SUGGESTED SOLUTION

IPCC MAY 2017 EXAM

FINANCIAL MANAGEMENT

Test Code - I M J 7 1 4 2

BRANCH - (MULTIPLE) (Date : 22.01.2017)

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Answer-1 :

Gross Profit Rs. 54,000

Gross Profit Margin 20%

$\therefore$ Sales $= \dfrac{\text{Gross Profit}}{\text{Gross Profit Margin}}$ Rs.54,000 / 0.20 = Rs.2,70,000

Credit Sales to Total Sales = 80%

$\therefore$ Credit Sales = Rs. 2,70,000×0.80 = Rs. 2,16,000

Total Assets Turnover = 0.3 times

$\therefore$ Total Assets $= \frac{\text{Sales}}{\text{Total Assets Turnover}}$

$= \frac{\text{Rs.}2{,}70{,}000}{0.3}$ = Rs. 9,00,000 **(2 Marks)**

Sales – Gross Profit = COGS

$\therefore$ COGS = Rs. 2, 70,000 – 54,000 = Rs. 2, 16,000

Inventory turnover = 4 times

Inventory = $\frac{\text{COGS}}{\text{Inventory turnover}} = \frac{2{,}16{,}000}{4} = \text{Rs.}54{,}000$

Average Collection Period = 20 days

$\therefore$ Debtors turnover $= \frac{360}{\text{Average Collection Period}} = 360/20 = 18$

$\therefore$ Debtors $= \frac{\text{Credit Sales}}{\text{Debtors turnover}} = \frac{Rs.2{,}16{,}000}{18} = Rs.12{,}000$

Current ratio = 1.8

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

1.8 Creditors = (Rs. 12,000 + Rs. 54,000 + Cash)

1.8 Creditors = Rs. 66,000 + Cash

Long-term Debt to Equity = 40%

Shareholders' Funds = Rs. 6, 00,000

$\therefore$ Long-term Debt = Rs. 6, 00,000 × 40% = Rs. 2, 40,000

Creditors (Balance figure) = 9, 00,000 – (6, 00,000 + 2, 40,000) = Rs. 60,000

$\therefore$ Cash = (60,000×1.8) – 66,000 = Rs. 42,000 **(2 Marks)**

Balance Sheet

Liabilities	**Rs.**	**Assets**	**Rs.**
Creditors (Bal. Fig)	60,000	Cash	42,000
		Debtors	12,000
Long- term debt	2,40,000	Inventory	54,000
Shareholders' funds	6,00,000	Fixed Assets (Bal fig.)	7,92,000
	9,00,000		**9,00,000**

(2 Marks)

Answer-2 :

Computation of Total Cash Cost:

	Rs.	**Rs.**
Sales		90,00,000
Less: Gross profit (25% x sales revenue)		22,50,000
Total Manufacturing cost (A)		67,50,000
Less: Material consumed cost	22,50,000	
Less: Wages paid	18,00,000	40,50,000
Manufacturing expenses		27,00,000
Less: Cash manufacturing expenses (Rs. 2,00,000 × 12)		24,00,000
Depreciation: (B)		3,00,000
Total Manufacturing cost : (C) = (A) – (B)		64,50,000
Add: Administrative expenses		6,00,000
Add: Sales promotion expenses		12,00,000
Total cash cost of manufacturing and sales		82,50,000

(2.5 Marks)

Estimation of Current Assets :

	Rs.

Debtors	20,62,500
(Total cash cost × 3/12) or (Rs. 82,50,000 × 3/12)	
Cash balance	2,50,000
Pre-paid sales promotion expenses	3,00,000
Raw materials stock (Material consumed / 12) or (Rs.22,50,000 / 12)	1,87,500
Finished goods stock	10,75,000
(Total cash cost x 2/12) or (Rs. 64,50,000 x 2/12)	
Total Current Assets	38,75,000

(2.5 Marks)

Estimation of Current Liabilities:

Sundry creditors	2,81,250
Material cost (Rs.22,50,000 x 1.5 months / 12 months)	
Manufacturing expenses outstanding	2,00,000
Wages outstanding (Rs. 18,00,000 × 1/12 months)	1,50,000
Administrative expenses outstanding (Rs.6,00,000 × 1 month / 12 months)	50,000
Total Current Liabilities	6 ,81,250
Working capital requirements : (CA - CL) (On cash cost basis)	31,93,750
Add: Safety Margin @ 5%	1,59,688
Total Working Capital	33,53,438

(3 Marks)

Answer-3 :

Statement showing Evaluation of the Proposed Credit Policies

(Amount Rs. in Lakhs)

		Credit policies			
				Proposed	
	Present	**I**	**II**	**III**	**IV**
Average Collection Period (days)	(20 days)	(30 days)	(40 days)	(50 days)	(60 days)
Sales (Annual)	60.00	65.00	70.00	74.00	75.00
Less: Variable cost (70% of sales)	42.00	45.50	49.00	51.80	52.50
Contribution	18.00	19.50	21.00	22.20	22.50
Less: Fixed Costs	8.00	8.00	8.00	8.00	8.00
Profit	10.00	11.50	13.00	14.20	14.50
Increase in profit compared to present profit: (A)	-	1.50	3.00	4.20	4.50
Investments in debtors	50.00	53.50	57.00	59.80	60.50
(Variable cost+ Fixed cost)					
Debtors turnover	18	12	9	7.2	6
(360 days/Average collection period)					
Average investment in debtors	2.78	4.46	6.33	8.3	10.08
(Investment in debtors/ Debtors turnover)					
Additional investment in debtors					
compared to present level	-	1.68	3.55	5.52	7.30
Required return on additional investment (25%) : (B)	-	0.42	0.89	1.38	1.83
Incremental profit: (A)–(B)	-	1.08	2.11	2.82	2.67

(4 Marks)

Decision: The Company should adopt the credit policy III (with collection period of 50 days) as it yields a maximum profit to the company.

Another method of solving the above problem is as under:
Statement Showing Evaluation of the proposed Credit Policies

(Rs. in Lakhs)

Particulars	**Present policy 20 days**	**Policy I 30 days**	**Policy II 40 days**	**Policy III 50 days**	**Policy IV 60 days**
A. Expected profit :	60.00	65.00	70.00	74.00	75.00
(a) Sales					
(b) Total Cost:					
(i) Variable Cost @ 70%	42.00	45.50	49.00	51.80	52.50
(ii) Fixed Costs	8.00	8.00	8.00	8.00	8.00
	50.00	53.50	57.00	59.80	60.50
(c) Expected Profit	10.00	11.50	13.00	14.20	14.50
B. Opportunity Cost of Investment in Receivables	0.69	1.11	1.58	2.08	2.52
C. Net Benefits [A-B]	9.31	10.39	11.42	12.12	11.98

(2 Marks)

Recommendation: The credit policy III (i.e. 50 days credit) should be adopted since the net benefits under this policy are higher than those under other policies.

Working Note

Calculation of Opportunity Cost of Investments in Receivables:

Opportunity Cost = Total Cost x $\frac{\text{CollectionPeriod}}{360}$ x $\frac{\text{Rate of Return}}{100}$

Present Policy = Rs.50 lakhs x $\frac{20}{360} x \frac{25}{100} = \text{Rs.0.69 lakh}$

Proposed Policy I = Rs.53.50 lakhs x $\frac{30}{360} x \frac{25}{100} = \text{Rs.1.11 lakh}$

Present Policy II = Rs.57.00 lakhs x $\frac{40}{360} x \frac{25}{100} = \text{Rs.1.58 lakh}$

Present Policy III = Rs.59.80 lakhs x $\frac{50}{360} x \frac{25}{100} = \text{Rs.2.08 lakh}$

Present Policy IV = Rs.60.50 lakhs x $\frac{60}{360} x \frac{25}{100} = \text{Rs.2.52 lakh}$

(2 Marks)

Answer-4 :

