₹	Assets	₹
Share capital	3,00,000	Fixed assets	26,00,000
Reserves & surplus	12,00,000	Current assets	
Long term loans	22,00,000	Stock of raw material	3,31,500
Current liabilities	11,00,000	Stock of finished goods	3,97,800
		Debtors	12,82,000
		Cash	1,88,700
	48,00,000		48,00,000

Q7

Working Notes:

(i) **Current Ratio**= Current Assets (CA)/Current Liabilities(CL) = 2.50 i.e., 2.5 :1.0

Working Capital = ₹ 1,20,000

Current Assets / Current Liabilities = 2.5

CA = 2.5 CL

CA – CL = 1,20,000

2.5 CL – CL = 1,20,000

1.5 CL = 1,20,000

$$CL = \frac{1,20,000}{1.5}$$

= ₹ 80,000

CA = 2.5 CL

= 2.5 × 80,000

= ₹ 2,00,000

Note:

Bank Overdraft = ₹ 20,000

Other CL = ₹ 60,000 (balancing figure)

CL = ₹ 80,000

(ii) **Liquid Ratio=** Quick Assets/CL (Excluding Overdraft) = 1.50 i.e., 1.50:1.00

1.0 - ₹ 60,000

1.5 - ?

(1.5/1.00) × 60,000 = ₹ 90,000 (Quick Assets)

Stock = CA - Quick Assets

= 2,00,000 - 90.000 **= ₹ 1,10,000**

(iii) Proprietary Ratio = (Fixed Assets/ Proprietary Funds) = 0.75

i.e., Working capital/ Proprietary Funds = 0.25

Proprietary Funds = (1/0.25) × 1,20,000 = ₹ 4,80,000

Less: Reserves & Surplus = ₹ 80,000

Share Capital = ₹ 4,00,000

(iv) Fixed Assets = 4,80,000 × 0.75 = ₹ 3,60,000.

Summarized Statement of Assets and Liabilities as on 31st March, 2017

Liabilities		₹	Assets		₹
Share capital		4,00,000	Fixed Assets		3,60,000
Reserves & Surplus		80,000	Current Assets :		
Current Liabilities:			Stock	1,10,000	
Bank Overdraft	20,000		Quick Assets	90,000	2,00,000
Other C.L	60,000	80,000			
Total		5,60,000	Total		5,60,000

Q8

Proforma Balance Sheet of the Textile Company as on .....

Liabilities	Amount (₹)	Assets	Amount (₹)
Net Worth	13,91,304	Fixed Assets	7,40,173
Long-Term debt	4,59,130	Cash	4,44,869
Current debt	5,84,348	Stock	6,80,851
		Sundry Debtors	5,68,889
	24,34,782		24,34,782

Working Notes:

1. Net worth = ₹ 32,00,000 ÷ 2.3 = ₹ 13,91,304
2. Current debt = (₹ 13,91,304/100) x 42 = ₹ 5,84,348
3. Total debt = (₹ 13,91,304/100) x 75 = ₹ 10,43,478
4. Long-term debt = ₹ 10,43,478 – ₹ 5,84,348 = ₹ 4,59,130
5. Fixed assets = (₹ 13,91,304/1,000) x 532 = ₹ 7,40,173
6. Current assets = ₹ 5,84,348 x 2.9 = ₹ 16,94,609
7. Inventory = ₹ 32,00,000 ÷ 4.7 = ₹ 6,80,851
8. Cash = ₹ 16,94,609 - (₹ 6,80,851 + ₹ 5,68,889) = ₹ 4,44,869

Q9

Working Notes and Calculations

1. Net worth = Equity Share Capital + Reserves + Surplus
   = **Rs.**4,00,000 + **Rs.**6,00,000 = **Rs.**10,00,000
2. Total Debt/Net worth = ½ or Total Debt/**Rs.**10,00,000 = ½ or Total Debt = **Rs.**10,00,000/2
   = **Rs.**5,00,000
3. Total of Balance Sheet (on Liabilities) = **Rs.**15,00,000 (after updating Working Note 2)
   Therefore Total Assets = **Rs.**15,00,000
4. Total Assets Turn–over = Turn–over/Total Assets = Turnover/**Rs.**15,00,000 = 2
   Or turnover (i.e. Sales) = **Rs.**15,00,000 × 2 = **Rs.**30,00,000
5. Cost of Goods Sole (COGS) = Sales less Gross Profit = **Rs.**30,00,000 less 30% thereon
   = **Rs.**21,00,000
6. Debtors = Sales × (40/360) = **Rs.**30,00,000 × (40/360) = **Rs.**3,33,333
7. COGS/Closing Inventory = **Rs.**21,00,000/Closing Inventory = 3 times
   ∴ Closing Inventory = **Rs.**21,00,000/3 = **Rs.**7,00,000
8. Acid Test Ratio = Quick Assets/Quick Liabilities = (debtors + Cash)/Current Liability
   = (**Rs.**3,33,333 + Cash)/ **Rs.**5,00,000 = 0.75
   ∴ Cash = **Rs.** 41,667

