

CA Intermediate Paper-2 Company & Other Laws

May-18 Exam Paper with Suggested Answers



Install **fmbytm** android app from google play store to get best quality Video/Audio/PDF Contents for CA Inter FM/CL, CA Final SFM/Capital Market, CFA Leve-1, NCFM Modules etc. All the audios/PDFs and many videos are free. For sample contents and link of the app visit www.fmbytm.com

Prepared by: **Tarun Mahajan, CFA, CA**
Faculty at NPA, Indore
tarunmahajanca@gmail.com
text/whatsapp 9893040600

(Disclaimer: Though every care has been taken to make these answer error free but these answers are prepared in a short period of time if you find any error please inform me at abovementioned contact details.)

Install “fmbytm” android app

For Videos, Audios, PDFs on:

- 1) CA Final SFM
- 2) CA Final Capital Market
- 3) CA Inter FM
- 4) CA Inter Company & Other Laws
- 5) NSE's NCFM modules
- 6) CFA Level-1,2,3

9893040600,

tarunmahajanca@gmail.com

For link of app and sample contents

visit fmbytm.com

Question 1

(a) Stopgo Ltd, an all equity financed company, is considering the repurchase of Rs.200 lakhs equity and to replace it with 15% debentures of the same amount. Current market value of the company is Rs.1140 lakhs and it's cost of capital is 20%. It's Earnings before interest and Taxes (EBIT) are expected to remain constant in future. It's entire earnings are distributed as dividend. Applicable tax rate is 30 percent. You are required to calculate the impact on the following on account of the change in the capital structure as per Modigliani and Miller (MM) Hypothesis.

- I. The market value of the company
- II. It's cost of capital, and
- III. It's cost of equity

(5Marks)

Answer 1 (a)

This is a question of Net Operating Income (NOI) approach with income tax.

(1) Impact on Market Value

- i) Value of unlevered company = $V_u = ₹1140$ lakhs
- ii) Value of levered company $= V_L = V_u + \text{Debt} \times \text{tax rate}$
 $= 1140 + 200 \times 0.30$
 $= 1140 + 60 = 1200$

(2) Impact on cost of capital

- i) Cost of Capital (K_o) of unlevered company = 20%

Calculation of EBIT:

$$K_o = \frac{EBIT(1 - t)}{V_u} \gg 20\% = \frac{EBIT \times 0.7}{1140} \gg EBIT = 325.71$$

- ii) Cost of Capital (K_o) of levered company:

$$K_o = \frac{EBIT(1 - t)}{V_L} = \frac{325.71 \times .7}{1200} = 19\%$$

(3) Impact on cost of equity

- i) Cost of Equity (K_e) of unlevered company = 20%
(Note: for unlevered company K_o and K_e remains same)
- ii) Cost of Equity (K_e) of levered company:

$$K_e = \frac{EAES}{\text{Value of Equity}} = \frac{207}{1000} = 20.7\%$$

$$\text{Here EAES} = (\text{EBIT} - \text{Int.})(1-t) = (325.71-30) \times 0.7 = 207$$

$$\text{Equity} = \text{Value} - \text{Debt} = 1200 - 200 = 1000$$

We can conclude that if company borrows money its cost of equity will increase, but overall cost of capital will reduce and market value will increase.

Question 1(b) The following data have been extracted from the books of LM Ltd:

Sales –Rs 100 lakhs

Interest payable per annum – Rs.10 lakhs

Operating leverage -1.2

Combined leverage -2.16

You are required to calculate :

- i. The financial Leverage,
- ii. Fixed cost and
- iii. P/V ratio

(5Marks)

Answer 1 (b)

$$\begin{aligned} (1) \text{ Financial Leverage} &= \text{Combined Leverage} / \text{Operating Leverage} \\ &= 2.16/1.2 \\ &= 1.8 \end{aligned}$$

(2) Fixed Cost:

$$DFL = \frac{EBIT}{EBIT - Interest} \gg 1.8 = \frac{EBIT}{EBIT - 10\text{lakhs}} \gg EBIT = 22.5$$

$$DOL = \frac{Contribution}{EBIT} \gg 1.2 = \frac{Contribution}{22.5} \gg Contribution = 27$$

$$EBIT = \text{Contribution} - \text{Fixed Cost}$$

$$22.5 = 27 - \text{Fixed Cost}$$

$$\text{Fixed Cost} = 4.5$$

$$(3) \text{ P/V ratio} = \text{Contribution/Sales} = 27/100 = 27\%$$

Question 1(c) The accountant of Moon Ltd. has reported the following data:

Gross profit	Rs.60,000
Gross profit Margin	20 per cent
Total Assets turnover	0.30:1
Net Worth to Total Assets	0.90:1
Current ratio	1.5:1
Liquid Assets to current Liability	1:1
Credit sales to Total sales	0.80:1
Average collection period	60 days
Assume 360 days in a year	

You are required to complete the following:

Balance Sheet of Moon Ltd.

