Questions	RATIOS	Questions	RATIOS
1	HW Typed	31	CW
2	HW Typed	32	CW
3	CW	33	CW
4	HW Typed	34	CW
5	HW Handwritten solution provided	35	HW Handwritten solution provided
6	CW	36	CW
7	Discussed in class -Typed	37	CW
8	HW Typed	38	To be covered in WCM Chapter
9	CW	39	HW Typed
10	CW	40	HW Typed
11	CW	41	HW Typed
12	HW Typed	42	HW Typed
13	HW Handwritten solution provided	43	HW Typed
14	HW Typed	44	HW Typed
15	HW Typed	45	HW Typed
16	HW Typed	46	HW Typed
17	HW Typed	47	CW
18	CW		
19	HW Typed		
20	CW		
21	CW		
22	CW		
23	CW		
24	CW		
25	HW Typed		
26	CW		
27	CW		
28	HW Typed		
29	CW		

30	CW		

Sol ③ WN ① BS

Prop funds	x	FA	$0.75x$
~~Debt~~			
Cl liab	CL	CA	

WN ②

$$\frac{FA}{Prop\ funds} = \frac{0.75}{1}$$

$FA = 0.75\ Prop\ funds$

$FA = 0.75x$

$Prop\ funds + CL = FA + CA$

$$x = 0.75x + (CA - CL)$$

(WC)

$$x = 0.75x + 600{,}000$$

$$0.25x = 600{,}000$$

$$x = 2400000$$

Prop funds = ₹24,00,000

FA = $0.75x$ = ₹18,00,000

Sol (5)

WN (1) & TR = 5 Times

$\frac{\text{CoGS}}{\text{Av Stock}} = 5$

$\frac{5,40,000}{\text{Av Stock}} = 5$

Av Stock = 1,08,000

WN (2)

Sales	7,29,000
− GP 25%	1,80,000
CoGS =	5,40,000

Let of Stock = x

Cl Stock = x + 30,000

Av Stock = $\frac{x + x + 30,000}{2}$ = x + 15000

$x + 15000 = 108000$

$x = 93,000$

Closing Stock = 93,000 + 30,000 = ₹123,000

WN (4) Liquidity ratio = $\frac{QA}{CL}$

$1.25 = \frac{CA - \text{Stock}}{CL}$

$1.25 = \frac{CA - 123000}{2,40,000}$

CA = ₹ 423,000

Sol 6

WORK 1

$CR = \frac{CA}{CL} = \frac{2.5}{1}$

$CA = 2.5CL$

$WC = CA - CL$

$450000 = 2.5CL - CL$

$300000 = CL$ CA = 750000

WORK 2

$\frac{Debt}{Equity} = \frac{1}{1.5}$

$\frac{Long\ term\ debt + CL}{Equity} = \frac{1}{1.5}$

WORK 3

$RO_{Total\ Assets} = \frac{NP}{Total\ Asset} \times 100$

$15\% = \frac{NP}{1750000} \times 100$

NP = 262500

WORK 4

$\frac{Total\ Asset}{Turnover\ ratio} = \frac{Sales}{Total\ Asset}$

$2 = \frac{Sales}{Total\ Asset}$

$2 = \frac{Sales}{1750000}$

Sales = 3500,000

WORK 5

Sales	3500000
− GP 20%	−700000
CoGS 80%	2800000

WORK 6

$QTR = \frac{CoGS}{Av\ Stock} = 7$

$\frac{2800000}{\frac{380000 + CL\ Stock}{2}} = 7$

CL Stock = 4,20,000

WORK 7

BS

Eq (60000×10)	600000	FA	1050000
RES			
Pref Shares	200000		
Debt		CA	750000
CL	300000	CL Stock	420000
	1750000		1750000

WORK 8

Net Profit PAT = 262500

− Pref Div (200000 × 9%) − 18000

EAES = 244500

WORK 9

Total Liab = 1750000

Debt 1 : 1.5 Equity

$Equity = \frac{1750000 \times 1.5}{2.5}$

Equity = 1050,000

Net Assets

Sol 6 Main Solution

(i) Quick ratio = $\frac{QA}{CL} = \frac{CA - Stock}{CL} = \frac{75000 - 42000}{3,00,000}$

QR = 1.1 : 1 Times

or QR = 1.1

(ii) FA Turnover ratio = $\frac{Sales}{FA} = \frac{3510000}{10,00000} = 3.5$ Times.

(iii) Proprietary ratio = $\frac{Net\ worth}{Total\ Assets} = \frac{10,50000}{1750000} = 0.6 : 1$

(iv) EPS = $\frac{EAES}{No\ of\ equity\ shares} = \frac{244500}{60000} =$ ₹ 4.075/share

(v) P/E ratio = $\frac{MPS}{EPS} = \frac{16}{4.075} = 3.926$ Times.

Sol (a)

(i) Interest coverage ratio $= \frac{EBIT}{Interest} = \frac{767}{162} =$ 4.73 Times

(ii) Debt Service Coverage ratio $= \frac{(EAT + Int) + \text{Non cash exp (dep)} + \text{Non op exp (Loss on Sale of FA)}}{Int + \text{Instalment (Principal)}}$

$= \frac{480 + 162 + 155}{162 + 178} =$ 2.34 Times

Working (i)

EBIT	767
− Int	−162 ✓
EBT	605
− Tax	−125
EAT	480 ✓

Sol10

Particulars	2009	2010
(i) GP ratio = $\frac{GP}{Sales} \times 100$	$\frac{64}{300} \times 100 = 21.3\%$	$\frac{76}{374} \times 100 = 20.3\%$
(ii) operating exp to Sales Ratio = $\frac{op\ Exp}{Sales} \times 100$	$\frac{49}{300} \times 100 = 16.3\%$	$\frac{57}{374} \times 100 = 15.2\%$
(iii) operating Profit ratio = $\frac{operating\ Profit}{Sales} \times 100$	$\frac{15}{300} \times 100 = 5\%$	$\frac{19}{374} \times 100 = 5.08\%$
(iv) Capital Turnover ratio = $\frac{Sales}{~~Av~~\ CE}$	$\frac{300}{100} = 3$ Times	$\frac{374}{~~\left(\frac{100+147}{2}\right)~~\ 147} = 2.54$ Times (~~AV~~ CE ✓)

we have used closing CE for both years to maintain consistency.

(v) STR = $\frac{COGS}{Av\ Stock}$	$\frac{236}{\left(\frac{40+60}{2}\right)} = 4.7$ Times	$\frac{298}{\left(\frac{60+94}{2}\right)} = 3.9$ Times
(vi) $\frac{Net\ Profit}{Net\ worth}$	$\frac{15}{100} \times 100 = 15\%$	$\frac{19}{117} \times 100 = 16.24\%$

(we have used closing Net worth in Denominator for both years to maintain consistency.)

(vii) Debtors collection Period $\Rightarrow \frac{365 \times ~~Av~~\ Debtors}{Credit\ sales}$	$\frac{365 \times 50,000}{270,000} = 67.6$ days	$\frac{365 \times 82,000}{342,000} = 87.5$ days

Reasons for change →

(i) Gross Profit Ratio has reduced from 21.3% (2009) to 20.3% (2010), it usually happens when CoGS increases more than Sales.

$$\%\text{ change in Sales} = \left(\frac{374000 - 300000}{300000}\right) \times 100 = 24.67\%$$

$$\%\text{ change in CoGS} = \left(\frac{298000 - 236000}{236000}\right) \times 100 = 26.27\%$$

As CoGS has increased more than proportionate thus GP has reduced.

(2), (3), (4), (5)

Read from ICAI Module Illustration (1)

Sol (i)

Average Stock = 3,69000
Debtors = 2,40,000
Inventory Turnover ratio = STR = 6 Times

(i) $ITR = \frac{COGS}{Inventory}$

$6 = \frac{COGS}{3,69000}$

₹ 21,69000 = COGS.

(ii)

Sales	100%	24,00,000
−COGS	90%	−21,69,000
GP	10%	2,40,000

$\frac{21,69,000 \times 100}{90}$

(iii) Total Sales = 24,00,000

80% Credit ₹ 19,20,000

20% Cash Sales ₹ 4,80,000

Main Solution

Debtor Velocity (Debtor Collection Period) (Average Collection Period) $= \frac{360}{DTA} = \frac{360}{\frac{\text{Credit Sales}}{\text{Av. Debtors}}} = \frac{360 \times \text{Av. Debtors}}{\text{Credit Sales}}$

$= \frac{360 \times 2,40,000}{19,20,000} =$ 45 days

Sol 13

Trading P&L A/c

To COGS	630,000	By Sales	9,00,000
To GP	270,000		
	9,00,000		9,00,000
To operating Exp	7692		
To Interest	70,000	By GP	2,70,000
To Income Tax	67308		
To Net Profit	1,25,000		
	2,70,000		2,70,000

WN(i)

$\frac{\text{Debt}}{\text{Equity}} = \frac{2}{1}$

$\frac{5,00,000}{\text{Equity}} = \frac{2}{1}$

Equity = 2,50,000

(ii) BS

Equity	2.5L
Debt	5L

(iii)

Debt × 14% = Int

5L × 14% = Int

70,000 = Int

WN(iv)

Sales	100%	9,00,000
− GP	30%	2,70,000
COGS	70%	6,30,000

WN(v)

$ROE = \frac{\text{EAES (Net Profit)}}{\text{Equity}}$

$50\% = \frac{\text{EAES OR PAT}}{2,50,000}$

PAT = 1,25,000

WN (VI)

$$CTR = \frac{Sales}{CE} = 1.2$$

$$\frac{Sales}{E+D} = 1.2$$

$$\frac{Sales}{5L+2.5L} = 1.2$$

Sales = ₹9,00,000 ✓

WN VII

Sales =	9,00,000
− Cogs =	−6,30,000
GP =	2,70,000
− Operative Exp	7692 (B/S)
Operative Profit EBIT	262308
− Int =	−70,000
EBT 100%	192308
− Tax 35%	−67308
EAT 65% =	1,25,000

$\left(\frac{125000}{65} \times 35\right)$

Alternative Presentation for Trading A/c

Trading A/c.

To Op Stock	4,50,000	By Sales	9,00,000
To Purchases (B/S)	2,52,000	By Cl Stock (8/7 × 63,000)	72,000
To GP	2,70,000		

Trading & P&L A/c

To opStock
- RM
- WIP
- FG

To Purchases (Indirect inward freight) (GST not credit)

To direct exp (labour) exp

To GP

To operating exp
- Selling / Distribution exp
- office / Admin exp

To Interest

To Non operating Exp

To Tax

To Net Profit (PAT)

By Sales
- Cash
- Credit
- Return

By clStock
- RM
- WIP
- FG

To GP

By operative Income
Royalty

By Non operating Income
- Rent / Dividend / Int.

P&L Appropriation A/c
By Net Profit

To PS Dividend
To Equity Div
To Interim Div

To Retained Earnings

Sol 18

Balance Sheet

Prop funds	9,60,000	FA (B/S)	7,20,000
[Share Capital 8,00,000 (B/S)			
R&S 1,60,000]			
		CA	4,00,000
CL	1,60,000	[Stock 1,60,000	
[Bank OD 40,000		Other CA 2,40,000 (B/S)]	
Other CL 1,20,000 (B/S)]			
	11,20,000		11,20,000

WN ①

$CR = \frac{CA}{CL} = \frac{2.5}{1}$

$CA = 2.5CL$

$WC = CA - CL$

$= 2.5CL - CL$

$240000 = 1.5CL$

CL = 1,60,000

CA = 2.5 × 160000 = 400000

WN ②

$\text{Liquid ratio} = \frac{QA}{CL}$

$1.5 = \frac{CA - Stock}{CL}$

$1.5 = \frac{400000 - Stock}{160000}$

$2,40,000 = 4,00,000 - Stock$

Stock = 1,60,000

WN (iii)

FA to Prop ratio = 0.75

$\frac{FA}{\text{Prop funds}} = \frac{0.75}{1}$

FA = 0.75 Prop funds

Let Prop funds = x

FA = 0.75x

B/S

Prop fund	x	FA	0.75x
CL	1,60,000	CA	4,00,000
	x+1,60,000		0.75x+400000

$x + 1,60,000 = 0.75x + 400000$

$0.25x = 2,40,000$

x = 9,60,000 (Prop funds)

Soln

B | S

Networth → ESC, Res, PSC — 100%

↓

Long term Debt & short term Debt = CL — 75%

Total

Obviously Agar
Total Liability = 75% of NW

toh question jaroor
Total liab mei sirf external
liab ko gin raha hoga.

