Illustration 87

From the following particulars, prepare a summarised Balance Sheet in detail as at 31st March, 2012:

Fixed assets to Networth = 0.8 : 1
Current ratio = 3 : 1
Fixed assets = ₹ 8,00,000
Reserve included in Proprietor's Fund = 25%
Acid Test ratio = 3 : 2
Cash and Bank = ₹ 15,000
Long-term Loans = ₹ 2,00,000
Bank overdraft = Nil

[C.U.B.Com. (Hons.) — 2013]

Solution **Balance Sheet of ... as at 31st March, 2012**

Particulars	Note No.	Amount (₹)
(1)	(2)	(3)
I. EQUITY AND LIABILITIES		
(1) Shareholders' Funds :		
(a) Share Capital	5 (b)	7,50,000
(b) Reserve and Surplus	5 (a)	2,50,000
(2) Share Application Money Pending Allotment :		—
(3) Non-current Liabilities :		
(a) Long-term Loans		2,00,000
(4) Current Liabilities :		
(a) All Current Liabilities	2(a)	2,00,000
TOTAL		14,00,000
II. ASSETS		
(1) Non-current Assets :		
(a) Property, Plant and Equipment		
(i) Tangible Assets :		8,00,000
(2) Current Assets :		
(a) Inventories / Stock	3	3,00,000
(b) Debtors	4	2,85,000
(c) Cash and Bank		15,000
TOTAL		14,00,000

Working Notes :

(1) Calculation of Working Capital

$$\frac{\text{Fixed Assets}}{\text{Networth}} = \frac{0.8}{1} = \frac{8,00,000}{\text{Networth}} = \frac{0.8}{1}$$

Or, Networth = ₹ 10,00,000.

Networth + Fixed Assets + Working Capital – Long-term Loans

₹ 10,00,000 = ₹ 8,00,000 + Working Capital – ₹ 2,00,000

Or, Working Capital = ₹ 4,00,000

(2) Calculation of Current Assets and Current Liabilities

(a) Working Capital = ₹ 4,00,000

Current Assets – Current Liabilities = ₹ 4,00,000 [as Current Ratio = $\frac{3}{1}$.

Hence,Current Assets = 3 Current Liabilities]

3 Current Liabilities – Current Liabilities = ₹ 4,00,000

Or, Current Liabilities = $\frac{4,00,000}{2}$ = ₹ 2,00,000

(b) Current Assets = ₹ 6,00,000

(3) Calcultaion of Stock

Acid Test Ratio = $\frac{3}{2}$

$$\frac{\text{Current Assets} - \text{Stock}}{\text{Current Liabilities}} = \frac{3}{2}$$

$$\frac{6,00,000 - \text{Stock}}{2,00,000} = \frac{3}{2}$$

Or, ₹ 12,00,000 – 2 Stock = ₹ 6,00,000

Or, Stock = $\frac{6,00,000}{2}$ = **₹ 3,00,000**

(4) Calculation of Debtors

Total Current Assets = ₹ 6,00,000

Stock + Debtors + Cash and Bank = ₹ 6,00,000

₹ 3,00,000 + Debtors + ₹ 15,000 = ₹ 6,00,000

Or, Debtors = ₹ 2,85,000

(5) Calculation of Reserve and Share Capital

Proprietors' Fund = ₹ 10,00,000

(a) Reserve = 25% of ₹ 10,00,000 = ₹ 2,50,000

(b) Share Capital = ₹ (10,00,000 – 2,50,000) = ₹ 7,50,000

[**Tutorial Note** : Networth and Proprietors' Fund have been used synonymously.]

Illustration 88

From the ratios and other information supplied below prepare a 'Proprietor's Fund' statement with as many components as possible :

(a) Current Ratio : 5/2

(b) Liquid Ratio = 3/2

(c) Fixed assets to Networth = 0.75

(d) Cash position ratio = 1/5

(e) Capital gearing (highly geared) = 2

(f) Reserve and Surplus to Equity Capital = 20%

Working capital (net) ₹ 90,000; Bank overdraft ₹ 20,000.
There is no other long-term liabilities except Preference Share Capital.