Liabilities	Rs.	Assets	Rs.
Net worth		Fixed Assets	
Current Liabilities		Stock	
		Debtors	
		Cash	
Total liabilities		Total Assets	

(5Marks)

Answer 1 (c)

Step 1:

$$GP \text{ Ratio} = \frac{\text{Gross Profit}}{\text{Sales}}$$

$$20\% = \frac{60,000}{\text{Sales}} \gg \text{Sales} = 3,00,000$$

Step 2:

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

$$0.30 = \frac{3,00,000}{\text{Total Asset}} \gg \text{Total Assets} = 10,00,000$$

Step 3:

$$\text{Net worth to Total Asset} = \frac{\text{Net Worth}}{\text{Total Asset}}$$

$$0.90 = \frac{\text{Net worth}}{10,00,000} \gg \text{Net Worth} = 9,00,000$$

Step 4:

Total Liabilities = Total Assets = 10,00,000

Current Liabilities = Total Liabilities – Net worth = 10,00,000 – 9,00,000 = 1,00,000

Step 5:

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

$$1.5 = \frac{\text{Current Assets}}{1,00,000} \gg \text{Current Assets} = 1,50,000$$

Step 6:

$$\text{Liquid Assets to Current Liability} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$1 = \frac{\text{Liquid Assets}}{1,00,000} \gg \text{Liquid Assets} = 1,00,000$$

$$\begin{aligned}\text{Stock} &= \text{Current Assets} - \text{Liquid Assets} \\ &= 1,50,000 - 1,00,000 \\ &= 50,000\end{aligned}$$

Step 7:

$$\text{Credit Sales} = \text{Total Sales} \times 0.80 = 3,00,000 \times 0.8 = 2,40,000$$

$$\text{Debtors} = \text{Credit Sales} \times \frac{\text{Collection period}}{360}$$

$$\text{Debtors} = 2,40,000 \times \frac{60}{360} = 40,000$$

Step 8:

$$\begin{aligned}\text{Cash} &= \text{Current Assets} - \text{Stock} - \text{Debtors} \\ &= 1,50,000 - 50,000 - 40,000 \\ &= 60,000\end{aligned}$$

Step 9:

$$\begin{aligned}\text{Fixed Assets} &= \text{Total Assets} - \text{Current Assets} \\ &= 10,00,000 - 1,50,000 \\ &= 8,50,000\end{aligned}$$

Balance Sheet of Moon Ltd.

Liabilities	₹	Assets	₹
Net Worth	9,00,000	Fixed Assets	8,50,000
Current Liabilities	1,00,000	Stock	50,000
		Debtors	40,000
		Cash	60,000
Total Liabilities	10,00,000	Total Assets	10,00,000

Question 1(d) Sun Ltd. is considering two financing plans.

Details of which are as under:

- (i) Fund's requirement – Rs.100 Lakhs
- (ii) Financial Plan

Plan	Equity	Debt
I	100%	-
II	25%	75%

- (iii) Cost of debt – 12% p.a
- (iv) Tax rate -30%
- (v) Equity share Rs.10 each, issued at a premium of Rs.15 per share.
- (vi) Expected Earnings before interest and taxes (EBIT) Rs40 lakhs.

You are required to compute:

- (i) EPS in each of the plan
- (ii) The Financial Break Even Point
- (iii) Indifference point between Plan I and plan II (5Marks)

Answer 1 (d)

Assumption: It is assumed that cost of debt given in the question is before tax. Means 12% is interest rate.

(i) EPS

Particulars	Plan I	Plan II
EBIT	40	40
Interest	0	9
PBT	40	31
Tax@30%	12	9.3
PAT	28	21.7
Number of equity shares	4	1
EPS	7	21.7

(ii) Indifference point

$$\frac{EBIT \times 0.7}{4} = \frac{(EBIT - 9) \times 0.7}{1}$$

EBIT = 12 lakhs

(iii) Financial Break Even Point

$$\frac{(EBIT - int)(1 - t)}{No.} = 0$$

$$Plan 1: \frac{EBIT \times 0.7}{4} = 0 \gg EBIT = 0$$

$$Plan 2: \frac{(EBIT - 12) \times 0.7}{1} = 0 \gg EBIT = 12$$

Question 2 (a)

XYZ Ltd. is presently all equity financed. The directors of the company have been evaluating investment in a project which will require Rs.270 lakhs capital expenditure on new machinery. They expect the capital investment to provide annual cash flows of Rs.42 lakhs indefinitely which is net of all tax adjustments. The discount rate which it applies to such investment decisions is 14 % net.

The directors of the company believe that the current capital structure fails to take advantage of tax benefits of debt, and propose to finance the new project with

undated perpetual debt secured on the company's assets. The company intends to issue sufficient debt to cover the cost of capital expenditure and the after tax cost of issue.

