INTER CA – MAY 2018

Sub – Financial Management

Topic –Capital Structure, Estimation of Working Capital, Cash Flow Statement, Cash Budget, Time Value of money

Test Code – M24

Branch: Andheri Date:14.01.2018

(50 Marks)

Note: All questions are compulsory.

Question 1 (6 marks)

(a) To get ₹25,00,000 after 15 years from now, Mr. X needs to deposit an amount at the end of each year, which gets accumulated @9% p.a. for 15 years to become an amount to ₹25,00,000. This can be calculated as follows:

Future Value = Annual Payment × $(FVIFA_{n,i})$ or Annual Payment × $\left(\frac{(1+i)^n-1}{i}\right)$

Future Value = ₹25,00,000

Interest (i) = 9% p.a.

Period (n) = 15 years

₹ 25,00,000 = A $(FVIFA_{15,0.09})$

Or, A = $\frac{₹25,00,000}{29.361}$ = ₹85,146.96 p.a.

(b) To get ₹25,00,000 after 15 years from now, Mr. X needs to deposit a lump sum payment to the fund which gets accumulated @9% p.a. for 15 years to become an amount to ₹25,00,000. This can be calculated as follows:

Future Value = Amount × $(FVIF_{15,0.09})$ or Amount × $(1+0.09)^{15}$

Or, Amount = $\frac{₹25,00,000}{3.642}$ = ₹ 6,86,436.02

(c) To get ₹ 25,00,000 after 15 years from now, Mr. X needs to deposit an amount at the beginning of each year which gets accumulated @9% p.a. for 15 years to become an amount to ₹25,00,000. This can be calculated as follows:

Future Value = Annual Payment × $(FVIFA_{n,i})$ × (1+i)

₹ 25,00,000 = A $(FVIFA_{15,0.09})$ × 1.09

₹ 25,00,000 = A (29.361 × 1.09)

Or, A = $\frac{₹25,00,000}{32.003}$ = ₹ 78,117.68 p.a.

Question 2 (8 Marks)

Particulars	Lakhs
1. Present Capital Employed = Equity + Debt = (200 + 140) + (360 + 200) [or] = Fixed Assets + NWC= 500 + (300 + 240 + 60 – 120 – 80) Note: Bank Borrowings are also included in the computation of capital Employed (1 mark)	900,00
2. Additional Capital reqd to meet extra sales = Capital Employed x % of sales Increase = ` 900 Lakhs x 20% (1 mark)	180
3. Internal Cash Accruals = Sales x Net Profit Ratio x After Dividend, i.e. Retention Rate = (` 600 Lakhs x 12%) x 4% NP Ratio x 50% post – dividend (1 mark)	14.40
4. External Funds required = Total Additional Funds required (Less) Internal Cash Accruals = (2	165.60

– 3) (1 mark)	
5. Constrains for raising External Funds of ` 165.60 Lakhs (2 marks)	
(a) Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{(\text{Inventories} + \text{Receivables} + \text{Cash}) \times 120\%}{(\text{Payables+Provision}) \times 120\% + \text{Short Term Bank Borrowings}}$ = 1.33 On Substitution, $\frac{(300 + 240 + 60) \times 120\%}{(120 + 80) \times 120\% + \text{Short Term Bank Borrowings}} = 1.33$ So, Short Term Bank Borrowings = $\frac{720-319.20}{1.33}$ = 301.35 Lakhs. Since existing Short Term Bank Borrowings = 200.00 Additional Borrowings = 301.35 – 200.00	101.35
(b) $\frac{\text{Fixed Assets}}{\text{Long TErm Loans}} = \frac{500 \times 120\%}{\text{Long Term Loans}}$ = 1.5 times. So, Long Term Loans = $\frac{600}{1.5}$ = 400.00 Lakhs Since existing Long Term Loans = 360.00, Additional Long – Term Loans = 400.00 – 360.00	40.00
6. Manner of raising additional capital: (Required = ` 180,000 Lakhs) (a) Internal Cash Accruals (WN 3) (b) Short Term Bank Borrowings (WN 5a) (c) Long Term Loans (WN 5b) (d) Equity Capital (balancing figure, on comparing with ` 180 Lakhs) (1 mark)	 14.40 101.35 40.00 24.25
Total Additional Funds Employed	180.00
7. Confirmation of Long Term Debt to Equity Ratio: Long Term Debt to Equity Ratio = $\frac{400}{(200.00 + 24.25 + 140.00 + 14.40)}$ = 1.05 times. (1 mark)	

Question 3 (10 marks)

Computation of Collection from Debtors (1 mark)