[C.U.B.Com. (Hons.) — 2012]

Solution **Statement of Proprietor's Fund as on ...**

Particulars	Amount (₹)	Amount (₹)
Sources of Funds		
Equity Capital [Note 9(a)]	1,00,000	
Reserve and Surplus [Note 9(b)]	20,000	
Preference Share Capital [Note 8]	2,40,000	3,60,000
Application of Funds		
Fixed Assets (Note 5)		2,70,000
Current Assets :		
Stock / Inventories (Note 2)	60,000	
Debtors (Note 7)	78,000	
Cash and Cash Equivalents (Note 6)	12,000	1,50,000
		4,20,000
Less: Current Liabilities :		
Creditors or Other Current Liabilities (Note 4)	40,000	
Bank Overdraft (Given)	20,000	60,000
Proprietor's Fund		3,60,000

Working Notes :

(1) Calculation of Current Assets and Current Liabilities

$$\text{Current Ratio} = \frac{5}{2}$$

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{5}{2}$$

Or, 2 Current Assets = 5 Current Liabilities

Working Capital = ₹ 90,000 (given)

Current Assets – Current Liabilities = ₹ 90,000

Or, 2 Current Assets – 2 Current Liabilities = ₹ 1,80,000

[multiplying both sides by 2]

Or, 5 Current Liabilities – 2 Current Liabilities = ₹ 1,80,000

$$\text{Or, Current Liabilities} = \frac{1,80,000}{3} = ₹\ 60,000$$

Current Assets = Working Capital + Current Liabilities

= ₹ 90,000 + ₹ 60,000 = ₹ **1,50,000**

(2) Calcultaion of Stock

$$\text{Liquid Ratio} = \frac{3}{2}$$

$$\frac{\text{Current Assets} - \text{Stock}}{\text{Current Liabilities}} = \frac{3}{2}$$

$$\text{Or, } \frac{1,50,000 - \text{Stock}}{60,000} = \frac{3}{2}$$

Or, ₹ 3,00,000 – 2 Stock = ₹ 1,80,000

$$\text{Or, Stock} = \frac{3,00,000 - 1,80,000}{2}$$

$$\text{Or, Stock} = \frac{1,20,000}{2} = \textbf{₹ 60,000}$$

(3) Calculation of Debtors and Cash

Debtors and Cash = Total Current Assets – Stock
= ₹ (1,50,000 – 60,000) = **₹ 90,000**

(4) Calculation of Creditors or Other Current Liabilities

Creditors = Total Current Liabilities – Bank Overdraft
= ₹ (60,000 – 20,000) = **₹ 40,000**

(5) Calculation of Fixed Assets and Networth

$$\frac{\text{Fixed Assets}}{\text{Networth}} = 0.75$$

$$\frac{\text{Fixed Assets}}{\text{Fixed Assets + Working Capital}} = 0.75$$

$$\text{Or, } \frac{\text{Fixed Assets}}{\text{Fixed Assets + 90,000}} = 0.75$$

Or, 0.25 Fixed Assets = ₹ 67,500
Or, Fixed Assets = ₹ 2,70,000
Networth = Fixed Assets + Working Capital
= ₹ (2,70,000 + 90,000) = ₹ 3,60,000

(6) Calculation of Cash and Cash Equivalents

$$\text{Cash Position Ratio} = \frac{1}{5}$$

$$\frac{\text{Cash + Cash Equivalents}}{\text{Current Liabilities}} = \frac{1}{5}$$

$$\text{Cash + Cash Equivalents} = \frac{1}{5} \text{ of ₹ 60,000} = \textbf{₹ 12,000}$$

(7) Calculation of Debtors

Debtors + Cash = ₹ 90,000
Or, Debtors = ₹ (90,000 – 12,000) = ₹ 78,000

(8) Calculation of Preference Share Capital

Capital Gearing = 2

$$\frac{\text{Preference Share Capital}}{\text{Equity Funds}} = 2$$

$$\text{Or, } \frac{\text{Preference Share Capital}}{\text{3,60,000– Preference Share Capital}} = 2$$

Or, Preference Share Capital = ₹ 7,20,000 – 2 Preference Share Capital

$$\text{Or, Preference Share Capital} = \frac{7,20,000}{3} = ₹\ 2,40,000$$

and Equity Funds = ₹ (3,60,000 – 2,40,000) = ₹ 1,20,000

(9) Calculation of Reserve and Surplus and Equity Capital

Equity Funds = ₹ 1,20,000

Equity Capital + Reserve and Surplus = ₹ 1,20,000

Equity Capital + 0.20 Equity Capital = ₹ 1,20,000

$$\text{Or, Equity Capital} = \frac{1,20,000}{1.20} = ₹\ 1,00,000$$

(a) Equity Capital is ₹ 1,00,000

(b) Reserve and Surplus = 20% of ₹ 1,00,000 = ₹ 20,000.