Since there is no Bank OD in the Balance Sheet format, Quick Liabilities = Current Liabilities

Balance Sheet as on 31st March 2018			
Liabilities	Rs.	Assets	Rs.
Equity Share Capital	4,00,000	Plant & Machinery & other Fixed Assets	4,25,000
Reserves and Surplus	6,00,000		
Total Debt:		Current Assets:	
Current Liabilities	5,00,000	Inventory	7,00,000
		Debtors	3,33,333
		Cash	41,667
Total	15,00,000	Total	15,00,000

Q10

(i) Current Ratio = Current Assets /Current Liabilities
= ₹930 lakhs /₹540 lakhs
= 1.72

(ii) Debt-Equity Ratio = Debt /Equity
= ₹ 300 lakhs/₹560 lakhs
= 0.54

Working Notes:

Current Assets :

Stock	= ₹ 460 lakhs
Debtors	= ₹ 460 lakhs
Cash and Cash Equivalent	= ₹ 10 lakhs
	= ₹ 930 lakhs

Current Liabilities :

Short term loans	= ₹ 360 lakhs
Trade Creditors	= ₹ 150 lakhs

Other Liabilities	= ₹ 30 lakhs
	₹ 540 lakhs

Debt :

Term loan	= ₹ 300 lakhs

Equity :

Capital	= ₹ 250 lakhs
Reserves	= ₹ 280 lakhs
P&L A/c	= ₹ 30 lakhs
	₹ 560 lakhs

Alternatively, Debt-Equity Ratio may be calculated as under:

Debt-Equity Ratio = ₹ 300 lakhs / ₹ 540 lakhs = 0.56

Debt
Term Loan = ₹ 300 lakhs

Equity

Capital	₹ 250 lakhs
Reserves	₹ 280 lakhs
P & L A/c	₹ 30 lakhs
	₹ 560 lakhs
Less: Misc. Exp.	₹ 20 lakhs
	₹ 540 lakhs

Q11

Balance Sheet As at 31st March 2019

Liabilities	Amount(₹)	Assets	Amount(₹)
Equity Share Capital	1,00,000	Fixed Assets	60,000
Current debt	24,000	Cash	60,000
Long-Term Debt	36,000	Inventory	40,000
	1,60,000		1,60,000

Working Notes:

1. Total debt = 0.60 x Equity Shares = 0.60 x ₹1,00,000= ₹60,000

   Current debt to total debt = 0.40, hence current debt = 0.40 x ₹60,000 = ₹24,000

2. Fixed assets = 0.60 x Equity Shares = 0.60 x ₹1,00,000 = ₹ 60,000

3. Total Liabilities = Total debt + Equity Shares Capital = ₹60,000 + ₹1,00,000 =₹1,60,000
   (Assets= Liabilities+ Equity Share Capital).
   Since fixed assets are ₹60,000, hence, current assets should be ₹1,00,000.

4. Total assets to turnover = 2 times: inventory turnover = 8 times
   Hence, inventory/total assets = 2/8 =1/4,

   Total assets =₹ 1,60,000

   Therefore, inventory=₹1,60,000/4 =₹40,000,
   Balance on Asset side is Cash = ₹1,00,000 -₹40,000 = ₹60,000

Q12

Let, Shareholders funds be 'x' ie E|S|C + R|S.