In this question
Total liab = Long term Debt + CL

$$\frac{\text{Total liab}}{\text{Networth}} \times 100 = 75\%$$

Sol 20

Balance sheet

Net assets (WN iv)	695652	FA (BIS)	379086
Total Liabilities (WN iii)	521,739	CA	847305
• Long term debt (BIS) 229565		Debtors 280548	
• CL (WN (VI)) 292174		Stock (WN v) 355556	
		other CA (BIS) 211201	
	1217391		1217391

WN(i)

$$CR = \frac{CA}{CL} = 2.9$$

$$\frac{CA}{292174} = 2.9$$

(WN vi)

$CA = 847305$

WN(ii)

$$ACP = \frac{365}{DTR}$$

$$64 = \frac{365}{DTR}$$

$$DTR = \frac{365}{64} = \frac{\text{Net credit Sales}}{\text{Average Debtors}}$$

$$\frac{365}{64} = \frac{1650000}{\text{Average Debtors}}$$

Average Debtors = ₹ 280548

* In absence of any information we assume-
  1. All Sales are Credit Sales ✕
  2. Average debtors = closing debtors

(iii)

$$\frac{\text{Total liability}}{\text{Net worth}} \times 100 = 75\%$$

$$\frac{\text{Total liabilities}}{695652\ (\text{WN iv})} \times 100 = 75\%, \quad \text{Total liabilities} = 521,739$$

(Long term Debt + CL)

(iv) $\frac{\text{Sales}}{\text{Networth}} = 2.3$

$\frac{16,00,000}{\text{Networth}} = 2.3$

$\therefore$ Networth = ₹ 6,95,652

(ESH + PSC)

WN(v) $\frac{\text{Sales}}{\text{Closstock}} = \frac{4.5}{1}$

$\frac{16,00,000}{\text{Closstock}} = \frac{4.5}{1}$

$\therefore$ Closstock = ₹ 3,55,556

WN (vi) $\frac{CL}{\text{Networth}} \times 100 = 42\%$

$\frac{CL}{6,95,652} \times 100 = 42\%$,

CL = 2,92,174

Sol(a) (i) **Income Statement**

Particulars	Amt (₹)
Sales	60,00,000
− COGS	18,00,000
Gross Profit	42,00,000
− operating Expenses (BII)	−33,00,000
+ operating Income	−
operating Profit = EBIT	8,10,000
− Interest	− 60,000
EBT 10%	7,50,000
− Tax 50%	−3,75,000
PAT 50%	3,75,000

(ii) **Balance Sheet**

Share Capital	10,50,000	FA (BII)	17,00,000
Reserves & S.	4,50,000	CA	4,00,000
15% Debentures	4,00,000	• Stock 1,50,000	
		• Debtors 2,00,000	
		• Cash 50,000 (BII)	
Sundry Creditors	2,00,000		
	21,00,000		21,00,000

$\frac{3,75,000}{50} \times 100$

Con (1)

Return on NW = 25%

$\frac{PAT}{NW} \times 100 = 25\%$

$\frac{3,75,000 \text{ (Con 4)}}{NW} \times 100 = 25\%$

$NW = \frac{3,75,000}{0.25} = 15,00,000$

Con (2)

Share Capital : Reserves = 7 : 3

Net worth 15,00,000

Share (7) : (3) Reserves

Share ⇒ 10,50,000 | R&S 4,50,000

Con (3)

$CR = \frac{CA}{CL} = \frac{2}{1}$

$\frac{CA}{2,00,000} = \frac{2}{1}$

CA = 4,00,000

Con (4)

$\frac{NP}{Sales} \times 100 = 6.25\%$

$NP = 60L \times 6.25\%$

NP = 3,75,000

Net Profit = Profit after Tax

= ₹3,75,000

Con (5)

$ITR = \frac{COGS}{Av\,Stock}$

$12 = \frac{18,00,000}{Av\,Stock}$

$Av\,Stock = 1,50,000$

Stock = ₹1,50,000

Con (6)

Int

Debt × 15% = 60,000

Debentures = $\frac{60,000}{0.15}$

Debentures = 4,00,000

Sol 22

Balance Sheet

Creditors (CL)	60,000 (bal)	Cash (WN 7)	42000
Long term Debt (WN 6)	2,40,000	Debtors (WN 5)	12000
Shareholders funds	600,000	Inventory (WN 4)	54000
		Fixed Asset (BIB) ⇒	792000
WN 3	900000	WN 3	900,000

WN 1 GP = 54000
GP% = 20%

Sales 100% =	270,000	$\left(\frac{54000}{20}\right)\times 100$
− GP 20% =	−54000	
CoGS 80% =	2,16,000	

WN 2
Total Sales = 270000
Credit Sale 80% = ₹216,000
Cash Sale 20% = 54000

WN 3 Total Asset Turnover ratio

$$0.3 = \frac{\text{Sales}}{\text{Total Assets}}$$

$$0.3 = \frac{270,000}{\text{Total assets}}$$

Total assets = 2,900,000

WN 4

$$ITR = \frac{\text{CoGS}}{\text{Av Stock}}$$

$$4 = \frac{216000}{\text{Av Stock}}$$

Av Stock = 54000
(Av Stock = Closing Stock in absence of opening Stock info)

WN 5

$$\text{Debtors} = \text{2 days}\left(\frac{\text{credit}}{\text{sales}}\right)$$

$$\text{Debtors} = \left(\frac{\text{credit sales}}{360}\right)\times 20$$

$$\text{Debtors} = \left(\frac{216000}{360}\right)\times 20$$

Debtors = 12000

WN 6

$$\frac{\text{Long term Debt}}{\text{Equity}}\times 100 = 40\%$$

Long term Debt = Equity × 40%
= 600000 × 40%
= 2,40000

WN 7

$$CR = \frac{CA}{CL}$$

$$1.8 = \frac{CA}{60000}$$

So CA = 108000

CA = Cash (bal) 42000 + Debtors 12000 + Stock 54000

Sol 23

Forecasted Balancesheet as on 31/3/2002

Share capital:			
14% P&C	1,00,000	FA	3,95,000
ESC	2,00,000	Cost (5,00,000+1,00,000)	
General Reserve (40,000+4400)	44,400	-Accdp (1,60,000+45,000)	
12% Debentures (60+50)	1,10,000		
CL		CA	
Creditors (WN5)	72,000	Stock (WN3)	33,750
Bank O/D (BS)	2350	Debtors (WN4)	1,00,000
	5,28,750		5,28,750

WN1

FA Turnover ratio = Sales / FA

$1.5 = \frac{\text{Sales}}{6,00,000}$

Sales = ₹9,00,000

WN2

STR = COGS / Av Stock

$14.4 = \frac{6,75,000}{\left(\frac{60,000 + \text{closing stock}}{2}\right)}$

Closing Stock = 33,750

WN3

Material	40%	3,60,000
Labour	25%	2,25,000
Man Exp	10%	90,000
Office exp	10%	90,000
Dep	5%	45,000
Cost	90%	8,10,000
+ Profit	10%	90,000
Sales	100%	= 9,00,000

⇒ COGS = 6,75,000

Sales = 9,00,000
− COGS = −6,75,000
GP = 2,25,000

WN ④ Debtors $= \frac{1}{9} \times$ Sales

$= \frac{1}{9} \times 9{,}00{,}000$

Debtors = 1,00,000

WN ⑤ Creditors $= \frac{1}{5} \times$ Material Cost

$= \frac{1}{5} \times 3{,}60{,}000$

Creditors = 72,000

WN ⑥

Profit = EBIT =	₹ 90,000
− Int (1,60,000 × 12%)	− ₹ 13,800
EBT	₹ 76,800
− Tax 50%	− ₹ 38400
EAT	₹ 38,400
− Pref Div (1,00,000 × 14%) =	− ₹ 14,000
EAES	₹ 24,400
− Equity Div (2,00,000 × 10%) =	− ₹ 20,000
Reserves & Surplus	= ₹ 4,400

Sol24

Balance Sheet as on March 31, 2007

Liabilities	₹	Assets	₹
		Plant and Machinery and other fixed assets (BB)	425000
Equity Shares capital	4,00,000		
Reserves and Surplus	6,00,000	Current assets:	1075000
Total Debt:		Inventory 709000	
Current liabilities	500000	Debtors 333333	
		Cash 41667 (BB)	
	1500000		1500000

Working ①

$\frac{\text{Total Debt}}{\text{NW}} = \frac{1}{2}$

$\frac{\text{Total Debt}}{1000000} = \frac{1}{2}$

Total Debt = ₹500000

Working ②

Total Asset Turnover

$\frac{\text{Sales}}{\text{Total Asset}} = \frac{2}{1}$

Sales = 2 × 1500000

Sales = 3000000

Working ③

Sales = 3000000

−GP 30% = 900000

CoGS = 2100000

Working ④

Debtors Collection Period = $\frac{360}{DTR} = \frac{360}{\frac{\text{Credit Sales}}{\text{Av Debtors}}} = \frac{360 \times \text{Av Debtors}}{\text{Credit Sales}}$

$40 = \frac{360 \times \text{Av Debtors}}{3000000}$

Av Debtors = Cl Debtors = 333333

Working ⑤

$ITR = \frac{CoGS}{Cl\ Stock}$

$3 = \frac{2100000}{Cl\ Stock}$

Cl Stock = 7L

Working ⑥

$\text{Acid Test Ratio} = \frac{QA}{CL}$

$0.75 = \frac{CA - Stock}{CL}$

$0.75 = \frac{CA - 709000}{500000}$

CA = 1075000

Sol 26

Balance Sheet

Notes & Payable (CL)	1,00,000
Long term Debt (WON①)	1,00,000
Common Stock	1,00,000
Retained Earning	1,00,000
	4,00,000

CA	2,00,000
Cash (BS)	50,000
A/C Rec (Debtors) (WON③)	50,000
Inventory (WON④)	1,00,000
Plant & Equipment (BS)	2,00,000
	4,00,000

WON①

$$\frac{\text{Long term Debt}}{\text{Net worth}} = \frac{0.5}{1}$$

$$\frac{\text{Long term Debt}}{2,00,000} = \frac{0.5}{1}$$

Long term Debt = ₹1,00,000

WON②

$$\text{Total Asset Turnover Ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

$$2.5 = \frac{\text{Sales}}{4,00,000}$$

10,00,000 = Sales

WON③ Debtors = 18 day Sales

$$\text{Debtors} = \left(\frac{\text{Credit Sales}}{360}\right) \times 18 = \left(\frac{10,00,000}{360}\right) \times 18 = 50,000$$

WON④

$$\text{ITR} = \frac{\text{COGS}}{\text{Av. Stock}}$$

$$9 = \frac{9,00,000}{\text{Av. Stock}}$$

Av. Stock = 1,00,000

WON⑤

Sales = 10,00,000

− GP 10% = −1,00,000

COGS = 9,00,000

WON⑥

$$\text{Acid test ratio} = \frac{\text{QA}}{\text{CL}}$$

$$\frac{1}{1} = \frac{\text{CA} - \text{Stock}}{\text{CL}}$$

$$\frac{1}{1} = \frac{\text{CA} - 1,00,000}{1,00,000}$$

1,00,000 = CA − 1,00,000

CA = 2,00,000

Sol 27

Balance sheet of Krishna Ltd.

Capital Block		6,00,000	
• Share Capital	3,00,000		
• Net Profit	1,20,000		
• RDS	30,000		
⇒ Debentures	1,50,000		
CL		2,00,000	
• Creditors	1,50,000		
• Other CL (BS)	50,000		
		8,00,000	8,00,000
FA (CB) (BS)			4,00,000
CA			4,00,000
Debtors	2,00,000		
Stock	1,50,000		
Other CA (BS)	50,000		

(Working i)

$CR = \frac{CA}{CL} = \frac{2}{1}$

$CA = 2CL$

$WC = CA - CL$

$2,00,000 = 2CL - CL$

$2,00,000 = CL$ ★

$\frac{CA}{2,00,000} = \frac{2}{1}$

$CA = 4,00,000$

(Working ii)

$\frac{\text{Capital Block}}{CA} = \frac{3}{2}$

$\frac{\text{Capital Block}}{4,00,000} = \frac{3}{2}$

Capital Block = 6,00,000

(Working iii)

$\frac{FA}{\text{Sales}} = \frac{1}{3}$

(From BS)

$\frac{4,00,000}{\text{Sales}} = \frac{1}{3}$

Sales = 12,00,000

(Working iv)

Sales = 12,00,000

Cash Sales : Credit Sales

1 : 2

4,00,000 : 8,00,000

Q 20, Q 24, Q 31 Handwritten Solutions

Telegram Channel CA Nitin Guru

WON (V)

Creditors Velocity = 2 months

Creditors = 2m purchases

Creditors = $\left(\frac{\text{Purchase}}{12}\right) \times 2$

(Cogs) $= \frac{9,00,000}{12} \times 2$

Creditors ⇒ 1,50,000

WON (VI)

Stock Velocity = 2m

Stock = 2m Cogs

Stock = $\left(\frac{\text{Cogs}}{12}\right) \times 2$

Stock = $\left(\frac{9,00,000}{12} \times 2\right)$

Stock = 1,50,000

WON (VII)

Debtors Velocity = 3m

Debtors = 3m Credit Sales

Debtor = $\left(\frac{\text{Credit Sales}}{12}\right) \times 3$

Debtors = $\left(\frac{8,00,000}{12} \times 3\right)$

Debtors = 2,00,000

WON (VIII)

Capital Block = 6,00,000

- Net Profit (10% × Sales) (10% × 12) − 1,20,000
- Reserves (2.5% × Sales) (2.5% × 12) − 30,000

Balance = 4,50,000

Debentures : Share Capital

1 : 2

1,50,000 : 3,00,000

WON (IX)

Sales	12,00,000
− GP 25%	− 3,00,000
Cogs	9,00,000

★ Extra Gyan

~~Op Stock~~ RM + Pur − ~~Cl Stock~~ RM = Cogs

(We assume Op Stock = Closing Stock)

So, Purchases = Cogs

Soln

Trading P&L A/c

To COGS	2,04,000	By Sales	2,40,000
To GP	36,000		
	2,40,000		2,40,000
		By GP	36,000
To other exp (BF)	17000		
To Dep	5000		
To Int (20,000×5%)	1000		
To PAT	13000		

Balance Sheet

Sh. Capital	1,00,000	Land & Building	80,000
Other Shareholders funds	30,000	P&M 50,000+10,000 − Dep (15,000+5000)	40,000
5% Debentures	20,000	CA	(BF) 80,000
CL		Debtors 40,000	
Creditors	50,000	Other CA 10,000	
		Stock 30,000	
	2,00,000		2,00,000

WN(i)

Share Capital	50%	₹1,00,000
Other Shareholders funds	15%	₹30,000
5% Debentures	10%	₹20,000
Trade Creditors	25%	₹50000
	100%	₹2,00,000

$\left(\frac{1,00,000}{50\%} \times 100\%\right)$

WN(ii)

$$QR = \frac{QA}{CL} = \frac{1}{1}$$

$$\frac{QA}{50,000} = \frac{1}{1}$$

$$QA = 50,000$$

WN(iii)

$$Debtors = \frac{4}{5} \times \text{Quick Assets}$$

$$= \frac{4}{5} \times 50,000 = 40,000$$

WN (iv) Debtors velocity = 2m

$\frac{12}{DTA} = 2$

DTR = 6 Times

$\frac{\text{credit Sales}}{\text{Av Debtors}} = 6$

$\frac{\text{credit Sales}}{40000} = 6$

credit Sales = ₹2,40,000

WN (i)

Return on Net worth = $\frac{PAT}{\text{Net worth}} \times 100$

$10\% = \frac{PAT}{1,00,000 + 30,000} \times 100$

PAT = ₹13000

WN (ii) Sales = 2,40,000

− GP 15% −36000

COGS = 204000

WN (iii) $\text{STR} = \frac{\text{COGS}}{\text{Av Stock}}$

$8 = \frac{204000}{\text{Av Stock}}$

Av Stock = 25,500

In this Question Sales was Preferred in numerator So, that figures matchup

WN viii)

FA = 60% of Total Assets

FA = 60% × 2,00,000

FA = 1,20,000

Land & Building ₹80,000

P&M

Old + New

50,000 + x

− Total Dep − (15000 + 5000)

40,000

So, Purchase of P&M = 10,000 (BS)

QA = CA − Stock

50,000 = 80,000 − Stock

Stock = 30,000

$8 = \frac{\text{Sales}}{\text{Av Stock}} \Rightarrow 8 = \frac{\text{Sales } 2,40,000}{30,000}$

40,000 (BS)

Q130

Particulars	Amt (₹)
Sales	50,00,000
− Variable cost 60%	−30,00,000
Contribution 40%	20,00,000
− Fixed cost (BB)	−9,00,000
EBIT (BB)	11,00,000
− Int (12% × 50,00,000)	6,00,000
EBT & EAT & EAES	5,00,000
÷ No of Shares ÷ n	50,000
EPS	₹10

Balance Sheet

Networth (5000 NP)	20,00,000	FA	41,66,667
		Other Assets.	18,33,333
Debt	50,00,000	CA	15,00,000
CL	5,00,000	Stock	10,00,000
		other CA	5,00,000

Working ① Av Collection Period = 30 days

Debtors Velocity = 30 = 360 / DTR

DTR = 12 Times = Credit Sales / Av. Debtors.

