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SUGGESTED SOLUTION

CA INTERMEDIATE

SUBJECT- F.M.

Test Code – CIM 8509

BRANCH - () (Date :)

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ANSWER 1(A)

$$(a) \quad \text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Since gross profit margin is 15 percent, the cost of goods sold should be 85 percent of the sales.

$$\text{Cost of goods sold} = 0.85 \times \text{Rs.}6,40,000 = \text{Rs.}5,44,000.$$

$$\text{Thus,} = \frac{\text{Rs.}5,44,000}{\text{Average inventory}} = 5$$

$$\text{Average inventory} = \frac{\text{Rs.}5,44,000}{5} = \text{Rs.}1,08,800$$

$$(b) \quad \text{Average collection period} = \frac{\text{Average Receivables}}{\text{Credit Sales}} \times 360 \text{ days}$$

$$\text{Average Receivables} = \frac{(\text{Opening Receivables} + \text{Closing Receivables})}{2}$$

Closing balance of receivables is found as follows:

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

$$\begin{aligned} \text{Average Receivables} &= \frac{(\text{Rs.}1,76,000 + \text{Rs.}80,000)}{2} \\ &= \text{Rs.}2,56,000 \div 2 = \text{Rs.}1,28,000 \end{aligned}$$

$$\text{Average collection period} = \frac{\text{Rs.}1,28,000}{\text{Rs.}6,40,000} \times 360 = 72 \text{ days}$$

(2*2 = 4 MARKS)

ANSWER 1 (B)**Working Note:****1. Calculation of Net Profit**

$$\frac{\text{Net Profit}}{\text{Capital}} = 25\%$$

$$\text{Or, } \frac{\text{Net Profit}}{\text{Rs.}8,00,000} = \frac{25}{100} \quad \text{Or, Net Profit} = \text{Rs.}2,00,000$$

(1 MARK)

2. Calculation of Sales

$$\frac{\text{Net Profit}}{\text{Sales}} = \frac{16}{100}$$

$$\text{Or, } \frac{\text{Rs.2,00,000}}{\text{Sales}} = \frac{16}{100} \quad \text{Or, Sales} = \text{Rs.12,50,000}$$

(1 MARK)

3. Calculation of Gross Profit

$$\begin{aligned} \text{Gross profit} &= \text{Rs. 12,50,000} \times 20\% \\ &= \text{Rs. 2,50,000} \end{aligned}$$

(0.5 MARK)

4. Calculation of Opening Stock

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Average Stock}} = 5 \text{ times}$$

$$\text{Or, } \frac{\text{Rs.12,50,000} \times (1-0.2)}{\text{Average Stock}} = 5$$

$$\text{Or, Average Stock} = \frac{\text{Rs.10,00,000}}{5} = \text{Rs. 2,00,000}$$

$$\text{Average Stock} = \frac{1,50,000 + \text{Opening Stock}}{2} = 2,00,000$$

$$\text{Or, Opening Stock} = 4,00,000 - 1,50,000 = \text{Rs. 2,50,000}$$

(1.5 MARKS)

Trading and Profit & Loss Account

Particulars	Rs.	Particulars	Rs.
To Opening Stock	2,50,000	By Sales	12,50,000
To Purchases	9,00,000	By Closing Stock	1,50,000
(Balancing figure)			
To Gross Profit (Balance c/d)	2,50,000		
	14,00,000		14,00,000
To Miscellaneous expenses	50,000	By Gross Profit (Balance b/d)	2,50,000
(Balancing figure)			
To Net Profit	2,00,000		
	2,50,000		2,50,000

(3 MARKS)

ANSWER 1 (C)**Operating Leverage (OL)**

$$\frac{\text{Contribution}}{\text{EBIT}} = \frac{\text{EBIT} + \text{Fixed Cost}}{\text{EBIT}} = \frac{\text{Rs.15,750} + \text{Rs.1,575}}{15,750} = 1.1$$

(1 MARK)**Financial Leverage (FL)**

$$= \frac{\text{EBIT}}{\text{EBT}} = \frac{15,750}{7,000} = 2.25$$

(1 MARK)**Combined Leverage (CL)**

$$= 1.1 \times 2.25 = 2.475$$

(1 MARK)**Percentage Change in Earnings per share**

$$\text{DCL} = \frac{\% \text{ change in EPS}}{\% \text{ change in Sales}}$$

$$2.475 = \frac{\% \text{ Change in EPS}}{5\%}$$

\therefore % change in EPS = 12.375%.