∴ 15% Debt = Shareholders fund × 2

= 2x

∴ Interest = 2x × 15% = 0.30x

Now, Capital Gearing Ratio = $\frac{\text{Debt + P|S|C}}{\text{E|S|C}}$

or, $3 = \frac{2x + (x - \text{E|S|C})}{\text{E|S|C}}$

or, $3 \times \text{E|S|C} = 2x + x - \text{E|S|C}$

or $4 \times \text{E|S|C} = 3x$

or, $\text{E|S|C} = 3/4x = 0.75x$

∴ $\text{P|S|C} = 0.25x$

Now, PD = P|S|C × 18% = 0.045x

also, Sales = Capital × Cap. Turnover Ratio

∴ Sales = (0.75x + 0.25x + 2x) × 2

= 6x

∴ PAFESH = [(Sales × EBIT %) − Interest] (1−t) − PD

= (6x × 50% − 0.30x)(1−0.30) − 0.045x

= 1.845x

∴ $\text{RoE} = \frac{\text{PAFESH}}{\text{E|S|Cap}} \times 100 = \frac{1.845x}{0.75x} \times 100$

= 246%

Q13

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

or, CA = 2.50 CL

Since, Working Capital = CA − CL = 3,00,000

or, 2.50 CL − CL = 3,00,000

or, CL = 200,000 ; CA = 5,00,000.

∴ Trade Payables = CL − Bank O/D

= 200,000 − 60,000

= ₹ 1,40,000.

(ii) Fixed Assets + Net Working Cap = Net Worth

Let, Net Worth be 'x'.

∴ 0.75 x + 3,00,000 = x

or, 0.25x = 3,00,000

or, x = 12,00,000.

∴ Eq. Share Cap = Net Worth − R/S

= 12,00,000 − 2,00,000

= ₹ 10,00,000.

(iii) Fixed Assets = 0.75 x

= 0.75 × 12,00,000

= ₹ 9,00,000.

(iv) Quick Ratio = $\frac{\text{CA - Stock}}{\text{CL - Bank O/D}}$

or, 1.80 = $\frac{5,00,000 - \text{Stock}}{2,00,000 - 60,000}$

or, Stock = 5,00,000 − 2,52,000

= ₹ 2,48,000.

Q14

$$\text{Inventory velocity} = \frac{\text{Avg Inv}}{\text{COGS}} \times 12$$

$$\text{or, COGS} = \frac{1,40,000}{1} \times 12$$

$$= ₹\ 16,80,000$$

Let, Sales be 'x'.

$\therefore$ Operating expenses = 0.10x

Operating Profit = 0.30x

$\therefore$ $x - 16,80,000 - 0.10x = 0.30x$

or, $0.60x = 16,80,000$

or, $x = 28,00,000$

$\therefore$ EBIT = 30% x 28,00,000 = ₹ 8,40,000

also, PAT = 28,00,000 x 16.8% = ₹ 4,70,400

$\therefore$ PBT = $\frac{470400}{1 - 0.30}$ = ₹ 6,72,000.

$\therefore$ Interest = EBIT - PBT

= 840,000 - 672,000

= ₹ 168,000.

and, Debt = $\frac{\text{Interest}}{10\%} = \frac{168000}{10\%}$ = ₹ 16,80,000.

and, Equity = $\frac{\text{Debt}}{2} = \frac{16.8L}{2}$ = ₹ 840,000

(i) Int. Coverage Ratio = $\frac{\text{EBIT}}{\text{Interest}}$

= $\frac{840000}{168000}$ = 5 times

(ii) Trade Receivables (Net) = 220,000 - 20,000

= 2,00,000.

Also, Cr. Sales + Cash Sales = 28,00,000
Cr Sales − Cash Sales = 2,00,000

2 Cr Sales = 30,00,000
∴ Cr. Sales = 15,00,000.

∴ Trade Receivable Turnover Ratio = $\frac{\text{Cr. Sales}}{\text{Trade Rec}} = \frac{15L}{2L} = 7.5$ times

(iii) $ROI = \frac{EBIT}{Eq + Debt} \times 100 = \frac{8.4L}{16.8L + 8.4L} \times 100$

$= 33.33\%$.

Q15

$\frac{GP}{COGS} = 33.33\%$.