Working ②

CA / Stock = 3/2

15,00,000 / Stock = 3/2

Stock = 10,00,000

Working ③ Acid Test ratio = QA/CL = 1/1

(CA − Stock)/CL = 1/1

15L − 10L = 5L = 1

5L 5L 1

Matched

Working ④ STR = Sales / Stock = 5 (because GP ratio is not given)

Sales / 10,00,000 = 5

Sales = 50 L

WN5 $\frac{\text{Total Liab}}{\text{Networth}} = \frac{2.75}{1}$

$\frac{50L + 5L}{40L} = \frac{2.75}{1}$

Matched

WN6 EAT

$\frac{\text{Net Profit}}{\text{Sales}} \times 100 = 10\%$

$\frac{NP}{50L} \times 100 = 10\%$

5,00,000

WN7

$CR = \frac{CA}{CL} = \frac{3}{1}$

$CA = 3CL$

Net WC = CA − CL

= 3CL − CL

Net WC = 2CL

10L = 2CL

5L = CL

CA = 15L

WN8

FA Turnover ratio $= \frac{\text{Sales}}{FA} = \frac{1.20}{1}$

$\frac{50L}{FA} = \frac{1.2}{1}$

FA = 4166667

WN9 $DFL = \frac{EBIT}{EBT} = 2.2$

$\frac{EBIT}{5,00,000} = 2.2$

EBIT = 11,00000

Sol (31)

Trading P&L Acc

To CoGS	9,00,000	By Sales	12,00,000
(Material 40%, Labour 11 60%)			
To GP	3,00,000		
	12,00,000		12,00,000
To other exp (bal)	2,46,800	By GP	3,00,000
To NP	53,200		
	3,00,000		3,00,000

Balance sheet

Equity		FA (0.8×95,000)	7,60,000
ESC	5,32,000		
GR&PL	1,33,000		
PSC	1,90,000		
Debentures	95,000	CA	3,80,000
CL	1,90,000	Stock	1,80,000
Creditors	90,000	Debtors	2,00,000
Other CL (bal)	1,00,000		
	11,40,000		11,40,000

WKN (1)

Sales 100% 12,00,000
− GP 25% −3,00,000
CoGS 9,00,000

WKN (2)

$\frac{NP}{ESC} \times 100 = 10\%$

$\frac{NP}{5,32,000} \times 100 = 10\%$

NP = 53,200

WKN (3)

$STR = \frac{CoGS}{Av\,Stock}$

$5 = \frac{9,00,000}{Av\,Stock}$

Stock = 1,80,000

WKN (4)

Debtors collection Period = 2m

$Debtors = Credit\ Sales \times \frac{2}{12}$

$Debtors = 12L \times \frac{2}{12} = 2L$

WKN (5)

Creditors velocity = 3m

$Creditors = Credit\ Purchases \times \frac{3}{12}$

$Creditors = 3,60,000 \times \frac{3}{12}$ (WKN 11)

Creditors = 1,90,000

We Assume that CA has only Stock & Debtors, so

(CA = 3,80,000)

Q6 $CR = \frac{CA}{CL} = \frac{2}{1}$

$\frac{3,80,000}{CL} = \frac{2}{1}$

$CL = 1,90,000$

Q7 $\text{Proprietary ratio} = \frac{FA}{CE} \times 100 = 80\%$

Let $CE = x$

$\frac{FA}{x} \times 100 = 80\%$

$FA = 0.8x$

Q8 $\text{Capital Gearing ratio} = \frac{PSC + Debt}{CE} \times 100 = 30\%$

$\frac{PSC + Debt}{9,50,000} \times 100 = 30\%$

$PSC + Debt = 2,85,000$

Q9 $\frac{GR \& PL}{EC} \times 100 = 25\%$

Equity = 665000

GR & PL 25% | Issued Capital 100%

1 : 4

1,33,000 : 5,32,000

Q10 $\frac{PSC}{Debentures} = \frac{2}{1}$

2,85,000

PSC 2 : 1 Debentures

1,90,000 | 95,000

Q11 Cost = 9,00,000

Material 40% = 3,60,000 (Credit Purchases)

Labour & OH 60% = 5,40,000

Q12 BS

CE	x	FA	$0.8x$
CL	1,90,000	CA	3,80,000

$x + 1,90,000 = 0.8x + 3,80,000$

$0.2x = 1,90,000$

$x = 9,50,000$

$CE = 9,50,000$

QNO 13

Capital employed 9,50,000

- ESC 100%] Equity funds 665000 (B/S)
- R&S&P&L 25%]
- PSC 1,90,000
- Debt 95000

Sol 32

Return on Equity using Du-Pont

Net Profit margin × Asset Turnover ratio × Equity multiplier = Return on Equity

$$\left(\frac{\text{Net Profit}}{\text{Sales}} \times 100\right) \times \left(\frac{\text{Sales}}{\text{Assets}}\right) \times \left(\frac{\text{Assets}}{\text{Equity}}\right) = \text{ROE}$$

$$\left(\frac{4212}{29261} \times 100\right) \times \left(\frac{29261}{27987}\right) \times \left(\frac{27987}{13572}\right) = \text{ROE}$$

14.39% × 1.0455 Times × 2.0621 = ROE

31.02% = ROE

Sol 33

(a) Capital Turnover ratio = $\frac{\text{Sales}}{\text{Capital employed}} = \frac{300000}{225000}$ = 1.33 Times

(b) Net operating Profit ratio = $\frac{\text{Profit (Return)} \times 100}{\text{Sales}} = \frac{80000 \times 100}{300000}$ = 26.67%

(c) using Du Pont

Capital Turnover ratio × Net operating Profit ratio = Return on Investment

$$\frac{\text{Sales}}{CE} \times \frac{\text{Net Profit}}{\text{Sales}} = \frac{\text{Net Profit}}{CE}$$

1.33 × 26.67% = **35.56%**

Sol 34

Capital Turnover ratio × Operating Profit ratio = Return on Capital employed.

For Ram Ltd.

4 Times × 5% = 20%

For Shyam Ltd

Capital Turnover ratio × Operating Profit ratio = Return on Capital employed.

$$\Rightarrow \frac{\text{Sales}}{\text{Capital employed}} \times 6\% = \text{ROCE}$$

$$\Rightarrow \frac{12,00,000 \text{ (WN 1)}}{2,00,000} \times 6\% = \text{ROCE}$$

$$\Rightarrow 6 \text{ Times} \times 6\% = 36\% = \text{ROCE}$$

WN 1 $\quad GP \text{ ratio} = \frac{GP}{\text{Sale}} \times 100$

$$15\% = \frac{1,80,000}{\text{Sales}} \times 100$$

Sales = ₹ 12,00,000.

Q.135

(A) Income Statement

Sales	75,00,000
− COGS	22,50,000
GP	52,50,000
− Operating Exp (CB13)	42,00,000
EBIT (Operating Profit)	10,50,000
− Int	−75,000
EBT 100%	975000
− Tax 50%	−487500
PAT 50%	487500

(B) Balance Sheet

Share capital	11,70,000	FA (CB18)	18,50,000
RaS	7,80,000		
		CA	10,00,000
15% Debt	5,00,000	Stock	1,87,500
		Receivables	2,00,000
Payables	2,50,000	Cash (CB8)	612500
Bank Term loan (Overdraft) (Short term)	1,50,000		
	28,50,000		28,50,000

WON ①

RONW = 25%

$\frac{PAT}{Networth} \times 100 = 25\%$

$\frac{487500 \text{ (WON 4)}}{Networth} = 25\%$

Networth = 19,50,000

WON ②

Networth = 19,50,000

Share Capital : RaS

6 : 4

11,70,000 : 7,80,000

WON ③ $CR = \frac{CA}{CL} = \frac{2.5}{1}$

$\frac{CA}{(2,50,000 + 1,50,000)} = \frac{2.5}{1}$

CA = 10,00,000

WON ④ $\frac{NP}{Sales} \times 100 = 6.5\%$

$\frac{PAT}{75,00,000} \times 100 = 6.5\%$

PAT = 4,87,500.

WON(5)

$$ITR = \frac{COGS}{AVSTOCK}$$

$$12 = \frac{22,50,000}{AVSTOCK}$$

$$AVSTOCK = 1,87,500$$

WON(6)

Debentures × 15% = 75000

Debentures = ₹5,00,000

Sol 36 Du Pont Model.

Capital Turnover Ratio × Profit Margin = Return on Investment

originally, 3 Times × 10% = RoI

30% = RoI

(i) If Profit margin reduces by 2% ⇒ 10% − 2% = **8%**

3 Times × 8% = **24% = RoI**

If Profit margin reduces by 2%, RoI decreases by 6% (30% − 24%)

(ii) If Profit margin increases by 2% ⇒ 10% + 2% = **12%**

RoI = 3 Times × 12% = **36% = RoI**

If Profit margin increases by 2%, RoI increases by 6%

(iii) Capital Turnover ratio decreases by 1

RoI = 2 Times × 10% = 20%

If Capital Turnover ratio decreases by 1, RoI decrease by 10%

(iv)

RoI = 4 Times × 10 = 40%

If Capital Turnover ratio increases by 1, RoI increased by 10%

Q137

Trading & P&L A/c

To COGS	1,50,000	By Sales	2,50,000
To GP	1,00,000		
	2,50,000		2,50,000
To Operating Exp (Bal)	37500	By GP	1,00,000
To Dep	10,000		
To Int (75000 × 10%)	7500		
To PAT	45000		
	1,00,000		1,00,000

Balance Sheet

Share Capital	2,00,000	L & B	40,000
Reserves	1,00,000	P&M 1,00,000 + x − Dep (30,000 + 10,000)	1,10,000
10% Debentures	75000	CA (Bal)	3,50,000
CL		Stock 2,25,000	
Trade Creditors	1,25,000	Debtors 31250	
		Other CA (Bal) 93750	
	5,00,000		5,00,000

WKN ①

Total Liabilities

Share Capital	40%	₹2,00,000
Reserves	20%	₹1,00,000
10% Debentures	15%	₹75,000
Creditors	25%	₹1,25,000
	100%	5,00,000

(2,00,000 / 40% × 100%)

WKN ② FA = 30% of TA

FA = 30% × 5,00,000

FA = 1,50,000

L & B ₹40,000

P & M ₹1,10,000

WKN ③

P&M	1,10,000
1,00,000 + x	
− Dep (30,000 + 10,000)	
	1,10,000

∴ x = 50,000

New Purchase = ₹50,000

WN 4

$QR = \frac{QA}{CL}$

$\frac{1}{1} = \frac{QA}{125000}$

$125000 = QA$ I

$CA = 350000$ (from B/S)

$CA - Stock = QA$

$350000 - Stock = 125000$

$225000 = Stock.$

WN 5 $Debtors = \frac{1}{5} \times QA$

$Debtors = \frac{1}{5} \times 125000$

Debtors = 31250

WN 6 $Debtor\ velocity = \frac{12}{DTR} = 1.5$

DTR = 8 Times

$\frac{Credit\ Sales}{Debtors} = 8$

$\frac{Credit\ sales}{31250} = 8$

Credit Sale = 250000

WN 7

$Return\ on\ NW = \frac{PAT}{NW} \times 100$

$15\% = \frac{PAT}{200000 + 100000} \times 100$

PAT = 45000

WN 8

Sales	=	250000
− GP	40%	−100000
COGS	=	150000

Sol 47 Main Solution

Balance Sheet

Networth $\left(\frac{1.2cr}{4}\right)$		30,00,000	FA $\left(\frac{1,20,00,000}{4}\right)$		30,00,000
→ Capital	10,00,000				
→ Res	20,00,000				
			CA		45,00,000
Debt $(1.2cr/4)$		30,00,000	Cash	5,00,000	
			Stock $(1.2cr/6)$	20,00,000	
CL		15,00,000	Debtors $(1.2cr/6)$	20,00,000	
Creditors = 10,00,000					
O/S Int = 3,00,000					
Other CL = 2,00,000					
		75,00,000			75,00,000

WN ①

Balance Sheet (Rough)

Share Capital, Reserves] Net Worth		30L $\frac{x}{4}$	FA	$\frac{1.2cr}{4}$ = 30,00,000 ← $\frac{x}{4}$	
Debt		30L $x/4$	CA		45L $\frac{2x}{6}+5,00,000$
CL	10L	$\frac{\frac{2x}{6}+5,00,000}{3}$ 15L	Cash in hand	5,00,000	
Creditors	$x/12$		Stock	$x/6$	20L
			Debtors	$x/6$	20L

Let Sales = x

WN ①

$\frac{\text{Debt}}{\text{Equity}} = \frac{1}{1}$

$\frac{\text{Debt}}{\frac{x}{4}} = \frac{1}{1}$

Debt = $x/4$

WN ②

$CR = \frac{CA}{CL} = \frac{3}{1}$

$\frac{\frac{2x}{6}+5,00,000}{CL} = \frac{3}{1}$

$\frac{\frac{2x}{6}+5L}{3} = CL$

WN ③

Acid Test Ratio $= \frac{QA}{CL} = \frac{8}{3}$

WN(4)

FA Turnover Ratio $= \frac{\text{Sales} = 4}{\text{FA}}$

$\frac{x}{FA} = 4$

$\frac{x}{4} = FA$

WN(5)

$\text{STR} = \frac{\text{Sales}}{\text{Avstock}} = 6$

$\frac{x}{\text{Stock}} = 6$

$\text{Stock} = \frac{x}{6}$

WN(6)

$\frac{\text{Stock}}{\text{Debtors}} = \frac{1}{1}$

$\frac{x/6}{\text{Debtors}} = \frac{1}{1}$

$\text{Debtors} = \frac{x}{6}$

WN(7)

$\frac{\text{Sales}}{\text{Networth}} = \frac{4}{1}$

$\frac{x}{NW} = \frac{4}{1}$

$NW = \frac{x}{4}$

WN(8)

$\frac{\text{Capital}}{\text{Reserve}} = \frac{1}{2}$

NW = 30,00,000

Capital : Reserve

1 : 2

10,00,000 | 20,00,000

WN(9) GP = 20% of sales

$GP = \frac{1}{5}$ of sales

$GP = \frac{1}{6}$ of sales.