Hence if sales is increased by 5%, EPS will be increased by 12.375%.

(2 MARKS)**ANSWER 2(A)**

	Existing	Proposed
Earnings before Interest and Tax	15.00	18.00
Less : Interest		
Term Loan (15%)	7.50	7.50
Bank Borrowing (20%)	6.60	11.60
Public Deposit (14%)	2.10	2.10
Total Interest	16.20	21.20
Loss after Interest	(1.20)	(3.20)
	Rs.15 lacs	Rs.18 lacs
Interest Coverage Ratio	Rs.16.20 lacs = 0.925	Rs.21.20 lacs = 0.849

So, it appears that the Interest Coverage ratio will fall and hence revised proposal is not desirable.

(4 MARKS)

ANSWER 2(B)

Sales in units	60,000 (Rs.)	50,000 (Rs.)
Sales Value	7,30,000	6,00,000
Variable Cost	(4,80,000)	(4,00,000)
Contribution	2,40,000	2,00,000
Fixed expenses	(1,00,000)	(1,00,000)
EBIT	1,40,000	1,00,000
Debenture Interest	(50,000)	(50,000)
EBT	90,000	50,000
Tax @ 30%	(27,000)	(15,000)
Profit after tax (PAT)	63,000	35,000

(4 MARKS)

(i) Earnings per share (EPS) = $\frac{63,000}{5,000} = \text{Rs.}12.6$ $\frac{35,000}{5,000} = \text{Rs.}7$

Decrease in EPS = $12.6 - 7 = 5.6$

% decrease in EPS = $\frac{5.6}{12.6} \times 100 = 44.44\%$

(ii) Operating leverage = $\frac{\text{Contribution}}{\text{EBIT}} = \frac{\text{Rs.}2,40,000}{\text{Rs.}1,40,000} = 1.71$ $\frac{\text{Rs.}2,00,000}{\text{Rs.}1,00,000} = 2$

(iii) Financial Leverage = $\frac{\text{EBIT}}{\text{EBT}} = \frac{\text{Rs.}1,40,000}{\text{Rs.}90,000} = 1.56$ $\frac{\text{Rs.}1,00,000}{\text{Rs.}50,000} = 2$

(3*2 = 6 MARKS)

ANSWER 2(C)

Calculation of Degree of Operating leverage and Degree of Combined leverage

Firm	Degree of Operating Leverage (DOL)	Degree of Combined Leverage (DCL)
	= $\frac{\% \text{Change in Operating Income}}{\% \text{ change in Revenue}}$	= $\frac{\% \text{ change in EPS}}{\% \text{ change in Revenue}}$
P	$\frac{25\%}{27\%} = 0.926$	$\frac{36\%}{27\%} = 1.111$
Q	$\frac{32\%}{25\%} = 1.280$	$\frac{24\%}{25\%} = 0.960$
R	$\frac{36\%}{23\%} = 1.565$	$\frac{21\%}{23\%} = 0.913$

S	$\frac{40\%}{21\%} = 1.905$	$\frac{23\%}{21\%} = 1.095$
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(5 MARKS)

ANSWER 3

PROFORMA BALANCE SHEET AS AT 31ST DECEMBER, 2010

(Figure in Rs. Lacs)

Liabilities	Amount	Assets	Amount
Share Capital	5.00	Fixed Assets	6.00
Reserve and Surplus	2.50	Stock	2.00
Term Loan (Balance Figure)	1.50	Debtors	2.50
Current Liabilities	2.00	Bank	0.50
	11.00		11.00