Illustration 89

Prepare Trading and Profit and Loss Account for the year ended 31.12.2011 from the following :

Current ratio 2.2; Deb tors velocity 73 days; Acid test ratio 1.4; Office overhead to Selling and Distribution overhead 1/3; G.P. ratio 0.25; Creditors velocity 3 months; Operating ratio 0.85; Stock velocity 4; Depreciation ₹ 8,000; Cash purchase 20%; Bank overdraft ₹ 20,000.

Net working capital ₹ 1,20,000; Goods sold on credit only.

Cost of goods sold includes chargeable expenses. *[C.U.B.Com. (Hons.) — 2012]*

Solution

In the books of ...

Dr. Trading and Profit and Loss Account for the year ended 31st December, 2011 Cr.

Particulars		₹	Particulars	₹
To Opening Stock / Inventories (Note 10)		1,02,000	By Sales : Credit (Note 4)	5,60,000
To Purchase : Cash (Note 8)	80,000		By Closing Stock / Inventories (Note 2)	1,08,000
Credit (Note 7)	3,20,000	4,00,000		
To Chargeable Expenses (Note 11)		26,000		
To Gross Profit c/d (Note 5)		1,40,000		
		6,68,000		6,68,000
To Office Overhead [Note 13(a)]		12,000	By Gross Profit b/d	1,40,000
To Depreciation (Given)		8,000		
To Selling and Distribution Overhead [Note 13(b)]		36,000		
To Net Profit (Note 14)		84,000		
		1,40,000		1,40,000

Working Notes :

(1) Calculation of Current Assets and Current Liabilities

$$\text{Current Ratio} = \frac{2.2}{1}$$

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{2.2}{1}$$

Or, Current Assets = 2.2 Current Liabilities

Net Working Capital = ₹ 1,20,000 (given)

Current Assets – Current Liabilities = ₹ 1,20,000

Or, 2.2 Current Liabilities – Current Liabilities = ₹ 1,20,000

$$\text{Or, Current Liabilities} = \frac{1,20,000}{1.2} = ₹\ \mathbf{1,00,000}$$

Current Assets = 2.2 × ₹ 1,00,000 = ₹ **2,20,000**

(2) Calculation of Stock / Inventories

$$\text{Acid Test Ratio} = \frac{1.4}{1}$$

$$\frac{\text{Quick Assets}}{\text{Quick Liabilities}} = \frac{1.4}{1}$$

$$\text{Or, } \frac{\text{Current Assets– Closing Stock}}{\text{Current Liabilities – Bank Overdraft}} = \frac{1.4}{1}$$

$$\text{Or, } \frac{2,20,000 - \text{Closing Stock}}{1,00,000 - 20,000} = \frac{1.4}{1}$$

Or, ₹ 2,20,000 – Closing Stock = ₹ 1,12,000

Or, Closing Stock = ₹ 1,08,000

(3) Calculation of Debtors

Current Assets = Inventories + Debtors + Cash and Bank

₹ 2,20,000 = ₹ 1,08,000 + Debtors + 0 [as bank overdraft is there, Cash and Bank balance is assumed to be Nil]

Or, Debtors = ₹ 1,12,000

(4) Calculation of Credit Sales and Total Sales

Debtors' Velocity = 73 days or 5 times [assuming 365 days in a year]

$$\frac{\text{Credit Sales}}{\text{Average Debtors}} = 5$$

Or, Credit Sales = 5 × ₹ 1,12,000 [assuming Opening and Closing Debtors are same]
Or, Credit Sales = ₹ 5,60,000
Total Sales = ₹ 5,60,000 (as goods are sold on credit only)

(5) Calculation of Gross Profit and Cost of Goods Sold

Gross Profit Ratio = 0.25
Or, Gross Profit = 0.25 of ₹ 5,60,000
Or, Gross Profit = ₹ 1,40,000
Cost of Goods Sold = Sales – Gross Profit
= ₹ (5,60,000 – 1,40,000) = ₹ 4,20,000

(6) Calculation of Creditors

Current Liabilities = ₹ 1,00,000
Bank Overdraft = ₹ 20,000 (given)
Creditors = Total Current Liabilities – Bank Overdraft
= ₹ 1,00,000 – 20,000
= ₹ 80,000