Sales	x
− GP	$-\frac{1}{6}x$
COGS	$\frac{5}{6}x$

WN 10 $\frac{\text{COGS}}{\text{Creditors}} = \frac{10}{1}$

$\frac{\frac{5}{6}x}{\text{Creditors}} = \frac{10}{1}$

$\frac{x}{12} = \text{Creditors}$

$\frac{120}{12} = 10$ L

WN 11

Int on Loan 10% O/S

CL

$\text{Int} = \frac{x}{4} \times 10\% = \frac{0.1x}{4}$

O/S Int

Ans (12) By Balance Sheet values

Total of Liab Side = Total of Asset Side

Networth + Debt + CL = FA + CA

$$\frac{x}{4} + \frac{x}{4} + \left(\frac{2x + 500000}{6}\right) \times \frac{1}{3} = \frac{x}{4} + \left(\frac{2x}{6} + 500000\right)$$

$$\frac{x}{4} + \frac{2x}{3} \times \frac{1}{3} + 500000 \times \frac{1}{3} = \frac{2x}{6} + 500000$$

$$\frac{x}{4} + \frac{x}{9} + \frac{500000}{3} = \frac{x}{3} + 500000$$

$$\frac{x}{4} + \frac{x}{9} - \frac{x}{3} = \frac{500000}{1} - \frac{500000}{3}$$

$$\frac{9x + 4x - 12x}{36} = \left(\frac{1500000 - 500000}{3}\right)$$

$$\frac{1x}{36} = \frac{1000000}{3}$$

$$x = \frac{12}{36} \times \frac{1000000}{3}$$

Sales = $x = 1,20,00000$

FINANCIAL ANALYSIS & PLANNING - RATIO ANALYSIS

Solution 1:

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

Gross Profit Ratio = $\frac{Gross\ Profit}{Sales}$ x100

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

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

Cost of Goods Sold = Sales – Gross Profit
= ₹ 48,000 – ₹ 12,00,000 = ₹ 36,00,000

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

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

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

Debtors' turnover ratio = $\frac{Credit\ Sales}{Average\ Accounts\ Receivable}$ = $\frac{₹\ 48,00,000}{Bills\ Receivable + Sundry\ Debtors}$ = 4

Or, Sundry Debtors + Bills receivable = ₹ 12,00,000
Sundry Debtors = ₹ 12,00,000 – ₹ 75,000 = ₹ 11,25,000

(iii) **Determination of Closing Stock**

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

So, Average Stock = ₹ 24,00,000

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

Or, Opening Stock + $\frac{(Opening\ Stock + ₹\ 30,000)}{2}$ = ₹ 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 period is 2 months.

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

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

= ₹ 36,30,000 = 6

Sundry Creditors + Bills Payables
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**

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

Or, ₹ 36,00,000 = 4

Fixed Assets

Or, Fixed Asset = ₹ 9,00,000

Workings:
*Calculations 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

Solution 2:
Working Notes:
(1) **Total liability = Total Assets = ₹ 50,00,000**
Debt to Total Assets Ratio = 0.40

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

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

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) $\frac{Long-term\ Debt}{Equity\ Shareholders'\ Fund}$ **= 30%***

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

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 = $\frac{100}{80}$ x 64,00,000 = 80,00,000

(6) **Inventory Turnover** = 360/55
COGS/Closing Inventory = 360/55
64,00,000/Closing Inventory = 360/55
Closing Inventory = 9,77,778
(7) **Accounts Receivable Period** = 36 days

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

Accounts Receivables = $\frac{36}{360}$x Credit Sales

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

Accounts Receivable = ₹ 8,00,000
(8) **Quick Ratio** = 0.9

$$\frac{Quick\ Assets}{Current\ Liabilities} = 0.9$$

Cash + debtors = 0.9
11,00,000
Cash + 8,00,000 = ₹ 9,90,000
Cash = ₹ 1,90,000

(9) **Fixed Assets = Total Assets – Current Assets** = 50,00,000 – (9,77,778 + 8,00,000 + 1,90,000) = 30,32,222

Balance Sheet of ABC Industries as on 31st March 2021

Liabilities	₹	Assets	₹
Share Capital	20,00,000	Fixed Assets	30,32,222
Reserved Surplus	10,00,000	Current Assets:	
Long term debt	9,00,000	Inventory	9,77,778
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 represents equity in "Long term debts to equity ratio". The question can be solved assuming only share capital as 'equity')

Solution 3:

Calculation of Fixed Assets and Proprietor's Funds

$$\frac{Fixed\ Assets}{Proprietorr's\ Fund} = \frac{0.75}{1}$$

Fixed Assets = 0.75 Proprietor's Fund
Proprietor's Fund = Total Assets – Current Liabilities
Proprietor's Fund = Fixed Assets + Current Assets – Current Liabilities
Proprietor's Fund = Fixed Assets + Net Working Capital
Proprietor's Fund = 0.75 Proprietor's fund + Net Working Capital

0.25 Proprietor's Fund = ₹ 6,00,000

Proprietor's Fund = $\frac{₹6,00,000}{0.25}$ = ₹ 24,00,000

Therefore, Fixed Assets = 0.75 × ₹ 24,00,000
= ₹ 18,00,000

Solution 4:

Ratios for the year 2005-2006(₹ in Lakhs)

(i) (a) **Inventory Turnover Ratio** = $\frac{COGS}{Average\ Inventory} = \frac{₹20,860}{(\frac{₹2,867+₹2,407}{2})}$ = 7.91 times

(b) **Financial Leverage** = $\frac{EBIT}{PBT} = \frac{₹170}{₹\ 57}$ = 2.98 times

(c) **Return on Investment**= $\frac{EBIT}{Capital\ Employed} = \frac{₹170}{\frac{₹5,947+₹4,555}{2}}$ = 3.24%

(d) **ROE**= $\frac{PAT}{Average\ Shareholders'\ Funds} = \frac{₹34}{\frac{₹\ 2,377+₹\ 1,472}{2}} = \frac{₹\ 34}{₹1,924.5}$ = 1.77%

(e) **Average Collection Period**

Average sales per day = $\frac{₹\ 22,165}{365}$ = ₹ 60.73 lakhs

Average collection period = $\frac{Average\ Debtors}{Average\ Sales\ per\ day} = \frac{\frac{₹\ 1,495+₹\ 1,168}{2}}{₹\ 60.73} = \frac{₹\ 1,331.5}{₹60.73}$ = 22 days.

(ii) **Brief Comment on the financial position of JKL Ltd.** = The Profitability of operations of the company are showing sharp decline due to increase in Operating expenses. The financial and operating leverages are becoming adverse. The liquidity of the company is under great stress.

Solution 6:

a. **Calculation of Quick Ratio**

Quick Ratio = $\frac{Quick\ Assets}{Current\ Liabilities} = \frac{₹\ 3,30,000}{₹\ 3,00,000}$ = 1.1:1 times

b. **Calculation of Fixed Assets Turnover Ratio**

Fixed Asset Turnover Ratio = $\frac{Sales}{Fixed\ Assets}$ = $\frac{₹\ 35,00,000}{₹\ 10,00,000}$ = 3.5 times

c. Calculation of Proprietary Ratio

Proprietary Ratio = $\frac{Net\ Worth}{Total\ Assets}$ = $\frac{₹\ 1050,000}{₹\ 17,50,000}$ = 0.6 : 1

d. Calculation of Earnings per Equity shares (EPS)

Earnings per Equity Share = $\frac{PAT-Preference\ Share\ Dividend}{Number\ of\ Equity\ Shares}$ = $\frac{₹\ 2,62,500-₹\ 18,000}{₹\ 60,000}$ = ₹ 4.075 per Share = ₹ 4.08

e. Calculation of Price Earnings Ratio (P/E Ratio)

P/E Ratio = $\frac{Market\ Price\ of\ Equity\ Share}{EPS}$ = $\frac{₹16}{₹4.075}$ = 3.926

Price – Earnings Ratio (P/E Ratio) = 3.93 times

Working Notes:

1. **Net Working Capital** = Current Assets – Current Liabilities

2.5 – 1 = 1.5

Thus, Current Assets = $\frac{Net\ Working\ Capital \times 2.5}{1.5}$ = $\frac{₹\ 4,50,000 \times 2.5}{1.5}$ = ₹ 7,50,000

Current Liabilities = ₹ 7,50,000 – ₹ 4,50,000= ₹ 3,00,000

2. **Total Assets Turnover Ratio** = $\frac{Turnover}{Total\ Assets}$ = 2

Sales = Total Assets Turnover × Total Assets

= 2 × (₹ 10,00,000 + ₹ 7,50,000) = ₹ 35,00,000

3. **Cost of Goods Sold** = 100 – 20 = 80% of Sales

= 80% of ₹ 35,00,000 = ₹ 28,00,000

4. **Average Stock** = $\frac{Cost\ of\ Goods\ Sold}{Stock\ Turnover\ Ratio}$ = $\frac{₹28,00,000}{7}$ = ₹ 4,00,000

Closing Stock = (Average Stock × 2) – Opening Stock

= (₹ 4,00,000× 2) – ₹ 3,80,000 = ₹ 4,20,000

Quick Assets = Current Assets – Closing Stock

= ₹ 7,50,000 – ₹ 4,20,000 = ₹ 3,30,000

Net Worth = $\frac{Total\ Assets\ (Debt\ Equity)1.5}{1+1.5}$ = $\frac{₹17,50,000 \times 1.5}{2.5}$ = ₹ 10,50,000

5. **Profit After Tax (PAT)** = Total Assets × Return on Total Assets = ₹ 17,50,000× 15% = ₹ 2,62,500

Solution 7:

(In '000)

Ratio	Formula	2018-19	2019-20	2020-21	Industry Average
Current ratio	$\frac{Current\ Assets}{Current\ Liabilities}$	$\frac{1,320}{520}$ = 2.54	$\frac{6,200}{3,456}$= 1.80	$\frac{8,912}{5,560}$ = 1.60	2.30:1
Acid test ratio (quick ratio)	$\frac{Quick\ Assets}{Current\ Liabilities}$	$\frac{680}{520}$ = 1.31	$\frac{3,200}{3,456}$= 0.93	$\frac{4,412}{5,560}$ = 0.79	1.20:1
Receivable turnover ratio	$\frac{Credit\ Sales}{Average\ Accounts\ Receivable}$	$\frac{3,600}{(600+600)/2}$ = 6	$\frac{8,640}{(600+3000)/2}$ = 4.80	$\frac{14,400}{(3000+4,200)/2}$ = 4	7 times
Inventory turnover ratios	$\frac{COGS}{Average\ Inventory}$	$\frac{2,480}{(640+640)/2}$ = 3.88	$\frac{5,664}{(640+3,000)/2}$ = 3.11	$\frac{9,600}{(3,000+4,500)/2}$ = 2.56	4.85 times

Long-term debt to total debt	$\frac{Long\ term\ debt}{Total\ Debt}$ x 100	$\frac{1,472}{1,992}$ x100 = 73.90%	$\frac{2,472}{5,928}$ x 100 = 41.70%	$\frac{5,000}{10,560}$ x 100 = 47.35%	24%
Debt-to-equity ratio	$\frac{Long\ term\ debt}{Shareholders'\ equity}$ x 100	$\frac{1,472}{3,128}$ x 100 = 47.06%	$\frac{2,472}{5,272}$ x 100 = 46.89%	$\frac{5,000}{7,752}$ x 100 = 64.50%	35%
Net profit ratio	$\frac{Net\ profit}{Sales}$ x 100	$\frac{728}{4,000}$ x 100 = 18.2%	$\frac{1,344}{9,600}$ x 100 = 14%	$\frac{1,680}{16,000}$ x 100 = 10.5%	18%
Return on total assets	$\frac{Net\ profit\ after\ taxes}{Total\ assets}$ x 100	$\frac{728}{5,120}$ x 100 = 14.22%	$\frac{1,344}{11,200}$ x 100 = 12%	$\frac{1,680}{18,312}$ x 100 = 9.17%	10%
Interest coverage ratio (times interest earned)	$\frac{EBIT}{Interest}$	$\frac{1,160}{120}$ = 9.67	$\frac{2,236}{316}$ = 7.08	$\frac{3,080}{680}$ = 4.53	10

Conclusion:
In the last two years, the current ratio and quick ratio are less than the ideal ratio (2:1 and 1:1 respectively) indicating that the company is not having enough resources to meet its current obligations. Receivables are growing slower. Inventory turnover is slowing down as well, indicating a relative build-up in inventories or increased investment in stock. High Long-term debt to total debt ratio and Debt to equity ratio compared to that of industry average indicates high dependency on long term debt by the company. The net profit ratio is declining substantially and is much lower than the industry norm. Additionally, though the Return on Total Asset (ROTA) is near to industry average, it is declining as well. The interest coverage ratio measures how many times a company can cover its current interest payment with its available earnings. A high interest coverage ratio means that an enterprise can easily meet its interest obligations, however, it is declining in the case of Jensen & Spencer and is also below the industry average indicating excessive use of debt or inefficient operations.
On overall comparison of the industry average of key ratios than that of Jensen & Spencer, the company is in deterioration position. The company's profitability has declined steadily over the period. However, before jumping to the conclusion relying only on the key ratios, it is pertinent to keep in mind the industry, the company dealing in with i.e. manufacturing of pharmaceutical drugs. The pharmaceutical industry is one of the major contributors to the economy and is expected to grow further. After the covid situation, people are more cautious towards their health and are going to spend relatively more on health medicines. Thus, while analyzing the loan proposal, both the factors, financial and non-financial, needs to be kept in mind.