Particulars	Nov	Dec	Jan	Feb	Mar
Sales	` 18, 00,000	` 25,80,000	` 9,00,000	` 12,60,000	` 18,00,000
Receipt Pattern: 50%	50% x 18,00,000 = ` 9,00,000	50% x 25,80,000 = ` 12,90,000	50%x 9,00,000 = ` 4,50,000	50%x12,60,000 = ` 6,30,000	50%x18,00,00 = ` 9,00,000
40%		40% x 18,00,000 = ` 7,20,000	40% x25,80,000 = ` 10,32,000	40% x9,00,000 = ` 3,60,000	40%x12,60,00 0 = ` 5,04,000
9%			9%x18,00,000 = ` 1,62,000	9%x25,80,000 = ` 2,32,200	9%x9,00,000 = ` 81,000
Total Receipts			` 16,44,000	` 12,22,200	` 14,85,000

2. Computation of Closing Stock of RM required for Jan, Feb and Mar (1 mark)

Month	Closing Stock of RM = Next 3 months Sales x 50%	`
January	50% of (Feb+Mar+Apr) Sales = 50% of (` 12,60,000 + ` 18,00,000 + ` 16,20,000)	23,40,000
February	50% of (Mar+Apr+May) Sales = 50% of (` 18,00,000 + ` 16,20,000 + ` 14,40,000)	24,30,000
March	50% of (Apr+May+Jun) Sales = 50% of (` 16,20,000 + ` 14,40,000 + ` 12,00,000)	21,30,000

3. Computation of Purchases and Payment to Creditors (1 mark)

Particulars	Jan	Feb	Mar
Opening Stock of Raw Materials(` 25,20,000 - ` 90,000)	` 24,30,000	` 24,30,000	` 24,30,000
Add: Purchases(balancing figure) (by reverse working)	` 3,60,000	` 7,20,000	` 6,00,000
Sub – Total (derived by reverse working)	` 27,90,000	` 30,60,000	` 30,30,000
Less: Closing Stock of RM (WN 2) Next 3 months Sales x 50%	` 23,40,000	` 24,30,000	` 21,30,000
Raw Material Cost of Goods Sold = 50% of Sales	` 4,50,000	` 6,30,000	` 9,00,000
Payment to Creditors Previous month purchases	` 6,95,000	` 3,60,000	` 7,20,000

4. Cash Budget for the months of January, February and March (amount in `)(5 marks)

Particulars	Jan	Feb	Mar
A. Opening Balance	3,00,000	6,78,140	10,24,940
B. Receipts / Inflows			

Debtors (WN 1)	16,44,000	12,22,200	14,85,000
Sales of Obsolete Stock $\frac{`90,000}{50\%}$ x 75%	-	-	1,35,000
Sale of Machinery (given)	-	1,00,000	-
Total Receipts	16,44,000	13,22,200	16,20,000
C. Payments / Outflows			
Creditors (WN 3)	6,95,000	3,60,000	7,20,000
Fixed and Variable Expenses (given)	4,81,860	3,56,400	4,75,200
Equipment Repair Expenses (given)	9,000	9,000	9,000
Ex-gratia (given)	30,000	-	45,000
Dividends (given)	-	-	1,20,000
Income Tax and Pf (given)	50,000	50,000	1,00,000
Capital Expenditure (given)	-	2,00,000	-
Loan Interest & Principle 8,40,000 + (8,40,000 x15% x $\frac{3}{12}$)	-	-	8,71,500
Total Payments	12,65,860	9,75,400	23,40,700
D. Closing Balance / (Overdraft) (A + B – C)	6,78,140	10,24,940	3,04,240

Question 4 (8 Marks)

Working Notes:

1. Capital employed before expansion plan:

	(Rs.)
Equity shares (Rs.10 x80,000 shares)	8,00,000
Debenture {(Rs.1,20,000/12) x100}	10,00,000
Retained earnings	18,00,000
Total capital employed	36,00,000

(1/2 mark)

2.Earnings before the payment of interest and tax(EBIT):

	(Rs.)
Profit(EBT)	6,00,000
Add: Interest	1,20,000
EBIT	7,20,00

(1/2 mark)

3.Return on Capital Employed (ROCE):

$$\text{Roce} = \frac{\text{EBIT}}{\text{Capital employed}} \times 100 = \frac{\text{Rs. 7,20,000}}{\text{Rs. 36,00,000}} \times 100 = 20\%$$

(1 mark)

4.Earnings before interest and tax (EBIT) after expansion scheme: (1 mark)

After expansion, capital employed =Rs.36,00,000+Rs.8,00,000
=Rs.44,00,000

Desired EBIT =20% x Rs.44,00,000=Rs.8,80,000

(i) Computation or Earnings per Share (EPS) under the following options: (4 Marks)

	Present	Expansion scheme Additional funds raised as	
		Debt	Equity
	(Rs.)	(Rs.)	(Rs.)
Earnings before Interest and Tax(EBIT)	7,20,000	8,80,000	8,80,000
Less: Interest –Old capital	1,20,000	1,20,000	1,20,000
-New capital	-	96,000	-