(7) Calculation of Credit Purchase

Creditors Velocity = 3 months or 4 times

$$\frac{\text{Credit Purchase}}{\text{Average Creditors}} = 4$$

Or, Credit Purchase = 4 × ₹ 80,000 [assuming Opening and Closing Creditors are same]
= ₹ 3,20,000

(8) Calculation of Cash Purchase

$$\text{Cash Purchase} = \frac{3,20,000}{80\%} \times 20\% = ₹\ \mathbf{80,000}$$

(9) Calculation of Total Purchase

Total Purchase = Cash Purchase + Credit Purchase
= ₹ 80,000 + ₹ 3,20,000 = ₹ **4,00,000**

(10) Calculation of Average Stock and Opening Stock

Stock Velocity = 4

$$\frac{\text{Cost of Goods Sold}}{\text{Average Stock}} = 4$$

$$\text{Or, Average Stock} = \frac{4,20,000}{4} = ₹\ 1,05,000$$

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

$$\text{Or, } ₹\ 1,05,000 = \frac{\text{Opening Stock} + 1,08,000}{2}$$

Or, ₹ (2,10,000 – 1,08,000) = Opening Stock
Or, Opening Stock = ₹ **1,02,000**

(11) Calculation of Chargeable Expenses

Cost of Goods Sold = Sales – Gross Profit
Opening Stock + Purchase + Chargeable Expenses – Closing Stock = ₹ 4,20,000
Or, ₹ 1,02,000 + ₹ 4,00,000 + Chargeable Expenses – ₹ 1,08,000 = ₹ 4,20,000
Or, Chargeable Expenses + ₹ 3,94,000 = ₹ 4,20,000
Or, Chargeable Expenses = ₹ 26,000

(12) Calculation of Operating Expenses

Operating Ratio = 0.85

$$\frac{\text{Cost of Goods Sold + Operating Expenses}}{\text{Net Sales}} = 0.85$$

$$\text{Or, } \frac{4,20,000 + \text{Operating Expenses}}{5,60,000} = 0.85$$

Or, Operating Expenses = ₹ 4,76,000 – ₹ 4,20,000
Or, Operating Expenses = ₹ 56,000

(13) Calculation of Office Overhead and Selling and Distribution Overhead

Operating Expenses = Office Overhead + Selling and Distribution Overhead + Depreciation
Or, ₹ 56,000 = Office Overhead + Selling and Distribution Overhead + ₹ 8,000
Or, Office Overhead + Selling and Distribution Overhead = ₹ 48,000
Or, Office Overhead + 3 Office Overhead = ₹ 48,000

$$\frac{\text{Office Overhead}}{\text{Selling and Distribution Overhead}} = \frac{1}{3}$$

Or, Selling and Distribution Overhead = 3 Office Overhead
Or, Office Overhead = ₹ 12,000
Or, Selling and Distribution Overhead = 3 Office Overhead
(a) Therefore, Office Overhead = ₹ 12,000
(b) Selling and Distribution Overhead = 3 × ₹ 12,000 = ₹ **36,000**

Illustration 90

From the following information, prepare the Balance Sheet of M Ltd. as on 31.12.2010 :

Current ratio	2 : 1
Liquid ratio	1.25 : 1
Fixed assets to Proprietorship ratio	0.75 : 1
Gearing ratio	1 : 1
Working Capital (Net)	₹ 8,000
Reserve and Surplus	₹ 2,000
Bank overdraft	₹ 2,000
Long-term Loan	Nil

[C.U.B.Com. (Hons.) — 2011]

Balance Sheet of M Ltd. as at 31st December, 2010

Particulars	Note No.	Amount (₹)
(1)	(2)	(3)
I. EQUITY AND LIABILITIES		
(1) Shareholders' Funds :		
(a) Share Capital :		
Equity Share Capital	6(b)	15,000
Preference Share Capital	6(a)	15,000
(b) Reserves and Surplus		2,000
(2) Share Application Money Pending Allotment :		—
(3) Non-current Liabilities :		—
(4) Current Liabilities :		
(a) Short-term Borrowings — Bank Overdraft		2,000
(b) Other Current Liabilities	4	6,000
TOTAL		40,000
II. ASSETS		
(1) Non-current Assets :		
(a) Property, Plant and Equipment		
(i) Tangible Assets	5	24,000
(2) Current Assets :		
(a) Inventories / Stock	2	6,000
(b) Other Current Assets	3	10,000
TOTAL		40,000