Solution 8:

(1) **Current Ratio** = $\frac{Current\ Assets}{Current\ Liabilities}$ = $\frac{₹\ 3,75,000}{₹1,65,000}$ = 2.27 : 1

(2) **Quick Ratio** = $\frac{Quick\ Assets}{Current\ Liabilities}$ = $\frac{₹\ 2,00,000}{₹\ 1,65,000}$ = 1.21 : 1

(3) **Debt Equity Ratio** = $\frac{Debt}{Equity}$ = $\frac{₹\ 3,50,000}{₹\ 7,50,000}$ = 0.467 : 1

(4) **Interest coverage Ratio** = $\frac{EBIT}{Interest}$ = $\frac{4.09-0.35-0.25-0.50}{0.47}$ = 6.36 times

(5) **Fixed Charge Coverage**= $\frac{EBIT}{Interest+\frac{Pref.Dividend}{(i-t)}}$ = $\frac{₹2.99}{₹0.47+\frac{₹0.2}{(i-0.5)}}$ = 3.44 times

(6) **STR** = $\frac{COGS}{Stock}$ = $\frac{₹\ 11,00,000}{\frac{₹\ 1,50,000+₹\ 1,75,000}{2}}$ = 6.77 times

(7) **DTR** = $\frac{Net\ Credit\ Sales}{Debtors}$ = $\frac{₹\ 12,00,000}{₹\ 1,00,000}$ = 12 times

(8) **Average Collection Period** = $\frac{360\ days}{12}$ = 30 days

(9) **Gross Profit Ratio** = $\frac{Gross\ Profit}{Net\ Sales} \times 100 = \frac{₹\ 4,00,000}{₹\ 15,00,000} \times 100 = 26.67\%$

(10) **Net Profit Ratio** = $\frac{PAT}{Net\ Sales} \times 100 = \frac{₹\ 1,26,000}{₹\ 15,00,000} \times 100 = 8.4\%$

(11) **Operating Ratio** = $\frac{COGS+Adm.Exp.+Selling\ Exp.}{Net\ Sales} \times 100 = \frac{₹\ (11,00,000+50,000)+\ 35,000+25,000}{₹\ 15,00,000} \times 100 = 80.67\%$

(12) **Return on Capital Employed** = $\frac{EBIT}{Capital\ Employed} \times 100 = \frac{₹\ 2,99,000}{₹\ 11,00,000} \times 100 = 27.18\%$

(13) **Earnings per share** = $\frac{EAE}{No.\ of\ equity\ shares} = \frac{₹1,26,000-₹\ 20,000}{35,000} = ₹\ 3.03$

(14) **Return on Shareholder's fund** = $\frac{EAT}{Shareholder's fund} \times 100 = \frac{₹\ 1,26,000}{₹\ 7,50,000} \times 100 = 16.8\%$

(15) **P/E Ratio** = $\frac{MPS}{EPS} = \frac{₹\ 45}{₹\ 3.03} = ₹\ 14.85$ times

(16) **Earning Yield** = $\frac{EPS}{MPS} \times 100 = \frac{₹\ 3.03}{₹\ 45} \times 100 = 6.73\%$

Solution 9:

(i) **Interest Coverage Ratio**= $\frac{EAT+Tax+Interest}{Interest} = \frac{480+125+162}{162}$ = 4.73 times

(ii) **Debt Service Coverage Ratio** = $\frac{EAT+Depreciation+Interest}{Interest+Principal} = \frac{480+155+162}{162+178}$ = 2.34 times

Solution 10:

Computation of Ratios

Particulars	2009	2010
1. Gross Profit Ratio Gross Profit/Sales	$\frac{64,000}{3,00,000}$ x 100 = 21.3%	$\frac{76,000}{3,74,000}$ x 100 = 20.3%
2. Operating Expense to Sales Ratio Operating Expenses/Total Sales	$\frac{49,000}{3,00,000}$ x 100 = 16.3%	$\frac{57,000}{3,74,000}$ x 100 = 15.2%
3. Operating Profit Ratio Operating Profit/ Total Sales	$\frac{15,000}{3,00,000}$ x 100 = 5%	$\frac{19,000}{3,74,000}$ x 100 = 5.08%
4. Capital Turnover Ratio Sales/ Capital Employed	$\frac{3,00,000}{1,00,000}$ = 3 times	$\frac{3,74,000}{1,47,000}$ =2.54 times
5. Stock Turnover ratio COGS/ Average Stock	$\frac{2,36,000}{50,000}$ = 4.7times	$\frac{2,98,000}{77,000}$ = 3.9 times
Net Profit/ Net Worth	$\frac{15,,000}{1,00,000}$ x 100 =15%	$\frac{17,,000}{1,00,000}$ x100=14.5%
7. Debtors Collection Period Average Debtors/ Average Daily Sales [wn 1]	$\frac{50,000}{739.73}$ = 67.6 days	$\frac{82,000}{936.99}$ = 87.5 days

Working note:

(1) Average Daily Sales = Credit Sales/ 365 $\frac{2,70,000}{365}$ = ₹ 739.73 $\frac{3,42,000}{365}$ = ₹ 936.99

Analysis: The decline in the Gross profit ratio could be either due to a reduction in the selling price or increase in the direct expenses. Similarly there is a decline in the ratio of Operating expenses to sales. And in depth analysis reveals that the decline in the warehousing and the administrative expenses has been partly set off by

an increase in the transport and the selling expenses. The operating profit ratio has remained the same in spite of a decline in the Gross profit margin ratio.
The company has not been able to deploy its capital efficiently. This is indicated by a decline in the Capital turnover from 3 to 2.5 times. In case the capital turnover would have remained at 3 the company would have increased sales and profits by ₹ 67,000 and ₹ 3,350 respectively.
The decline in the stock turnover ratio implies that the company has increased its investment in stock. Return on Net worth has declined indicating that the additional capital employed has failed to increase the volume of sales proportionately. The increase in the Average collection period indicates that the company has become liberal in extending credit on sales. However, there is a corresponding increase in the current assets due to such a policy.
It appears as if the decision to expand the business has not shown the desired results.

Solution 12:
(a)Inventory turnover = Cost of goods sold/Average inventory
Since gross profit margin is 15 per cent, the cost of goods sold should be 85 per cent of the sales.

Cost of goods sold = 0.85 × ₹ 6,40,000 = ₹ 5,44,000.
Thus, = ₹ 5, 44,000 /Average inventory =5

Average inventory = ₹ 5, 44,000/5 = ₹ 1,08,800

(b) Average collection period = {Average Receivables×360 days}/ Credit Sales

Average Receivables = (Opening Receivables+Closing Receivables)/2
Closing balance of receivables is found as follows:

	₹	₹
Current assets (2.5 of current liabilities)		2,40,000
Less: Inventories	48,000	
Cash	16,000	64,000
\ Receivables		1,76,000

Average Receivables = (₹1,76,000 + ₹ 80,000)/2 = ₹ 1,28,000
So,
Average collection period = (₹ 1,28,000 × 360)/₹ 6, 40,000 = 72 days

Solution 14:
Working Notes:
(i) **Cost of Goods Sold = Sales – Gross Profit (25% of sales)**
= ₹ 30,00,000 – ₹ 7,50,000= ₹ 22,50,000

(ii) **Closing Stock = Cost of Goods sold/ Stock turnover**
= ₹ 22,50,000 / 6 = ₹ 3,75,000

(iii) **Fixed Assets = Cost of Goods sold / Fixed Assets Turnover**
= ₹ 22,50,000 / 1.5
= ₹ 15,00,000

(iv) **Current Assets:**
Current Ratio = 1.5 and Liquid ratio = 1
Stock = 1.5 – 1 = 0.5
Current Assets = Amount of Stock x 1.5/0.5
= ₹ 3,75,000 x 1.5/0.5 = ₹ 11,25,000

(v) **Liquid Assets (Debtors and Cash)**
= Current Assets – Stock
= ₹ 11,25,000 – ₹ 3,75,000 = ₹ 7,50,000

(vi) **Debtors = Sales x Debtors collection period ½**
= ₹ 30,00,000 x 2/12 = ₹ 5,00,000

(vii) **Cash = Liquid Assets – Debtors**
= ₹ 7,50,000 – ₹ 5,00,000 = ₹ 2,50,000

(viii) **Net Worth = Fixed Assets / 1.2**
= ₹ 15,00,000 / 1.2 = ₹ 12,50,000

(ix) **Reserves & Surplus**
Reserves & Share Capital = 0.6 + 1 = 1.6
Reserves & Surplus = ₹ 12,50,000 x 0.6/1.6 = ₹ 4,68,750

(x) **Share Capital = Net Worth – Reserves & Surplus**
= ₹ 12,50,000 – ₹ 4,68,750 = ₹ 7,81,250

(xi) **Current liabilities = Current Assets / Current Ratio**
= ₹ 11,25,000/ 1.5 = ₹ 7,50,000

(xii) **Long-term debts**
Capital Gearing ratio = long-term debts/Equity Shareholders' Fund
Long –term Debts = ₹ 12,50,000 x 0.5 = ₹ 6,25,000

(a) **Preparation of Balance Sheet of a Company**

Balance Sheet

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity Share Capital	7,81,250	Fixed Assets	15,00,000
Reserves & Surplus	4,68,750	Current Assets	
Long – term debts	6,25,000	Stock	3,75,000
Current Liabilities	7,50,000	Debtors	5,00,000
		Cash	2,50,000
	26,25,000		**26,25,000**

(b) **Statement showing working capital Requirements**

		(₹)
Current Assets		
(i) Stocks		3,75,000
(ii) Receivables		5,00,000
(iii) cash in hand & at bank		2,50,000
A. Current Assets: Total		11,25,000
Current Liabilities		
B. Current Liabilities : Total		7,50,000
Net Working Capital (A – B)		3,75,000
Add: Provision for contingencies		41,667
(1/9th of Net Working Capital)		
Working Capital Requirement		
		4,16,667

Solution 15:

(a) Dividend Yield on the Equity Shares = $\frac{Dividend\ per\ Share}{Market\ Price\ per\ Share} \times 100 = \frac{₹2\ (0.20 \times ₹10)}{₹40} \times 100 = 5\%$

(b) Dividend Coverage Ratio

(i) Preference = $\frac{Profit\ after\ Taxes}{Dividend\ Payable\ to\ Prefernce\ Shareholders} = \frac{₹2,70,000}{₹27,000\ (0.09 \times ₹3,00,000)}$ = 10 times

(ii) EquityCoverage Ratio = $\frac{Profit\ after\ Taxes - Preference\ Share\ Dividend}{Dividend\ Payable\ to\ Equity\ Shareholders\ at\ Current\ rate\ of\ ₹2\ per\ share}$ = $\frac{₹2,70,000 - ₹27,000}{₹1,60,000\ (80,000\ shares \times ₹2)}$ = 1.52 times

(c) **Earnings per equity share**= $\frac{Earnings\ available\ to\ Equity\ Shareholders}{Number\ of\ Equity\ Shares\ outstanding}$ = $\frac{₹2,43,00}{80,000}$ = ₹ 3.04 per share

(d) **Price-earning (P/E) ratio**= $\frac{Market\ Price\ per\ Share}{Equity\ per\ Share}$ = $\frac{₹40}{₹3.04}$ = 13.2 times

Solution 16:

(a) **Sales Gross Profit Ratio** = $\frac{Gross\ Profit}{Sales}$

20% = $\frac{₹5,00,000}{Sales}$

Sales = ₹ 25,00,000

(b) Sundry Debtors

Debtors Velocity = $\frac{12}{Debtors\ Turnover\ Ratio}$

3 = $\frac{12}{Debtors\ Turnover\ Ratio}$

Debtor Turnover Ratio = 4 times

Debtor Turnover Ratio = $\frac{Sales}{Average\ Receivable}$

4 = $\frac{₹25,00,000}{Average\ Receivable}$

Average Receivable = ₹ 6,25,000
Average Receivable = Bills Receivable + Debtors
₹ 6,25,000 = ₹ 60,000 + Debtors
Debtors = ₹ 5,65,000

(c) Sundry Creditors

Creditors Turnover Ratio = $\frac{Purchases}{Average\ Payable}$

6 = $\frac{₹22,00,000}{Average\ Payable}$

Average Payable = ₹ 3,36,667
Average Payable = Bill Payable + Creditors
₹ 3,36,667 = ₹ 36,667 + Creditors
Creditors = ₹ 3,30,000

Working Notes:

(i) Cost of Goods sold = Net Sales – Gross Profit = ₹ 25,00,000 – ₹ 5,00,000 = ₹ 20,00,000

(ii) Let Opening Stock = x
Therefore Closing Stock = x + ₹ 20,000
Stock Velocity = $\frac{12}{Stock\ Turnover\ Ratio}$
6 = $\frac{12}{Stock\ Turnover\ Ratio}$
Stock Turnover Ratio = 2 times

(iii) **Stock Turnover Ratio** = $\frac{Cost\ of\ Goods\ Sold}{Average\ stock}$

2 = $\frac{₹20,00,000}{\frac{2x+2,00,000}{2}}$

x = ₹ 9,00,000
Opening Stock = ₹ 9,00,000
Therefore, Closing Stock = ₹ 9,00,000 + ₹ 20,000 = ₹ 11,00,000

(iv) **Cost of Goods sold = Opening Stock + Purchases – Closing Stock**
₹ 20,00,000 = ₹ 9,00,000 + Purchases – ₹ 11,00,000
Purchases = ₹ 22,00,000

(d) Stock = ₹ 11,00,000

Solution 17:

(i) Computation of Opening Stock

Gross Profit = 20 % of sales = 20% of ₹ 40,00,000 = ₹ 8,00,000
Cost of Goods Sold (COGS) = Sales - Gross Profit = ₹ 40,00,000 – ₹ 8,00,000 = ₹ 32,00,000

$$\text{Inventory Turnover Ratio} = \frac{COGS}{Average\ Inventory}$$

$$\text{Or, } 8 = \frac{₹\ 32,00,000}{Average\ Inventory}$$

Average Inventory = ₹ 4,00,000
Now, Closing Stock = Opening stock + ₹ 40,000
$\frac{Opening\ Stock + Closing\ Stock}{2}$ = ₹ 4,00,000

Or, Opening Stock + Opening Stock + ₹ 40,000 = ₹ 8,00,000
Or, 2 opening stock = 7,60,000
Opening stock = ₹ 3,80,000

(ii) Computation of Bank Overdraft

$$\text{Current Ratio} = \frac{Current\ Assets(CA)}{Current\ Liabilities(CL)} = 1.5$$

$$CA = 1.5\ CL$$
$$\text{Or, } CL = \frac{CA}{1.5}$$

Further, Working Capital = Current Assets – Current Liabilities
So, ₹ 2,85,000 = 1.5 CL – CL
Or, .5 CL = ₹ 2,85,000
CL = ₹ 5,70,000
Bank Overdraft + Other CL = ₹ 5,70,000
Other CL = ₹ 5,70,000 - Bank Overdraft

$$\text{Now, } \frac{Bank\ Overdraft}{Other\ CL} = \frac{2}{1}$$
$$\text{Or, } \frac{Bank\ Overdraft}{₹\ 5,70,000 - bank\ overdraft} = \frac{2}{1}$$

Or , ₹ 11,40,000 – 2 bank overdraft = bank overdraft
Bank Overdraft = ₹ 3,80,000

Solution 18:

Balance Sheet

Liabilities	Amount (₹)	Assets	Amount (₹)
Capital	8,00,000	Fixed Assets	7,20,000
Reserves & Surplus	1,60,000	Stock	1,60,000
Bank Overdraft	40,000	Current Assets	2,40,000
Sundry Creditors	1,20,000		
	11,20,000		11,20,000

Working Notes

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

2.5 = $\frac{Current\ Assets}{Current\ Liabilities}$

2.5 = $\frac{Working\ Capital + Current\ Liabilities}{Current\ Liabilities}$

Current Liabilities = ₹ 1,60,000

(2) Working Capital = Current Assets – Current Liabilities

₹ 2,40,000 = Current Assets – ₹ 1,60,000

Current Assets = ₹ 4,00,000

(3) Quick Liabilities = Current Liabilities – Bank overdraft

= ₹ 1,60,000 – ₹ 40,000 = ₹ 1,20,000

(4) Quick Ratio = $\frac{Quick\ Assets}{Quick\ Liabilities}$

1.5 = $\frac{Quick\ Assets}{₹1,20,000}$

Quick Assets = ₹ 1,80,000

(5) Stock = Current Assets – Quick Assets

= ₹ 4,00,000 – ₹ 1,80,000 = ₹ 2,20,000

(6) $\frac{Fixed\ Assets}{Proprietary\ Fund}$ **= 0.75**

Fixed Assets = 0.75 Proprietary Fund

Working Capital = 0.25 Proprietary Fund

Proprietary Fund = $\frac{₹\ 2,40,000}{0.25}$

Proprietary Fund = ₹ 9,60,000

(7) Fixed Assets = 0.7 × ₹ 9,60,000 = ₹ 7,20,000.