		(Rs.8,00,000 x12%)	
Earnings before Tax(EBT)	6,00,000	6,64,000	7,60,000
Less: Tax(50%of EBT)	3,00,000	3,32,000	3,80,000
PAT	3,00,000	3,32,000	3,80,000
No. of shares outstanding	80,000	80,000	1,60,000
Earnings per share(EPS)	3.75 $\left(\frac{\text{Rs. } 3,00,000}{80,000}\right)$	4.15 $\left(\frac{\text{Rs. } 3,32,000}{80,000}\right)$	2.38 $\left(\frac{\text{Rs. } 3,80,000}{160,000}\right)$

(ii) Advise to the Company :When the expansion scheme is financed by additional debt, the EPS is higher .Hence, the company should finance the expansion scheme by raising debt.(1 Mark)

Question 5 (4 Marks)

Major considerations in capital structure planning

There are three major considerations, i.e. risk, cost of capital and control, which help the finance manager in determining the proportion in which he can raise funds from various sources.

Although, three factors, i.e., risk, cost and control determine the capital structure of a particular business undertaking at a given point of time. (1 mark)

Risk: The finance manager attempts to design the capital structure in such a manner, so that risk and cost are the least and the control of the existing management is diluted to the least extent. However, there are also subsidiary factors also like – marketability of the issue, manoeuvrability and flexibility of the capital structure, timing of raising the funds. Risk is of two kinds, i.e., Financial risk and Business risk. Here, we are concerned primarily with the financial risk. Financial risk also is of two types:

- Risk of cash insolvency
- Risk of variation in the expected earnings available to equity share-holders (1 mark)

Cost of Capital: Cost is an important consideration in capital structure decisions. It is obvious that a business should be at least capable of earning enough revenue to meet its cost of capital and finance its growth. Hence, along with a risk as a factor, the finance manager has to consider the cost aspect carefully while determining the capital structure. (1 mark)

Control: Along with cost and risk factors, the control aspect is also an important consideration in planning the capital structure. When a company issues further equity shares, it automatically dilutes the controlling interest of the present owners. Similarly, preference shareholders can have voting rights and thereby affect the composition of the Board of Directors, in case dividends on such shares are not paid for two consecutive years. Financial institutions normally stipulate that they shall have one or more directors on the Boards. Hence, when the management agrees to raise loans from financial institutions, by implication it agrees to forego a part of its control over the company. It is obvious, therefore, that decisions concerning capital structure are taken after keeping the control factor in mind. (1 mark)

Question 6 (4 Marks)

Advise to the Management

Option I: Cash Down Payment (1 ½ marks)
Cash down payment= Rs 7,50,000

Option II: Annual Installment Basis(1 ½ marks)
Annual installment = 9,00,000 × 1/6= Rs 1,50,000
Present Value of 1 to 6 instalments @12%
= 1,50,000 × 4.111
= Rs 6,16,650

Advise: Mr. Patel should buy Xerox machine on installment basis because the present value of cash out flows is lower than cash down payment. This means Option II is better than Option I. (1 mark)

Question 7 (8 marks)

Projected Statement of Cash Flow for the year ended 31st March 20X8

	(Rs.)
Cash flow from Operating Activities	
Profit before taxation	1,04,500
Adjustments:	
Less: Profit on sale of machine {Rs. 38,000 – (Rs. 95,000 – Rs.66,500)}	(9,500)
Add: Depreciation	1,14,000
Operating profit before working capital changes	2,09,000
Increase in Inventories & Trade receivable (Rs.5,60,500 – Rs.4,75,000)	(85,500)
Increase in Trade payables (Rs.1,48,200 – Rs.1,14,000)	34,200
Increase in Bills payable (Rs. 98,800 – Rs. 76,000)	22,800
Cash generated from operations	1,80,500
Less: Income tax paid*	Nil
Net Cash from Operating activities (A)	1,80,500
Cash flow from Investing Activities	
Purchase of plant	(1,90,000)
Sale of machine	38,000
Net cash from Investing activities (B)	(1,52,000)
Cash Flow from Financing Activities	
Dividend paid	(57,000)
Dividend distribution tax (Working note)	(19,000)
Net cash from Financing activities (C)	(76,000)
Net Increase/(Decrease) in cash and cash equivalents (A+B+C)	(47,500)
Cash and cash equivalent at the beginning of the year	66,500
Cash and cash equivalent at the end of the year	**19,000**

(2 marks)

(2 marks)

(2 marks)

* No information is given on corporate tax.

Working note:

Dividend distribution tax is paid on the gross amount of dividend paid. The gross dividend is calculated as : $\frac{\text{Dividend Payable}}{(1-\text{tax rate})}$

Gross Amount of Dividend = $\frac{\text{Rs. } 57,000}{(1-0.25)}$ = Rs.76,000

Dividend Distribution Tax = Rs.76,000 × 25% = Rs.19,000

(2 marks)

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