(i) Calculation of Sales

Fixed assets Rs.(1,62,50,000 + 30,00,000) = 1,92,50,000

Sales = $\frac{1,92,50,000}{1.4} = 1,37,50,000$

Cost of goods sold	= 1,37,50,000 × 0.90	= 1,23,75,000
Material	= 1,37,50,000 × 0.40	= 55,00,000
Depreciation	= 1,37,50,000 × 0.05	= 6,87,500
Net profit	= 1,37,50,000 × 0.10	= 13,75,000

(1.5 Marks)

Calculation of Net Fixed Assets

		Rs.
Opening balance		1,62,50,000
Add: Purchases		30,00,000
		1,92,50,000
Less: Accumulated Depreciation	52,00,000	
Additional Depreciation	6,87,500	58,87,500
Closing balance of fixed assets		1,33,62,500

(1.5 Marks)

Calculation of Closing Stock

$$\text{Average Stock} = \frac{\text{Cost of goods sold}}{\text{Stock turnover ratio}}$$

$$= \frac{1,23,75,000}{6} = 20,62,500$$

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

$$20,62,500 = \frac{(19,50,000 + \text{ Closing Stock })}{2}$$

Closing stock = 41,25,000 – 19,50,000 =	21,75,000
Calculation of Debtors = 1,37,50,000 × 0.10 =	13,75,000
Calculation of Creditors = 55,00,000 × 0.25 =	13,75,000

(1.5 Marks)

Calculation of Interest and Provision for Taxation

Net profit	13,75,000
Less: Interest (19,50,000 × 10%)	2,55,500
(5,50,000 × 11%)	11,19,500
Less: Taxes	3,35,850
Net profit available for dividend	7,83,650
Less: Preference share dividend	2,60,000
Less: Equity dividend @ 7%	4,20,000
Transfer to reserves and surplus	1,03,650
Reserves and Surplus	
Opening balance	14,00,000
Add: Current balance	1,03,650
	15,03,650

(1.5 Marks)

Projected Cash Flow Statement

(i)	**Cash flow from Operating Activities**		
	Profit after taxation		7,83,650
	Depreciation added back		6,87,500
			14,71,150
	Add: Increase in current liabilities and decrease in current assets		
	Provision for taxation		3,35,850
	Debtors (26,00,000 – 13,75,000)		12,25,000
	Less: Increase in current assets and decrease in current liabilities		
	Stock (21,75,000 – 19,50,000)	(2,25,000)	
	Creditors (13,75,000 – 32,50,000)	(18,75,000)	(21,00,000)
	Net Cash from Operating Activities		**9,32,000**
(ii)	**Cash flow from Investing Activities**		
	Purchase of Fixed Assets		(30,00,000)
(iii)	**Cash flow from Financing Activities**		
	Issue of Debenture	5,50,000	
	Issue of equity share capital	30,00,000	
	Dividend paid	(6,80,000)	28,70,000
	Net increase in cash		8,02,000
	Opening balance of cash		2,50,000
	Closing balance		10,52,000

(3 Marks)

Projected Balance Sheet as on 31st March, 2008

Liabilities	**Rs. *('000)***	***Assets* Rs.**		***('000)***
Equity share capital	9,000	Fixed Assets (at cost)	19,250	
8% Preference share capital	3,250	Less : Depreciation written off	5,887.50	13,362.50

Reserves & Surplus	1,503.65	Stock	2,175
10% & 11% Debentures	2,500		
Sundry Creditors	1,375	Sundry debtors	1,375
Provision for taxation	335.85	Cash	1,052
Total	**17,964.50**	**Total**	**17,964.50**

(5 Marks)

Answer-5 :

(i) Net Sales : Rs. 30 crores

EBIT = 12% on sales = Rs. 3.6 crores

Return on Capital Employed (pre-tax) = $\frac{\text{EBIT}}{\text{Capital Employed}} = \frac{3.6}{10+2+6} \text{x}100 = 20\%$

After tax it will be = 20% (1 - 0.4)= 12 %.