Solution 19:

Balance Sheet(In ₹)

Equity Share Capital	4,87,500	Fixed Assets	6,00,000
Reserves	5,000	Current Assets	
P&L A/c	7,500	Stock	18,750
Debt's	5,00,000	Debtors	18,750
Current Liabilities	18,750	Other Current Assets	7,62,500
Other Current Liabilities	3,81,250		
	14,00,000		14,00,000

Working Notes:

(1) Let CL be x

CA = 2x

Net WC = CA – CL

4,00,000 = 2x – x

x = 4,00,000

CL = 4,00,000

CA = 4,00,000 × 2 = ₹8,00,000

(2) $\frac{Fixed\ Assets}{Turnover}$ **= 4**

= $\frac{6,00,000}{Turnover}$ = 4

Turnover = ₹ 1,50,000

(3) **GP** = (25% of 1,50,000) = ₹ 37,500
(4) **COGS** = Sales – GP = 1,50,000 – 37,500 = ₹ 1,12,500
(5) **Debtors** = 1,50,000 × $\frac{1.5}{12}$ = ₹ 18,750
(6) **Stock** = 1,12,500 × $\frac{2}{12}$ = ₹ 18,750
(7) **Creditors** = 1,12,500 × $\frac{2}{12}$ = ₹ 18,750
(8) **Net Profit** = 1,50,000 × 5% = ₹ 7,500
(9) **Reserve** = $\frac{2}{3}$ × 7,500 = ₹ 5,000
(10) **Capital Gearing ratio** = $\frac{Debt}{Equity\ Shareholderr's\ funds}$ = $\frac{1}{1}$

Capital employed = FA + Net WC
= ₹ 6,00,000 + ₹ 4,00,000
= ₹ 10,00,000

Debt = 10,00,000 × $\frac{1}{2}$ = ₹ 5,00,000

Equity Shareholder's Fund = 10,00,000 × $\frac{1}{2}$ = ₹ 5,00,000

(11) **Equity Share Capital** = Equity Shareholder's funds – Reserve – P & L A/c = 5,00,000 – 5,000 – 7,500 = ₹ 4,87,500

Solution 21:

(a) Calculation of operating Expenses for the year ended 31st March, 2010.

		(₹)
Net profit [@ 6.25% of sales]		3,75,000
Add: Income Tax (@ 50%)		3,75,000
Profit Before Tax (PBT)		7,50,000
Add: Debenture Interest		60,000
Profit before interest and tax (PBIT)		8,10,000
Sales		60,00,000
Less: Cost of goods sold	18,00,000	
PBIT	8,10,000	26,10,000
Operating Expenses		33,90,000

(b) Balance Sheet as on 31st March, 2010

Liabilities	₹	Assets	₹
Share Capital	10,50,000	Fixed Assets	17,00,000
Reserve and Surplus	4,50,000	Current Assets:	
15% Debentures	4,00,000	Stock	1,50,000
Sundry Creditors	2,00,000	Debtors	2,00,000
		Cash	50,000
	21,00,000		21,00,000

Working Notes:

(i) **Share capital and Reserves**

The return on net worth is 25%. Therefore, the profit after tax of ₹ 3,75,000 should be equivalent to 25% of the net worth.

Net worth × $\frac{25}{100}$ = ₹ 3,75,000

∴ New worth = $\frac{₹3,75,000 \times 100}{25}$

= ₹ 15,00,000

The ratio of share capital to reserves is 7:3

Share Capital = 15,00,000 × $\frac{7}{10}$ = ₹ 10,50,000

Reserves = 15,00,000× $\frac{3}{10}$ = ₹ 4,50,000

(ii) Debentures

Interest on Debentures @ 15% = ₹ 60,000

∴ Debentures = $\frac{60,000\times100}{15}$ = ₹ 4,00,000

(iii) Current Assets

Current Ratio = 2
Sundry Creditors = ₹ 2,00,000
∴ Current Assets = 2 Current Liabilities
= 2×2,00,000 = ₹ 4,00,000

(iv) **Fixed Assets**

(In ₹)

Liabilities:	
Share Capital	10,50,000
Reserves	4,50,000
Debentures	4,00,000
Sundry Creditors	2,00,000
	21,00,000
Less: Current Assets	4,00,000
Fixed Assets	17,00,000

(v) Composition of Current Assets

Inventory Turnover = 12
$\frac{Cost\ of\ Goods\ Sold}{Closing\ Stock}$ = 12
Closing Stock = $\frac{₹18,00,000}{12}$
Closing Stock = ₹ 1,50,000

Composition:	₹
Stock	1,50,000
Sundry Debtors	2,00,000
Cash (Balancing Figure)	50,000
Total Current Assets	4,00,000

Solution 22:

Balance Sheet

Liabilities	₹	Assets	₹
Creditors	60,000	Cash	42,000
Long term Debt	2,40,000	Debtors	12,000
Shareholders' funds	6,00,000	Inventory	54,000
		Fixed assets	7,92,000
	9,00,000		9,00,000

Working Note:

1. **Gross Profit:**
   GP Margin = 20%
   GP = ₹ 54,000
   ∴ Sales = ₹ 2,70,000

2. **Credit Sales**
   Credit sales = 80% of total sales
   = 2,70,000× 80%
   = ₹ 2,16,000.

3. **Total Assets:**
   Total Assets Turnover = $\frac{Sales}{Total\ Assets}$ = 0.3 times
   ∴ Total Assets = $\frac{2,70,000}{0.3}$ = ₹ 9,00,000

4. **Inventory Turnover** :
   Inventory Turnover = $\frac{Cash}{Inventory}$ × 100

   ∴ 4 = $\frac{₹\ 2,70,000 - ₹\ 54,000}{Inventory}$

   Inventory = ₹ 54,000

5. **Debtors:**
   Debtors = $\frac{Credit\ Sales}{360\ days}$ × 20 days

   = $\frac{₹2,16,000}{360\ days}$ × 2 = ₹ 12,000

6. **Creditors**: $\frac{Long\ Term\ Debt}{Equity}$ = 40%
   Long term debt = 40% of equity
   = 6,00,000× 40%
   = ₹ 2,40,000
   Creditor + Long term debt + shareholders funds = ₹ 9,00,000
   Creditor + ₹ 2,40,000 + ₹ 6,00,000 = ₹ 9,00,000
   ∴ Creditors = ₹ 60,000.

7. **Current Ratio:**
   Current ratio = $\frac{Current\ Assets}{Current\ Liabilities}$

   1.8 = $\frac{Debtors + Inventory + Cash}{Creditors}$

   1.8 = $\frac{12,000 + 54,000 + Cash}{60,000}$

   Cash = ₹ 42,000

8. **Fixed Assets:** It is the balancing figure on assets side.

Solution 25:

Balance Sheet

Liabilities	₹	Assets	₹
Equity Share Capital	1,00,000	Fixed assets	60,000
Current Debt	24,000	Inventory	40,000
Long Term Debt	36,000	Cash	60,000
	1,60,000		1,60,000

Working Notes:

1. **Total Debt** = 0.60 × Owner equity = 0.60 × ₹ 1,00,000 = ₹ 60,000
   Current debt to Total debt = 0.40, hence current debt = 0.40 × 60,000 = ₹ 24,000
2. **Fixed assets** = 0.60 × Owners Equity = 0.60 × ₹ 1,00,000 = ₹ 60,000
3. **Total Equity** = Total Debt + Owners equity = ₹ 60,000 + ₹ 1,00,000 = ₹ 1,60,000
4. **Total assets** consisting of fixed assets and current assets must be equal to ₹ 1,60,000 (Assets = Liabilities + Owners equity). Since Fixed assets are ₹ 60,000, hence Current assets should be ₹ 1,00,000
5. **Total assets turnover** = 2 Times : Inventory turnover = 8 times

   $\frac{Inventory}{Total\ Assets} = \frac{2}{8} = \frac{1}{4}$

   $\frac{Inventory}{₹1,60,000} = \frac{1}{4}$

   or 4 × Inventory = 1 × ₹ 1,60,000
   = ₹ 1,60,000
   Or Inventory = $\frac{₹\ 1,60,000}{4}$ = ₹ 40,000
   Balance on Asset side
   ∴ Cash = ₹ 1,60,000 – ₹ 60,000 – ₹ 40,000
   = ₹ 60,000

Solution 26:

Balance Sheet

Liabilities	₹	Assets	₹
Notes and payables	1,00,000	Cash	50,000
Long-term debt	1,00,000	Accounts receivable	50,000
Common stock	1,00,000	Inventory	1,00,000
Retained earnings	1,00,000	Plant and equipment	2,00,000
Total liabilities and equity	4,00,000	Total assets	4,00,000

Working Notes

$\frac{Long-term\ debt}{Net\ worth}$ **= 0.5 =** $\frac{Long-term\ debt}{2,00,000}$

Long – term debt = ₹ 1,00,000

Total liabilities and net worth = ₹ 4,00,000

Total assets = ₹ 4,00,000

$\frac{Sales}{Total\ assets}$ **= 2.5 =** $\frac{Sales}{4,00,000}$

Sales = ₹ 10,00,000

Cost of goods sold = (0.9) (₹ 10,00,000) = ₹ 9,00,000.

$\frac{Cost\ of\ goods\ sold}{Inventory}$ = $\frac{9,00,000}{Inventory}$ = 9

Inventory = ₹ 1,00,000

$\frac{Receivables \times 360}{10,00,000}$ **= 18 days**

Receivables = ₹ 50,000

$\frac{Cash + 50,000}{1,00,000}$ = 1

Cash = ₹ 50,000

Plant and equipment = ₹ 2,00,000.

Solution 28:

1. **Balance Sheet**

Liabilities	₹	Assets	₹
Share Capital (WN6)	7,81,250	Fixed Assets (WN 3)	15,00,000
Reserves (WN6)	4,68,750	Current Assets	
Long-Term Loans (Balancing Figure)	6,25,000	Stock (WN4) 3,75,000	
Current Liabilities (WN8)	7,50,000	Debtors (WN5) 5,00,000	
		Bank (WN9) 2,50,000	11,25,000
Total	26,25,000	Total	26,25,000

Working Notes

1. **Gross Profit Ratio=** 25%of sales. So, Gross Profit = 25% × ₹ 30,00,000= ₹ 7,50,000
2. **Cost of Goods Sold (COGS)**= Sales – Gross Profit = ₹ 30,00,000 – ₹7,50,000 = ₹ 22,50,000
3. **Fixed Assets Turnover (based on COGS)**= $\frac{COGS}{Fixed\ Assets}$= $\frac{₹\ 22,50,000}{Fixed\ Assets}$= 1.5 times.

   Hence, Fixed Assets= $\frac{₹\ 22,50,000}{1.5}$= ₹ 15,00,000
4. **Stock Turnover** = $\frac{COGS}{Inventory}$= $\frac{₹\ 22,50,000}{Inventory}$ =6 times. So, Inventory = $\frac{22,50,000}{6}$ =₹ 3,75,000
5. **Debt Collection Period**= 2 months. So, Debtors= Sales ×$\frac{2}{12}$= ₹ 30,00,000 × $\frac{2}{12}$= ₹ 5,00,000
6. $\frac{Fixed}{Net\ Worth}$=$\frac{₹\ 15,00,000}{Net\ Worth}$= 1.20. So, Net Worth = $\frac{₹\ 15,00,000}{1.2}$= ₹ 12,50,000

   Re$Assets$serve & Surplus to Share Capital = 0.6:1

   Reserve & Surplus = 12,50,000 × $\frac{0.6}{1.6}$ = ₹ 4,68,750

   Share Capital = 12,50,000 × $\frac{1}{1.6}$ = ₹ 7,81,250
7. **Current Ratio** = $\frac{Current\ Assets}{Current\ Liabilities}$= 1.5 times. So, Current Assets = 1.5 × Current Liabilities.
8. **Quick Ratio=** $\frac{Quick\ Assets}{Quick\ Liabilities}$= 1 time. So, $\frac{Current\ Assets-Stock}{Current\ Liabilities}$= 1.

$\frac{1.5 \times Current\ Liabilities - ₹\ 3,75,000}{Current\ Liabilities} = 1$

Current Liabilities = ₹ 7,50,000

9. Hence, **Current assets**= 1.5 × 7,50,000 = ₹ 11,25,000
   Current Assets = Inventory + Debtors + Cash & Bank
   ₹ 11,25,000 = ₹ 3,75,000 + ₹ 5,00,000 + Cash & Bank
   Cash & Bank = ₹ 2,50,000
10. **Verification of Long Term Loans**: Capital Gearing Ratio = $\frac{Preference\ Capital + Debt}{Equity\ Shareholders\ Funds} = \frac{Nil + ₹\ 6,25,000}{₹\ 12,50,000} = 0.5$ times.

Note: in the absence of information, Share Capital = Equity Share Capital only.
Net Worth = WN6 = ₹ 12,50,000. Debt is taken as balancing figure from the B/s above.