∴ $COGS = \frac{GP}{33.33\%} = \frac{10,00,000}{33.33\%} = ₹\ 30,00,000$

∴ Sales = COGS + GP = 30L + 10L = ₹ 40L

Avg Inventory = $COGS \times \frac{\text{Inv velocity}}{12}$

$= 30,00,000 \times \frac{4}{12} = ₹\ 10,00,000.$

Cls Inventory = 0/s Inventory × 3

also, $\frac{\text{Cls Inv} + \text{O/s Inv}}{2} = 10,00,000$

or, Cls Inv + O/s Inv = 20,00,000

or, (O/s Inv × 3) + O/s Inv = 20,00,000

∴ O/s Inv = $\frac{20L}{4}$ = ₹ 5L

Cls Inv = ₹ 15L

$$\text{Quick Ratio} = \frac{\text{CA} - \text{Stock}}{\text{CL}}$$

$$\text{or, } \frac{6}{5} = \frac{\text{CA} - 15,00,000}{\text{CL}}$$

$$\text{or, } 6\text{CL} = 5\text{CA} - 75,00,000$$

$$\text{also, } \frac{\text{CA}}{\text{CL}} = \frac{8}{5}$$

$$\therefore 5\text{CA} = 8\text{CL}$$

$$\therefore 6\text{CL} = 8\text{CL} - 75,00,000$$

$$\text{or, } 2\text{CL} = 75,00,000$$

$$\text{or, } \text{CL} = 37,50,000.$$

$$\text{and, } \text{CA} = \frac{8 \times 37.5\text{L}}{5} = ₹\ 60,00,000.$$

$$\text{Working Capital} = 60\text{L} - 37.5\text{L}$$
$$= ₹\ 22.5\text{L}$$

$$\therefore \text{Working Capital Turnover Ratio} = \frac{\text{Turnover}}{\text{Working Cap}}$$
$$= \frac{40\text{L}}{22.5\text{L}} = \frac{16}{9} \ (16:9)$$

Q16

$$\text{CA} = 2.5\,\text{CL}$$

$$\text{also, } \text{CA} - \text{CL} = 60,000$$

$$\text{or, } 2.5\text{CL} - \text{CL} = 60,000$$

$$\text{or, } 1.5\,\text{CL} = 60,000$$

$$\text{or, } \text{CL} = \frac{60,000}{1.50} = ₹\ 40,000.$$

$$\text{and, } \text{CA} = 2.5 \times 40,000 = ₹\ 1,00,000.$$

$$\text{Liquid Ratio} = \frac{\text{CA} - \text{Stock}}{\text{CL}}$$

$$\text{or,} \quad 1.50 = \frac{100{,}000 - \text{Stock}}{40{,}000}$$

$$\text{or,} \quad \text{Stock} = 100{,}000 - (40{,}000 \times 1.5)$$

$$= ₹\ 60{,}000.$$

Q17

(a) $$\text{Sales} = \frac{\text{Gross Profit}}{\text{GP Margin}} = \frac{3{,}00{,}000}{25\%} = ₹\ 12\text{L}$$

(b) $$\text{Sundry Drs} = \text{Sales} \times \frac{\text{ACP}}{12}$$

$$= 12{,}00{,}000 \times \frac{2}{12} = ₹\ 2{,}00{,}000$$

(c) $$\text{Avg Inventory} = \frac{\text{COGS}}{\text{ITR}} = \frac{12{,}00{,}000 \times 75\%}{8}$$

$$= ₹\ 112{,}500.$$

$$\therefore \text{Closing Inv} = (\text{Avg Inv} \times 2) - \text{Cl. Inv}$$

$$= (112{,}500 \times 2) - 105{,}000$$

$$= ₹\ 120{,}000.$$

(d) $$\text{Purchases} = \text{COGS} + \text{Cl} - \text{Os}$$

$$= 9{,}00{,}000 + 120{,}000 - 105{,}000$$

$$= ₹\ 915{,}000.$$

$$\text{Creditors} = \text{Purchases} \times \frac{\text{Payment lag}}{12}$$

$$= 915{,}000 \times \frac{1}{12} = ₹\ 76{,}250.$$

Q18

(i) Credit Sales = Total Sales − Cash Sales
= 1250 Lakhs − 100 Lakhs
= ₹ 1,150 Lakhs.

∴ Days Sales Outstanding = $\frac{\text{A/c. Rec}}{\text{Cr. Sales}} \times 365$

= $\frac{50.48}{1150} \times 365 \cong 16$ days.

(ii) Interest Coverage Ratio = $\frac{\text{EBIT}}{\text{Interest}}$

= $\frac{180L}{(250L \times 10\%)}$ = 7.2 times

(iii) Debt Ratio = $\frac{\text{Long term bonds}}{\text{Total Assets}} \times 100$

= $\frac{250L}{1000L} \times 100$ = 25%

(iv) Inventory Turnover Ratio = $\frac{\text{COGS}}{\text{Avg Inv.}}$

= $\frac{800L}{300L}$ = 2.67 times

(v) Earnings per share = $\frac{\text{Price per share}}{\text{P/E Ratio}}$

= $\frac{₹72}{18}$ = ₹ 4 per share