Working Notes :

(1) Calculation of Current Assets and Current Liabilities

$$\text{Current Ratio} = \frac{2}{1}$$

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

Or, Current Assets = 2 Current Liabilities

Working Capiktal (Net) = ₹ 8,000 (given)

Or, Current Assets – Current Liabilities = ₹ 8,000

Or, 2 Current Liabilities – Current Liabilities = ₹ 8,000

Or, Current Liabilities = ₹ 8,000

Current Assets = 2 × ₹ 8,000 = ₹ **16,000**

(2) Calculation of Stock / Inventories

$$\text{Liquid Ratio} = \frac{1.25}{1}$$

$$\frac{\text{Quick Assets}}{\text{Current Liabilities}} = \frac{1.25}{1}$$

$$\text{Or, } \frac{\text{Current Assets} - \text{Stock / Inventories}}{\text{Current Liabilities}} = \frac{1.25}{1}$$

$$\text{Or, } \frac{16{,}000 - \text{Inventories}}{8{,}000} = \frac{1.25}{1}$$

Or, Inventories = ₹ 6,000

(3) Calculation of Other Current Assets

Other Current Assets = Total Current Assets – Stock / Inventories
= ₹ 16,000 – ₹ 6,000 = ₹ 10,000

(4) Calculation of Other Current Liabilities

Other Current Liabilities = Total Current Liabilities – Bank Overdraft
= ₹ 8,000 – ₹ 2,000 = ₹ 6,000

(5) Calculation of Fixed Assets and Proprietors' Fund

$$\frac{\text{Fixed Assets}}{\text{Proprietorship Fund}} = \frac{0.75}{1}$$

$$\text{Or, } \frac{\text{Fixed Assets}}{\text{Fixed Assets + Working Capital}} = \frac{0.75}{1}$$

$$\text{Or, } \frac{\text{Fixed Assets}}{\text{Fixed Assets + 8,000}} = \frac{0.75}{1}$$

Or, Fixed Assets – 0.75 Fixed Assets = ₹ 6,000

$$\text{Or, Fixed Assets} = \frac{6{,}000}{0.25} = ₹\ 24{,}000$$

Proprietorship Fund = Fixed Assets + Working Capital
= ₹ (24,000 + 8,000) = ₹ **32,000**

(6) Calculation of Preference Share Capital and Equity Share Capital

Proprietorship Fund = Share Capital + Reserve and Surplus
Or, ₹ 32,000 = Share Capital + ₹ 2,000
Or, Share Capital = ₹ 30,000
Gearing Ratio = 1 : 1

$$\text{Or, } \frac{\text{Preference Share Capital}}{\text{Equity Share Capital}} = \frac{1}{1}$$

(a) Preference Share Capital = ₹ 30,000 × $\frac{1}{2}$ = ₹ **15,000**

(b) Equity Share Capital = ₹ 30,000 × $\frac{1}{2}$ = ₹ 15,000

Illustration 91

Following are the accounts of A Ltd. for two years :

Particulars	2009 (₹)	2010 (₹)	Particulars	2009 (₹)	2010 (₹)
To Opening Stock	—	10,000	By Sales	1,50,000	2,00,000
To Purchase	1,20,000	1,25,000	By Closing Stock	10,000	—
To Wages	30,000	35,000	By Gross Loss	10,000	—
To Manufacturing Expenses	20,000	25,000			
To Gross Profit	5,000	—			
	1,70,000	2,00,000		1,70,000	2,00,000

Comment on the (i) GP ratios; (ii) Operating ratios; and (iii) Stock Turnover ratios of the two years of the company.

[C.U.B.Com. (Hons.) — 2011]

Solution

(i) G.P. Ratio in 2009 and 2010

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

$$\text{Gross Profit Ratio in 2009} = \frac{-10,000}{1,50,000} \times 100 = \mathbf{-6.67\%}$$

$$\text{Gross Profit Ratio in 2010} = \frac{5,000}{2,00,000} \times 100 = \mathbf{2.5\%}$$

Comment :

In 2009, Gross Profit Ratio was negative. It was definitely a cause of concern. The ways in which a company can improve its gross profit are to increase sales volue and/or reduce cost of goods sold. In 2010, Gross Profit Ratio has increased considerably and reached to 2.5%. It ensures an effective increase in company's profit earning capacity.