2. **Statement of Working Capital Requirements**

Particulars	Computation	₹
A. Current Assets	Stock (WN4) 3,75,000	
	Debtors (WN5) 5,00,000	
	Bank (WN9) 2,50,000	11,25,000
B. Current Liabilities	(WN8)	7,50,000
C. Net Working Capital (A – B)	100% –10% =90%	3,75,000
D. 10% Provision for Contingencies	10%(on Item E)= 1/9th on Item C	41,667
E. Required Net Working Capital	100%	4,16,667

Solution 29:

Projected Profit and Loss Account for the year ended 31-3-2010

To Cost of Goods Sold	2,04,000	By Sales	2,40,000
To Gross Profit	36,000		
	2,40,000		2,40,000
To Debenture Interest	1,000	By Gross Profit	36,000
To Depreciation	5,000		
To Administration and Other Expenses	17,000		
To Net Profit	13,000		
	36,000		36,000

Projected Balance Sheet as at 31st March, 2010

Liabilities	₹	Assets	₹
Share Capital	1,00,000	Fixed Assets	
Profit and Loss A/c(17,000 + 13,000)	30,000	Land &Buildings	80,000
		Plant &Machinery	
5% Debentures	20,000	60,000	
		Less: Depreciation	
Current Liabilities		20,000	40,000
Trade Creditors	50,000	Current Assets	
		Stock	
		30,000	
		Debtors	
		40,000	
		Bank	
		10,000	80,000
	2,00,000		2,00,000

Working Notes:

1.

Particulars	%	₹
Share Capital	50%	1,00,000
Other Shareholders Funds	15%	30,000
5% Debentures	10%	20,000
Trade Creditors	25%	50,000

Total	100%	2,00,000

2. **Total liabilities = Total Assets**
   ₹ 2,00,000 = Total Assets
   Fixed Assets = 60% of total gross fixed assets and current assets
   = ₹ 2,00,000 × 60/100 = ₹ 1,20,000

3. **Net Plant & Machinery = ₹ 1,20,000 – ₹ 80,000** = ₹ 40,000
   Depreciation increased by ₹ 5,000
   ∴Depreciation = ₹ 15,000 + ₹ 5,000 = ₹ 20,000
   Gross Plant and Machinery = ₹ 40,000 + ₹ 20,000 = ₹ 60,000

4. **Current Assets = Total Assets – Fixed Assets**
   = ₹ 2,00,000 – ₹ 1,20,000 = ₹ 80,000

5. **Quick Ratio=** $\frac{Current\ Assets-Stock}{Current\ Liabilities}$ **= 1**
   = $\frac{₹80,000-Stock}{₹50,000}$ = 1
   ₹ 50,000 = ₹ 80,000 – Stock
   Stock = ₹ 80,000 – ₹ 50,000 = ₹ 30,000

6. **Debtors = 4/5th of Quick Assets**
   = (₹ 80,000 – 30,000) × 4/5 = ₹ 40,000
   Debtors Turnover Ratio= $\frac{Debtors}{Credit\ Sales}$ × 365 = 60 days
   = $\frac{40,000 \times 12}{Credit\ Sales}$ × 365 = 2 months
   2 credit sales = 4,80,000
   Credit sales = 4,80,000/2 = 2,40,000

7. **Gross Profit (15% of Sales)** ₹ 2,40,000 × 15/100 = ₹ 36,000
8. **Return on net worth (Profit after tax)**
   Net worth = ₹ 1,00,000 + ₹ 30,000
   = ₹ 1,30,000
9. **Net profit** = ₹ 1,30,000 × 10/100 = ₹ 13,000
10. **Debenture interest** = ₹ 20,000 × 5/100 = ₹ 1,000
11. **Quick Assets** = ₹ 50,000
    Debtors + Bank = ₹ 50,000
    ₹ 40,000 + Bank = ₹ 50,000
    Bank = ₹ 10,000

Solution 30:

Profit and Loss Statement of Check& Co.

Particulars	Amount (₹)
Sales	50,00,000
Less: Variable Cost(60% on Sales)	30,00,000
Contribution	20,00,000
Less : Fixed cost(Balancing Figure)	9,00,000
EBIT	11,00,000
Less: Interest (Balancing Figure)	6,00,000
EBT(10% of sales of ₹ 50,00,000)	5,00,000
Less: Tax	NIL
EAT	5,00,000

Balance Sheet of M/s Check& Co.

Liabilities	Amount (₹)	Assets	Amount (₹)
Share capital	5,00,000	Fixed Assets	41,66,667
Reserves & Surplus	15,00,000	Current Assets	
12% Term loan	50,00,000	Stock	10,00,000

Current Liabilities	5,00,000	Debtors	4,16,667
		Other Current Assets	83,333
		Other Non Current assets	18,33,333
	75,00,000		75,00,000

Working Notes:

1. **Current Ratio =** $\frac{Current\ Assets}{Current\ Liabilities}$ = 3 times.

Current Assets = 3 × Current Liabilities.
Net Working Capital = Current Assets – Current Liabilities = ₹ 10,00,000.
3 × Current Liabilities – Current Liabilities = ₹ 10,00,000 = 2 × Current Liabilities = ₹ 10,00,000
Current Liabilities = $\frac{Rs,10,00,000}{2}$ = ₹ 5,00,000
Current Assets = 3 × ₹ 5,00,000 = ₹ 15,00,000

2. $\frac{Current\ Assets}{Stock} = \frac{₹15,00,000}{Stock} = \frac{3}{2}$

Stock = ₹ 15,00,000 × $\frac{2}{3}$ = ₹ 10,00,000

3. **Quick Ratio** = $\frac{Quick\ Assets}{Quick\ Liabilities}$ = 1 time.

$\frac{Current\ Assets - Stock}{Current\ Liabilities - Bank\ OD}$ = 1

$\frac{₹15,00,000 - ₹10,00,000}{₹5,00,000 - Bank\ OD}$ = 1

Bank OD = ₹ Nil.

4. **Stock Turnover Ratio** = $\frac{Sales}{Inventory} = \frac{Sales}{₹10,00,000}$ = 5.

Sales = ₹ 10,00,000 × 5 = ₹ 50,00,000

5. **Fixed Assets T/O** = $\frac{Sales}{Net\ Fixed\ Assets} = \frac{₹50,00,000}{Net\ Fixed\ Assets}$ = 1.2

Net Fixed Assets = $\frac{₹50,00,000}{1.2}$ = ₹ 41,66,667

6. **Average Collection Period** = 30 days. Assuming 1 year = 360 days, Debtors = Sales × $\frac{30}{360}$ = ₹ 50,00,000 × $\frac{30}{360}$ = ₹ 4,16,667

7. **Financial Leverage** = $\frac{EBIT}{EBT} = \frac{EBIT}{₹5,00,000}$ = 2.20

EBIT = ₹ 5,00,000× 2.2 = ₹ 11,00,000

8. **Long Term Loan** = $\frac{Interest\ Amount}{Interest\ Rate} = \frac{₹6,00,000}{12\%}$ = ₹ 50,00,000.

9. **Total External Liabilities = Long Term Liabilities + Current Liabilities** = ₹ 50,00,000 + ₹ 5,00,000 = ₹ 55,00,000

10. $\frac{Total\ Liabilities}{Net\ Worth}$ = 2.75 $\frac{₹55,00,000}{Net\ Worth}$ = 2.75.

Net Worth = $\frac{₹55,00,000}{2.75}$ = ₹ 20,00,000

11. **Number of Equity Shares** = $\frac{Net\ worth}{Book\ value\ per\ share} = \frac{₹20,00,000}{₹40}$ = 50,000 Shares.

Equity share Capital = 50,000 shares × ₹ 10 = ₹ 5,00,000

12. **Retained Earnings = Net Worth – Share Capital** = ₹ 20,00,000 – ₹ 5,00,000 = ₹ 15,00,000

13. **Total Current Assets = Inventory + Debtors + Cash &Bank.**

₹ 15,00,000= ₹ 10,00,000 + ₹ 4,16,667 + Cash & Bank.
Cash & Bank = ₹ 83,333

Solution 31:

Trading and Profit and Loss Account for the period ending 31st December, 2010

To Cost of Materials	3,60,000	By Sales	12,00,000
To Wages & Overheads	5,40,000		
To Gross Profit c/d	3,00,000		
	12,00,000		12,00,000
To Expenses & Depreciation (Balancing Figure)	2,46,800	By Gross Profit b/d	3,00,000
To Net Profit	53,200		
	3,00,000		3,00,000

Projected Balance Sheet as on 31st December, 2010

Liabilities	₹	Assets		₹
Share Capital:		Fixed Assets		7,60,000
Equity Share Capital	5,32,000	Current Assets		
Preference Share Capital	1,90,000	Stock	1,80,000	
Reserves & Surplus:		Debtors	2,00,000	3,80,000
General Reserve	79,800			
Profit & Loss A/c	53,200			
Secured Loan:				
Debentures	95,000			
Current Liabilities:				
Creditors	90,000			
Bank Overdraft	1,00,000			
	11,40,000			11,40,000

Working Notes:

(1)

Sales:	₹
Gross Profit	3,00,000
Ratio of Gross Profit	25%
Sales (₹ 3,00,000 × $\frac{100}{25}$)	12,00,000

(2)

	₹
Cost of Sales:	12,00,000
Sales	3,00,000
Less: Gross Profit	9,00,000

(3) **Assuming stock and debtors are the only Current Assets**:

(a) Stock in Trade = $\frac{₹9,00,000}{5}$ = ₹ 1,80,000

(b) Debtors = $\frac{₹12,00,000}{6}$ = ₹ 2,00,000

(4) **Current Liabilities** = $\frac{1}{2}$ of ₹ 3,80,000 = ₹ 1,90,000

(5) **Trade Creditors** = $\frac{1}{4}$ of ₹ 3,60,000 = ₹ 90,000

(6) **Bank Overdraft:** Current Liabilities – Trade Creditors
= 1,90,000 – 90,000 = ₹ 1,00,000

(7) **Material**: 40% of ₹ 9,00,000 = ₹ 3,60,000

(8) **Fixed Assets to Capital employed** = 80%
Working Capital to Capital employed = 20%
The amount of Working Capital being ₹ 1,90,000, the amount of Fixed Assets will be ₹ 1,90,000 × 4 = ₹ 7,60,000.

(9) **Total Capital employed**: Fixed Assets + Working Capital = ₹7,60,000 + ₹ 1,90,000 = ₹ 9,50,000

(10) **Capital Gearing Ratio** = 30%
Preference Shares + Debentures = 30% of ₹ 9,50,000 = ₹ 2,85,000

(11) **Preference Shares** = 2/3 of ₹ 2,85,000 = ₹ 1,90,000
Debentures = 1/3 of ₹ 2,85,000 = ₹ 95,000
(12) **General Reserve & Profit & Loss A/c balance** being 25% of Equity Capital
= 1/5 of ₹ 6,65,000 = ₹ 1,33,000
(13) **Equity Capital** = ₹ 5,32,000
(14) **Profit** (10% on Equity Capital) = ₹ 53,200
(15) **General Reserve** (₹ 1,33,000 – ₹ 53,200) = ₹ 79,800
(16) **Wages and Overheads** = 60% of ₹ 9,00,000 = ₹ 5,40,000

Solution 32:
Return on Equity = Net Profit Margin × Asset Turnover Ratio × Equity Multiplier
= 0.1439 × 1.0455 × 2.0621 = 0.3102 or 31.02%
Working Notes:
Net Profit Margin = Net Income (₹ 4,212) ÷ Revenue (₹ 29,261) = 0.1439, or 14.39%
Asset Turnover Ratio = Revenue (₹ 29,261) ÷ Assets (₹ 27,987) = 1.0455 times
Equity Multiplier = Assets (₹ 27,987) ÷ Shareholders' Equity (₹ 13,572) = 2.0621 times

Solution 33:
(a) **Capital Turnover Ratio** = $\frac{Net\ Sales}{Average\ Capital\ Employed}$

Net Sales	₹ 3,00,000
Capital Employed	₹ 2,25,000
Capital Turnover Ratio	1.33 Times

(b) **Net Operating Profit Ratio** = $\frac{P.A.T.}{Net\ Sales}$ × 100

PAT	₹ 80,000
Net Sales	₹ 3,00,000
Net Operating Profit Ratio	26.67%

(c) ROI = Net Operating Ratio × Capital Turnover Ratio

Net Operating Profit	26.67%
Capital Turnover Ratio	1.33 Times
ROI	35.47%

Solution 34:
ROI = Net Operating Profit Ratio × Capital Turnover Ratio
Ram Ltd = 5% × 4 times = 20%
Shyam Ltd = 6% ×6 times = 36%

Working Notes:
Sales = ₹ 1,80,000/ 15% = ₹ 12,00,000
Capital Turnover Ratio = $\frac{Net\ Sales}{Capital\ Employed}$

= $\frac{12,00,000}{2,00,000}$ = 6 times

Solution 38:
(i) Return on total assets
Return on total assets= $\frac{EBIT\ (1-T)}{Total\ Assets\ (FA+CA)}$ = $\frac{₹\ 2.30\ Crores\ (1-0.3)}{₹\ 5.20\ crores + ₹\ 7.80\ crores}$

= $\frac{₹\ 1.61\ crores}{₹\ 13\ crores}$ = 0.1238 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 $= \frac{Net\ Profit\ after\ taxes\ (EAT)}{Owners'\ equity}$	$= \frac{1,26,84,000}{5,00,00,000}$ = 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	4.68	4.68	4.68
Short Term Debt)			
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 = $\frac{Current\ Assets}{Current\ Liabilities}$	$= \frac{7.80}{5.76}$ = 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%.