Particulars	Rs. in crores
EBIT	3.6
Less: Interest on Debt (15% of 6 crores)	0.9
EBT	2.7
Less : Tax @ 40%	1.08
EAT	1.62
Less : Preference dividend	0.26
Earnings available for Equity Shareholders	1.36
Return on equity = 1.36/10 × 100 = 13.6%	

(3 Marks)

Segments due to the presence of Preference Share capital and Borrowing (Debentures)

Segment of ROE due to preference capital : (12% - 13%) × Rs. 2 Crore = - 2%

Segment of ROE due to Debentures: (12% - 9%) × Rs. 6 Crores = 18 %

Total= -2 % +18 % = 16 %

Cost of debenture (after tax) = 15% (1- 0.4) = 9 %

The weighted average cost of capital is as follows

Source		Proportion	Cost (%)	WACC (%)
(i)	Equity	10/18	13.60	7.56
(ii)	Preference shares	2/18	13.00	1.44
(iii)	Debt	6/18	9.00	3.00
	Total			**12.00**

(2 Marks)

(ii) Financial Leverage $= \frac{\text{EBIT}}{EBT} = \frac{3.6}{2.7} = 1.33$

Combined Leverage = FL × OL

3 = 1.33 × OL Or, OL $= \frac{3}{1.33}$ Or, Operating Leverage = 2.26

(1 Mark)

Answer-6 :

(a) Working Notes:

(i) Calculation of Sales

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

$$\therefore \frac{26,00,000}{\text{Sales}} = \frac{1}{3} \Rightarrow \text{Sales} = \text{Rs.}78,00,000$$

(ii) Calculation of Current Assets

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

$$\therefore \frac{26,00,000}{\text{Current Assets}} = \frac{13}{11} \Rightarrow \text{Current Assets} = \text{Rs.}22,00,000$$

(iii) Calculation of Raw Material Consumption and Direct Wages

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

Raw Material Consumption (20% of Works Cost) Rs.13,26,000
Direct Wages (10% of Works Cost) Rs. 6,63,000

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

$= 13,26,000 \times \frac{3}{12} = \text{Rs. } 3,31,500$

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

$= 66,30,000 \times \frac{6}{100} = \text{Rs. } 3,97,800$

(vi) Calculation of Current Liabilities

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

$$\frac{22,00,000}{\text{Current Liabilities}} = 2 \Rightarrow \text{ Current Liabilities = Rs.11,00,000}$$

(vii) Calculation of Debtors

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

$\frac{\text{Debtors}}{78,00,000}$ x 365 = 60 $\Rightarrow$ Debtors Rs.12,82,191.78 or Rs.12,82,192

(viii) Calculation of Long term Loan

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

$$\frac{\text{Long Term Loan}}{11,00,000} = \frac{2}{1} \Rightarrow \text{ Long term loan = Rs.22,00,000}$$

(ix) Calculation of Cash Balance

		Rs.
Current assets		22,00,000
Less: Debtors	12,82,192	
Raw materials 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

$$\frac{\text{Capital}}{\text{Reserves and Surplus}} = \frac{1}{4} \Rightarrow \text{ Sharte Capital = 15,00,000 x } \frac{1}{5} = Rs.3,00,000$$

Reserves and Surplus = 15,00,000 x $\frac{4}{5}$ = Rs.12,00,000

(10 x 0.5 = 5 Marks)

Profit and Loss Account of PQR Ltd.
for the year ended 31st December, 2006

Particulars	Rs.	Particulars	Rs.
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 figure)	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**

(1.5 Marks)

Balance Sheet of PQR Ltd.
as at 31st December, 2006

Liabilities	Rs.	Assets	Rs.
Share Capital	3,00,000	Fixed Assets	26,00,000
Reserves and Surplus	12,00,000	Current Assets:	
Long term loans	22,00,000	Stock of Raw Material	3,31,500
Current liabilities	11,00,000	Stock of Finished Goods	3,97,800
		Debtors	12,82,192
		Cash	1,88,508
	48,00,000		**48,00,000**

(1.5 Marks)