(ii) Operating Ratio in 2009 and 2010

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

$$\text{Operating Ratio in 2009} = \frac{1,60,000}{1,50,000} \times 100 = \mathbf{106.67\%}$$

$$\text{Operating Ratio in 2010} = \frac{1,95,000}{2,00,000} \times 100 = \mathbf{97.5\%}$$

Comment :

In 2009, Operating Ratio was very high leading no surplus (rather deficit in the form of Gross Loss) to the business. Lower Operating Ratio is desirable. It decreased to 97.5% in 2010 and resulted in Gross Profit.

(iii) Stock Turnover Ratio in 2009 and 2010

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

[Here, Cost of Goods Sold consists of the Cost of materials drawn from the Inventories. Any amount of Labour or Overhead should be excluded.)

Particulars	2009 (₹)	2010 (₹)
Cost of Goods Sold (a) [Sales – Gross Profit / (Gross Loss) – Labour – Overhead]	1,10,000	1,35,000
Average Stock (b) = $\frac{\text{Opening Stock + Closing Stock}}{2}$	$\frac{\text{Nil + 10,000}}{2}$ = 5,000	$\frac{\text{10,000 + Nil}}{2}$ = 5,000
Stock Turnover Ratio= $\frac{a}{b}$	22	27

Comment :

Stock Turnover Ratio has increased from 22 in 2009 to 27 in 2010. Other things remaining the same, an increase in the speed of inventories turnover indicates a relatively low level of inventories and that increases profits.

Illustration 92

Assuming 360 days in a year, calculate the average collection period from the following :

Average inventory	₹ 3,60,000
Debtors	₹ 2,40,000
Inventory turnover	6
Gross Profit ratio	10%
Credit sales to total sales	20%

[C.U.B.Com. (Hons.) — 2011]

Solution

$$\text{Average Collection Period} = \frac{360 \text{ days}}{\text{Debtors' Turnover}}$$

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

Inventory Turnover = 6

$$\text{Or, } \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}} = 6$$

Or, Cost of Goods Sold = 6 × ₹ 3,60,000 = ₹ 21,60,000

Gross Profit Ratio = 10% of Sales

$$= \frac{1}{9} \text{ of Cost of Goods Sold}$$

$$= \frac{1}{9} \text{ of ₹ } 21,60,000 = ₹ 2,40,000$$

Total Sales = Cost of Goods Sold + Gross Profit
= ₹ (21,60,000 + 2,40,000) = ₹ **24,00,000**
Credit Sales = 20% of Total Sales
= 20% of ₹ 24,00,00 = ₹ **4,80,000**

Hence, Debtors' Turnover Ratio = $\frac{4,80,000}{2,40,000}$ (assuming Opening and Closing receivables / Debtors are same)
= 2 times

Average Collection Period = $\frac{360 \text{ days}}{2}$ = **180 days**

Illustration 93

Balance Sheet of ABB Ltd. as at 31.03.2010

Liabilities	(₹ '000)	Assets	(₹ '000)
Equity Share Capital of ₹ 10 each	1200	Land and Building	
9% Preference Share Capital	400	(Less: Accumulated Depreciation of ₹ 2,20,000)	1880
Capital Reserve	50	Vehicles	620
11% Debentures	600	Inventories	280
Mortgage Loan (10%)	250	Prepaid Expenses	300
Trade Creditors	235	Sundry Debtors	150
Outstanding Expenses	12	Marketable Securities	50
Bank Overdraft (Unsecured)	200	Preliminary Expenses	25
Provision for Tax	135	Profit and Loss (Dr.)	40
Unclaimed Dividends	18	Cash in Hand	25
	3100		3100

From the above information, you are to compute the following ratios with appropriate comments:
(a) Working Capital ratio
(b) Cash Position ratio
(c) Propritary ratio
(d) Asset (fixed) to Proprietorship ratio
(e) Debt-Equity ratio

[C.U.B.Com. (Hons.) — 2010]