Solution 39:

Working Notes :

(i) **Calculation of Sales** $= \frac{Fixed\ Assets}{Sales} = \frac{1}{3}$

26,00,000 x 3 = 1 x sales = Sales = ₹ 78,00,000

(ii) Calculation of Current Assets

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

$\frac{26,00,000}{Current\ Assets} = \frac{13}{11}$ = Current Assets = ₹ 22,00,000

(iii) Calculation of Raw Material Consumption and Direct Wages

	₹
Sales	78,00,000
Less : Gross Profit	11,70,000
Works Cost	66,30,000

Raw Material Consumption (20% of Work Cost) ₹ 13,26,000

Direct Wages (10% of Work Cost) ₹ 6,63,000

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

= 13,26,000 x $\frac{3}{12}$ = ₹ 3,31,500

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

= 66,30,000 x $\frac{6}{100}$ = ₹ 3,97,800

(vi) Calculation of Current liabilities

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

$\frac{22,00,000}{Current\ Liabilities}$ = 2

Current Liabilities = ₹ 11,00,000

(vii) Calculation of Receivables

Average collection period = $\frac{Receivables}{Credit\ Sales}$ x 365

$\frac{Receivables}{78,00,000}$ x 365 = 60 = Receivables = ₹ 12,82,191.78 or ₹ 12,82,192

(viii) Calculation of Long Term Loan

$\frac{Long\ term\ loan}{Current\ Liabilities}$ = $\frac{2}{1}$ = Long Term Loan = ₹ 22,00,000

$\frac{Long\ term\ loan}{11,00,000}$ = $\frac{2}{1}$ = Long Term Loan = ₹ 22,00,000

(ix) Calculation of Cash balance

		₹
Current Assets		22,00,000
Less : Receivables	12,82,192	
Raw material stock	3,31,500	
Finished goods stock	3,97,800	20,11,492
Cash balance		**1,88,508**

(x) 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 = 15,00,000

= $\frac{Capital}{Reserve\ \&\ Surplus}$ = $\frac{1}{4}$ = Share Capital

= 15,00,000 x $\frac{1}{5}$ = ₹ 3,00,000

Reserve and Surplus = 15,00,000 x $\frac{4}{5}$ = ₹ 12,00,000

Profit and Loss Account of PQR Ltd , for the year ended 31st March , 2020

Particulars	₹	Particulars	₹
To Direct Materials	13,26,000	By Sales	78,00,000
To Direct Wages	6,63,000		

To Works (Overhead) Balancing Figure	46,41,000		
To Gross Profit c/d (15% of Sales)	11,70,000		-
	78,00,000		78,00,000
To Selling and Distribution Expenses (balancing figures)	5,46,000	By Gross Profit b/d	11,70,000
To Net Profit (8% of sales)	6,24,000		-
	11,70,000		**11,70,000**

Balance Sheet of PQR Ltd. as at 31st March , 2020

Liabilities	₹	Assets	₹
Share Capital	3,00,000	Fixed Assets	26,00,000
Reserve & 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
		Receivables	12,82,192
		Cash	1,88,508
	48,00,000		**48,00,000**

Solution 40:

Ratios	2018	2019	2020
Current ratio	1.19	1.25	1.20
Acid test ratio	0.43	0.46	0.40
Average collection period	18	22	27
Inventory turnover	NA*	8.2	6.1
Total debt to net worth	1.38	1.40	1.61
Long term debt to total capitalization	0.33	0.32	0.32
Gross profit margin	0.200	0.163	0.132
Net profit margin	0.075	0.047	0.026
Assets turnover	2.80	2.76	2.24
Return on Assets	0.21	0.13	0.06

Analysis : The company's profitability has declined steadily over the period . As only ₹ 50,000 is added to retained earnings , the company must be paying substantial dividends . Receivables are growing slower , although the average collection period is still very reasonable relative to the terms given . Inventory turnover is slowing as well , indicating a relative build-up in inventories . The increase in receivables and inventories , coupled with the fact that net worth has increased very little , has resulted in total debt – to – worth ratio increasing to what would have to be regarded on an absolute basis as a high level.

The current and acid – test ratios have fluctuated , but the current ratio is not particularly inspiring . The lack of deterioration in these ratio is clouded by the relative build up in both receivables and inventories , evidencing deterioration in the liquidity of these two assets. Both the gross profit and net profit margins have declined substantially. The relationship between the two suggests that the company has reduced the relative expenses in 2019 in particular. The build up in inventories and receivables has resulted in a decline in asset turnover ratio , and this, coupled with the decline in profitability , has resulted in a sharp decrease in the return on assets ratio.

Solution 41:

Ratios	Navya Ltd.	Industry Norms
1. Current Ratio = $\frac{Current\ Assets}{Current\ Liabilities}$	$\frac{52,80,000}{19,80,000}$ = 2.67	2.50
2. Receivable Turnover Ratio= $\frac{Sales}{Debtors}$	$\frac{1,10,00,000}{11,00,000}$ = 10.0	8.00
3. Inventory turnover ratio = $\frac{Sales}{Stock}$	$\frac{1,10,00,000}{33,00,000}$ = 3.33	9.00
4. Total Asset Turnover Ratio = $\frac{Sales}{Total\ Sales}$	$\frac{1,10,00,000}{77,00,000}$ = 1.43	2.00

5. Net Profit Ratio = $\frac{Net\ Profit}{Sales}$	$\frac{2,31,000}{1,10,000}$ = 2.10%	3.50%
6. Return on Total Asset = $\frac{Net\ Profit}{Total\ Assets}$	$\frac{2,31,000}{77,00,000}$ = 3.00%	7%
7. Return on Net Worth (Based on Net profit) = $\frac{Net\ Profit}{Net\ Worth}$	$\frac{2,31,000}{48,00,000}$ = 4.81%	10.5%
8. $\frac{Total\ Debt}{Total\ Assets}$	$\frac{29,00,000}{77,00,000}$ = 37.66%	60%

Comments :

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

Solution 42:

(i) Calculation of Shareholders' Fund:

$$\frac{Reserve\ \&\ Surplus}{Shareholder's\ Funds} = 0.5$$

$$\frac{Reserve\ \&\ Surplus}{Equity\ Share\ Capital + Reserve\ \&\ Surplus} = 0.5$$

$$\frac{Reserve\ \&\ Surplus}{10,00,000 + Reserve\ \&\ Surplus} = 0.5$$

Reserve & Surplus = 5,00,000 + 0.5 Reserve & Surplus
0.5 Reserve & Surplus = 5,00,000
Reserve & Surplus = 10,00,000
Shareholders' funds = 10,00,000 +10,00,000
Shareholders' funds = ₹20,00,000

(ii) Calculation of Value of Stock:

$$\frac{Sales}{Shareholder's\ Funds} = 1.5$$

Sales = 1.5 × 20,00,000
Sales = 30,00,000
Gross Profit = 30,00,000 × 20% = 6,00,000
Cost of Goods Sold = 30,00,000 – 6,00,000
= ₹24,00,000

Stock velocity = 2 months

$$\frac{Average\ Stock}{Cost\ of\ Goods\ sold} \times 12 = 2$$

$$\frac{Average\ Stock}{24,00,000} \times 12 = 2$$

Average stock = ₹4,00,000

(iii) Calculation of Debtors:
Debtors Turnover Ratio = 6

$$\frac{Sales}{Average\ Debtors} = 6$$

$$\frac{30,00,000}{Average\ Debtors} = 6$$

Average Debtors = ₹5,00,000

(iv) Calculation of Current Liabilities:
Net Working Capital Turnover ratio = 2.5

$$\frac{Sales}{Current\ Assets - Current\ Liabilities} = 2.5$$

$$\frac{30,00,000}{Current\ Assets - Current\ Liabilities} = 2.5$$

Current Assets – Current Liabilities = 12,00,000..... (1)
Current Ratio = 2.5

$\frac{Current\ Assets}{Current\ Liabilities}$ = 2.5

Current Assets = 2.5 Current Liabilities..... (2)

From (1) & (2),

2.5 Current Liabilities – Current Liabilities = 12,00,000

1.5 Current Liabilities = 12,00,000

Current Liabilities = ₹8,00,000

(v) Calculation of Cash Balance:

Current Assets = 2.5 Current Liabilities

Current Assets = 2.5 (8,00,000)	= 20,00,000
(-) Debtors	(5,00,000)
(-) Stock	(4,00,000)
Cash Balance	**₹11,00,000**

Solution 43:

1. Working Notes:

(i) **Calculation of Sales**

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

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

(ii) **Calculation of Current Assets**

$\frac{Fixed\ Assets}{Sales} = \frac{13}{11}$

$\frac{1,30,00,000}{Current\ Assets} = \frac{13}{11} \Rightarrow$ 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 × $\frac{3}{12}$ = ₹ 16,57,500

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

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

(i) Calculation of Current Liabilities

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

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

(ii) Calculation of Debtors

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

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

(iii) Calculation of Long-term Loan

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

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

(iv) 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

(v) 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

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

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

Profit and Loss Statement of ASD Ltd. for the year ended31st 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**

Solution 44:

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

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

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

Average Receivables = ₹ 2,62,500
Closing Receivables = ₹ 2,62,500

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

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

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

Or Average Stock = ₹ 2,10,000

$\frac{Opening\ Stock + Closing\ Stock}{2}$ =₹ 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) Current Ratio= $\frac{Current\ Assets}{Current\ Liabilities} = \frac{Stock + Receivables + Cash}{Bank\ Overdraft + Creditors}$

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

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)

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

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

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 + Fixed 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

Solution 45:
1. Current Ratio = 3:1
Current Assets (CA)/Current Liability (CL) = 3:1
CA = 3CL
WC = 10,00,000
CA – CL = 10,00,000
3CL – CL = 10,00,000
2CL = 10,00,000
CL = $\frac{10,00,000}{2}$
CL = ₹5,00,000
CA = 3 x 5,00,000
CA = ₹15,00,000
2. Acid Test Ratio = CA – Stock / CL = 1:1
= $\frac{15,00,000 - Stock}{5,00,000}$ =1
15,00,000 – stock = 5,00,000
Stock = ₹10,00,000
3. Stock Turnover ratio (on sales) = 5
$\frac{Sales}{Avg\ stock}$ = 5
$\frac{Sales}{10,00,000}$ = 5
Sales = ₹50,00,000
4. **Gross Profit** = 50,00,000 x 40% = **₹20,00,000**
Net profit (PBT) = 50,00,000 x 10% = **₹5,00,000**
5. PBIT/PBT = 2.2
PBIT = 2.2 x 5,00,000
PBIT= 11,00,000
Interest = 11,00,000 – 5,00,000 = **₹6,00,000**
Long term loan = $\frac{6,00,000}{0.12}$ = **₹50,00,000**
6. Average collection period = 30 days
Receivables = $\frac{30}{360}$ x 50.00.000 = 4,16,667
7. Fixed Assets Turnover Ratio = 0.8
50,00,000/ Fixed Assets = 0.8
Fixed Assets = ₹62,50,000

Income Statement

	Amount (₹)
Sales	50,00,000
Less: Cost of Goods Sold	30,00,000
Gross Profit	20,00,000
Less: Operating Expenses	9,00,000
Less: Interest.	6,00,000
Net Profit	5,00,000

Balance sheet

Liabilities	Amount (₹)	Assets		Amount (₹)
Equity share capital	22,50,000	Fixed asset		62,50,000
Long term debt	50,00,000	Current assets:		
Current liability	5,00,000	Stock	10,00,000	
		Receivables	4,16,667	
		Other	83,333	15,00,000
	77,50,000			77,50,000

Solution 46:

Ratios	Comment
Liquidity	Current ratio has improved from last year and matching the industry average. Quick ratio also improved than last year and above the industry average. The reduced inventory levels (evidenced by higher inventory turnover ratio) have led to better quick ratio in FY 2022 compared to FY 2021. 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.

Solution 47:

1. Balance Sheet of Rudra Ltd.

Liabilities	(₹)	Assets	(₹)
Capital	10,00,000	Fixed Assets	30,00,000
Reserves	20,00,000	Current Assets:	
Long Term Loan @ 10%	30,00,000	Stock in Trade	20,00,000
Current Liabilities:		Debtors	20,00,000
Creditors	10,00,000	Cash	5,00,000
Other Short-term Current Liability (Other STCL)	2,00,000		
Outstanding Interest	3,00,000		
	75,00,000		75,00,000

Working Notes:
Let sales be ₹ x
Balance Sheet of Rudra Ltd.

Liabilities	(₹)	Assets	(₹)
Capital Reserves		Fixed Assets Current	x/4
Net Worth	x/4	Assets:	
Long Term Loan @ 10%	x/4	Stock in Trade	x/6
		Debtors	x/6
		Cash	5,00,000
Current liabilities:			
Creditors	x/12		
Other Short-term Current Liability			
Outstanding Interest			
Total Current Liabilities	x/9+5,00,000/3		
Total		Total	

1. Fixed Asset Turnover = 4 = x/Fixed Assets
Fixed Assets = x 4

2. Stock Turnover = 6 = x /stock
Stock = x/ 6

3. Sales to net worth = 4 = x /net worth
Net worth = x / 4

4. Debt: Equity = 1 : 1
Long Term Loan /Net worth = 1/ 1

Long term loan = Net worth = x/ 4

5. Gross Profit to Cost = 20%
GP / Sales – GP = 20%
G P/ x – G P = 20%
GP = 0.2 x – 0.2 GP
1.2 GP = 0.2 x
G P = 0.2x / 1.2
G P = x/6
Cost of Goods Sold = x – x/6 = 5/6 x

6. COGS to creditors = 10:1
COGS/ Creditors = 10 / 1
(5 x/6) / Creditors = 10/ 1
Creditors = 5x/60 = x/12

7. Stock /Debtor = 1
Debtor = Stock = x/ 6

8. Current Ratio = 3 : 1
(Stock +Debtors + Cash)/Current Liabilities = 3/1
(x/6 + x/6 +5,00,000)/ Current Liabilities = 3
{x/3 +5,00,000}/3 = CL
CL = x/9 + 5,00,000/3

9. CA = 3CL
= 3 {x/9 +₹ 5,00,000/3}
CA = x/3 +5,00,000

10. Net worth + Long Term Loan + Current Liability = Fixed Asset + Current Assets
{x/4 + x/4 + x/9 + ₹ 5,00,000/3} = {x/4 + x/3+ ₹ 5,00,000}
{x/4 + x/9 – x/3} = {₹ 5,00,000 – ₹ 5,00,000/ 3}
(9x+ 4x –12x)/36 = (₹15,00,000 – ₹ 5,00,000)/3
x /36 = ₹10,00,000/ 3
x = ₹ 1,20,00,000

11. Now, from above calculations, we get,
Fixed Asset =x/4 = ₹1,20,00,000/4 = ₹ 30,00,000
Stock =x/6 = ₹1,20,00,000/6 = ₹ 20,00,000
Debtor =x/6 = ₹1,20,00,000/6 = ₹ 20,00,000
Net Worth = x/4 = ₹ 30,00,000
Now, Capital to Reserve is 1 : 2
Capital = ₹ 10,00,000
and, Reserve = ₹ 20,00,000
Long Term Loan = x/4 = 30,00,000

Outstanding Interest = 30,00,000×10% = 3,00,000
Creditors = x/12 = ₹ 1,20,00,000 /12 = ₹ 10,00,000

Current Liabilities = Creditors + Other STCL + Outstanding Interest
{x/9 + ₹ 5,00,000/3} = ₹ 10,00,000+ Other STCL + ₹ 3,00,000
{₹1,20,00,000/9 + ₹ 5,00,000/3} = ₹ 13,00,000+ Other STCL
₹ 15,00,000 = Other STCL + ₹ 13,00,000
Other STCL = ₹ 2,00,000