(2 MARKS)

Working Notes:

(a) Current Assets - Current Liabilities = Working Capital

i.e. 2.5 – 1.0 Rs.3,00,000

i.e. 1.5 Rs.3,00,000

i.e. 1 Rs.2,00,000

i.e. 2. Rs.5,00,000

i.e. Current Assets Rs.5,00,000

i.e. Current Liabilities Rs.2,00,000

(1 MARK)

(b) Debtors and Bank

$$\text{Liquid Ratio} = \frac{\text{Debtors \& Bank}}{\text{Current Liabilities}} = 1.5$$

Therefore, Debtors and Bank = Rs.3,00,000

(1 MARK)

(c) Stock = Current Assets - Debtor and Bank

i.e., Rs. 5,00,000 - Rs. 3,00,000 = Rs. 2,00,000

(1 MARK)

(d) Stock Turnover ratio is 6 ie., Cost of Sales = 6 X stock

Therefore, Cost of sales = 6 X Rs. 2,00,000 = Rs. 12,00,000

(1 MARK)

(e) Gross Profit Ratio is 20%, therefore, Cost of Goods Sold (Rs. 12,00,000) is 80% of Sales. The Sales of the firm is therefore, Rs. 15,00,000 with a Net Profit is 3,00,000.

(1 MARK)

(f) The debt collection period is 2 months. So, the debtors are 1/6 of sales and are therefore, Rs. 2,50,000.

(1 MARK)

(g) The Bank balance is Rs. 3,00,000-Rs. 2,50,000 (i.e.. debtors) = Rs. 50,000. (1 MARK)

(h) The Fixed Assets turnover is 2 and the Cost of Sales is Rs. 12,00,000. Therefore, the Fixed Assets are Rs. 6,00,000. (1 MARK)

ANSWER 4

Income Statements of Company A and Company B

	Company A (Rs.)	Company B (Rs.)
Sales	91,000	1,05,000
Less: Variable cost	56,000	63,000
Contribution	35,000	42,000
Less: Fixed Cost	20,000	31,500
Earnings before interest and tax (EBIT)	15,000	10,500
Less: Interest	12,000	9,000
Earnings before tax (EBT)	3,000	1,500
Less: Tax @ 30%	900	450
Earnings after tax (EAT)	2,100	1,050

Working Notes:

Company A

$$(i) \quad \text{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT i.e. EBIT - Interest}}$$

$$\text{So, } 5 = \frac{\text{EBIT}}{\text{EBIT} - 12,000}$$

$$\text{Or, } 5 (\text{EBIT} - 12,000) = \text{EBIT}$$

$$\text{Or, } 4 \text{ EBIT} = 60,000$$

$$\text{Or, EBIT} = \text{Rs. } 15,000$$

$$(ii) \quad \text{Contribution} = \text{EBIT} + \text{Fixed Cost} \\ = \text{Rs. } 15,000 + \text{Rs. } 20,000 = \text{Rs. } 35,000$$

$$(iii) \quad \text{Sales} = \text{Contribution} + \text{Variable cost} \\ = \text{Rs. } 35,000 + \text{Rs. } 56,000 \\ = \text{Rs. } 91,000$$

Company B

$$(i) \quad \text{Contribution} = 40\% \text{ of Sales (as Variable Cost is 60\% of Sales)} \\ = 40\% \text{ of } 1,05,000 = \text{Rs. } 42,000$$

$$(ii) \quad \text{Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}} \text{ Or, } 4 = \frac{\text{Rs. } 42,000}{\text{EBIT}}$$

$$\text{EBIT} = \frac{\text{Rs. } 42,000}{4} = \text{Rs. } 10,500$$

$$(iii) \quad \text{Fixed Cost} = \text{Contribution} - \text{EBIT} = 42,000 - 10,500 = \text{Rs. } 31,500$$

(5 MARKS)