Solution

(a) Working Capital Ratio

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

Calculation of Current Assets and Current Liabilities

Current assets	₹	Current Liabilities	₹
Inventories	2,80,000	Trade Creditors	2,35,000
Prepaid Expenses	30,000	Outstanding Expenses	12,000
Sundry Debtors	1,50,000	Bank Overdraft (Unsecured)	2,00,000
Marketable Securities	50,000	Provision for Tax	1,35,000
Cash in Hand	25,000	Unclaimed Dividends	18,000
Current Assets	5,35,000	**Current Liabilities**	6,00,000

$$\text{Working Capital Ratio} = \frac{5,35,000}{6,00,000} = 0.89 : 1$$

Comment :

Working Capital Ratio is a static measure of liquidity at a point of time. Though there is no hard and fast rule, but a Workign Capital Ratio of 2 : 1 is generally considered good. In the present case, due to lower Working Capital Ratio of 0.89 : 1, the firm may face difficulty in paying its current liabilities in time. Along with this, the firm is not ready to face uncertainities and random shocks to cash flow.

(b) Cash Position Ratio :

$$\text{Cash Position Ratio} = \frac{\text{Financial Assets}}{\text{Current Liabilities}}$$

$$= \frac{\text{Cash + Bank + Short–term Marketable Securities}}{\text{Current Liabilities}}$$

$$= \frac{25,000 + 50,000}{6,00,000}$$

$$= \frac{75,000}{6,00,000} = 0.125$$

Comment :

Company's cash position as compared to Current Liabilities is very low. Generally, recommended value is between 0.2 to 0.5. This will be even worse if marketable securities is not considered as csh equivalent.

(c) Proprietary Ratio :

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

Calculation of Shareholders' Fund and Total Assets

Shareholders' Fund		₹	Total Assets	₹
Equity Share Capital		12,00,000	Fixed Asses :	
9% Preference Share Capital		4,00,000	Land and Building	18,80,000
Capital Reserve		50,000	Vehicle	6,20,000
		16,50,000	Current Assets :	
Less: Preliminary Expenses	25,000		Inventories	2,80,000
Profit and Loss (Dr.)	40,000	65,000	Prepaid Expenses	30,000
		15,85,000	Sundry Debtors	1,50,000
			Marketable Securities	50,000
			Cash in Hand	25,000
				30,35,000

$$\text{Hence, Proprietary Ratio} = \frac{15,85,000}{30,35,000} = 0.52 : 1$$

Comment :
This ratio shows the proportion of total assets of a business financed by shareholders' fund. Here, proprietors' share in total assets is 52% approximately. It implies the company's dependency on proprietors and outsiders. So far the financing is concerned, contributions of proprietors and outsiders are almost equal.

(d) Assets (fixed) to Proprietorship Ratio :

$$\text{Asset (fixed) to Proprietorship Ratio} = \frac{\text{Fixed Assets}}{\text{Proprietors' Fund}}$$

$$= \frac{18,80,000 + 6,20,000}{15,85,000} = 1.58 : 1$$

[**Tutorial Note** : Shareholders' Fund and Proprietor's Fund have been used synonymously.]

Comment :
This ratio indicates the portion / percentage of the owner's funds inveted in fixed assets. It helps to measure the solvency of a company. Here the ratio is more than 100%, it implies that shareholders' funds or propreitors' funds are not sufficient to finance the fixed assets and the firm has to depend upon the outsiders for the same.

(e) Debt-Equity Ratio

$$\text{Debt-Equity Ratio} = \frac{\text{Long–term Debts}}{\text{Shareholders' Funds}}$$

$$= \frac{11\% \text{ Debentures} + \text{Mortgage Loan } (10\%)}{\text{Shareholders' Funds}}$$

$$= \frac{6,00,000 + 2,50,000}{15,85,000}$$

$$= \frac{8,50,000}{15,85,000} = \mathbf{0.54 : 1}$$

Comment :
This ratio measures the contribution of lenders relative to the contribution of owners. This ratio should generally be less than one. In the present case, it is less than one which indicates that the claims of the owners are greater than those of the lenders.

Illustration 94

Compute Debt-Equity ratio from the following and comment upon it :

Equity Share Capital	6.0 lac
9% Preference Capital	2.5 lac
Reserve and Surplus	1.2 lac
10% Debentures	3.2 lac
Secured Loan (8%)	1.3 lac
Preliminary Expenses	0.3 lac
Miscellaneous Exdpenditures	0.4 lac

[C.U.B.Com. (Hons.) — 2010]

Solution

$$\text{Debt-Equity Ratio} = \frac{\text{Long–term Debts}}{\text{Shareholders' Funds}}$$

$$= \frac{\text{10\% Debentures + Secured Loans (8\%)}}{\text{(Equity Share Capital + 9\% Preference Capital + Reserve and Surplus) – Preliminary Expenses – Misc. Expenditures}}$$

$$= \frac{3,20,000 + 1,30,000}{(6,00,000 + 2,50,000 + 1,20,000) - (30,000 + 40,000)}$$

$$= \frac{4,50,000}{9,00,000} = \frac{1}{2} \text{ or } 1 : 2$$

Comment :
This ratio measures the contribution of lenders relative to the contribution of owners. In the present case, for every one rupee of long-term liability there is two rupees of shareholders' equity.

Illustration 95

Compute 'operating ratio' and 'operating profit ratio' from the following and comment on them :

Cost of goods sold = $\frac{3}{4}$ of net sales.

Income tax = 20% of net profit before tax.
Administrative expenses = ₹ 1,00,000
Net income after tax = ₹ 2,40,000
Selling expenses = ₹ 50,000
Other income = ₹ 50,000

[C.U.B.Com. (Hons.) — 2010]

Solution

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

Calculation of Gross Profit

Particulars	₹	₹
Net Income after Tax	2,40,000	
Add: Income tax (20% of Net Profit before tax or 25% of Net Profit after Tax)	60,000	
Net Profit before Tax		3,00,000
Less: Other Income :		50,000
Operating Profit		2,50,000
Add: Administrative Expenses	1,00,000	
Selling Expenses	50,000	1,50,000
Gross Profit		4,00,000

Cost of Golds Sold = $\frac{3}{4}$ of Net Sales.

Hence, Given Profit = $\frac{1}{4}$ of Net Sales.

Therefore, Net Sales = ₹ 4,00,000 × 4 = ₹ 16,00,000.
Cost of Goods Sold = ₹ (16,00,000 – 4,00,000) = **₹ 12,00,000**

$$\text{Operating Ratio} = \frac{12,00,000 + 1,50,000}{16,00,000} \times 100 = \mathbf{84.375\%}$$

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

$$= \frac{2,50,000}{16,00,000} \times 100 = \mathbf{15.625\%}$$

Comment :
It measures the proportion of operating expenses per rupee of Sales. A high Operating Ratio indicates a small surplus available to the business and lower profitability. In the present case, operating ratio is as high as 84.375% and that resulted in lower operating profit ratio at 15.625%.

Formulae at a Glance

Sl. No.	Name of the Ratio	Method of Computation	For details see Page
1.	Current Ratio	Current Assets / Current Liabilities	20.4
2.	Quick / Liquid Ratio	Quick Assets / Quick Liabilities	20.5
3.	Debt Equity Ratio	Long–term Debts / Shareholders' Funds	20.12
4.	Total Assets to Debt Ratio	Total Assets / Long–term Debt	20.14
5.	Proprietary Ratio	Shareholders' Funds / Total Assets	20.14
6.	Inventory / Inventories Turnover Ratio	Cost of Goods Sold / Average Stock	20.16
7.	Debtors Turnover Ratio	Credit Sales / Average Debtors + Average Bills Receivable	20.20
8.	Creditors Trunover Ratio	Credit Purchases / Average Creditors + Average Bills Payable	20.22
9.	Working Capital Turnover Ratio	Turnover / Working Capital	20.23
10.	Total Assets Turnover Ratio	Net Sales / Turnover / Total Assets = Number of Times	20.24

11.	Gross Profit Ratio	$\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$	20.25
12.	Net Profit Ratio	$\frac{\text{Net Profit}}{\text{Net Sales}} \times 100$	20.27
13.	Operating Ratio	$\frac{\text{Cost of Goods Sold + Operating Expenses}}{\text{Net Sales}} \times 100$	20.30
14.	Return on Capital Employed	$\frac{\text{EBIT}}{\text{Capital Employed}} \times 100$	20.34
15.	Return on Networth	$\frac{\text{Profit after Tax}}{\text{Networth}} \times 100$	20.35
16.	Earnings per Share	$\frac{\text{Net Income after Tax – Preference Dividend Requirement}}{\text{Number of Equity Shares}}$	20.36
17.	Price Earning Ratio	$\frac{\text{Market Price per Share}}{\text{Earnings per Share}}$	20.36
18.	Dividend Yield Ratio	$\frac{\text{Dividend per Share}}{\text{Market Value per Share}} \times 100$	20.36