The current annual gross rate of interest required by the market on corporate undated debt of similar risk is 10%. The after tax costs of issue are expected to be Rs. 10 lakhs. Company's tax rate is 30%.

You are required to calculate:

- (i) The adjusted present value of the investment
- (ii) The adjusted discount rate and
- (iii) Explain the circumstances under which this adjusted discount rate may be used to evaluate future investments. (8Marks)

Answer 2(a)

(Disclaimer: Concept of APV was given by Myers. ICAI has not given anything on this in its study material. Hence this question is solved based on concepts of Myers. ICAI may come up with an entirely different solution)

Step 1: Unlevered value of the project

PV of CFAT discounted with unlevered K_e – Initial Investment

Present Value of perpetuity – Initial Investment

$$= 42/14\% - 270$$

$$= 300 - 270$$

$$= 30$$

Step 2: PV of tax benefit on interest

Tax benefit / Interest rate

$$= 280 \times 10\% \times 30\% / 10\%$$

$$= 8.4 / 10\%$$

$$= 84$$

(Note : amount of debt = amount required for project + amount required for floatation cost

$$= 270 + 10 = 280)$$

Step 3: After tax issue expenses =10

Step 4:

Adjusted Present Value = Unlevered value of the project + Value of financing effects

Here Value of financing effects = tax benefit on interest – after tax floatation cost

$$APV = 30 + (84 - 10) = 30 + 74 = 104$$

Step 5: adjusted discounting rate: it is the rate at which NPV will be same as APV

$$NPV = \frac{CFAT}{WACC} - Initial\ Investment \gg 104 = \frac{42}{WACC} - 270 \gg WACC = 11.22\%$$

Note: WACC = weighted average cost of capital

This rate may be used only if current capital structure may be maintained.

Question 2(b)

What are Masala Bonds?

(2Marks)

Answer 2(b)

A new category of bonds has emerged, named as **Masala Bonds**. These are bonds issued by Indian companies in foreign country and denominated in Indian rupees. Though the foreign investor pays in terms of foreign currency but Indian company converts it into Indian rupees.

Similarly company pays Interest in Indian rupees and also makes redemption in Indian rupees which is converted into foreign currency and paid to foreign investors. Here the risk of exchange rate fluctuation is borne by foreign investors.

Question 3

Maruti Ltd. requires a plant costing Rs.200 Lakhs for a period of 5 years. The company can use the plant for the stipulated period through leasing arrangement or the requisite amount can be borrowed to buy the plant. In case of leasing, the company received a proposal to pay annual lease rent of Rs.48 lakhs at the end of each year for a period of 5 years.

In case of purchase, the company would have a 12%, 5 years loan to be paid in equated annual installment, each installment becoming due in the beginning of each year. It is estimated that plant can be sold for Rs. 40 lakhs at the end of 5th year. The company uses straight line method depreciation . Corporate tax rate is 30%. Cost of capital after tax for the company is 10%.

The PVIF @10% and 12% for the five years are given below:

Year	1	2	3	4	5
PVIF @10%	0.909	0.826	0.751	0.683	0.621
PVIF @12%	0.893	0.797	0.712	0.636	0.567

You are required to advise whether the plant should be purchased or taken on lease. (10Marks)

Answer 3**Option 1: Lease****Step 1:** PV of lease rent

Lease Rent x PVAF (10%, 5)

= 48×3.791

= 181.97

Step 2: PV of tax benefit on lease rent

Tax benefit x PVAF (10%, 5)

= $(48 \times 0.30) \times 3.791$

= 14.4×3.791

= 54.59

Step 3: Net Present Value

$$= -181.97 + 54.59$$

$$= -127.38$$

Option 2: Loan**Working note 1: Loan Instalment**

Loan = Instalment x Present Value Annuity Due Factor (r%, n)

$$Loan = A \times \frac{1 - \left(\frac{1}{1+r}\right)^n}{r} \times (1+r)$$

$$200 = A \times \frac{1 - \left(\frac{1}{1.12}\right)^5}{0.12} \times (1.12)$$

$$200 = A \times 4.307$$

$$A = 49.54$$

Working note 2: Loan Amortization Table

Year	Interest	Principal	Balance
0	0.00	49.54	150.46
1	18.06	31.48	118.98
2	14.28	35.26	83.72
3	10.05	39.49	44.23
4	5.31	44.23	0.00

Step 1: Annual Cash Flows

Year	Installment	Tax Benefit on		Net Cash Flow	PV @10%	PV
		Interest	Depreciation			
0	-49.54	0.00	0.00	-49.54	1.000	-49.54
1	-49.54	5.42	9.60	-34.52	0.909	-31.38
2	-49.54	4.28	9.60	-35.65	0.826	-29.47
3	-49.54	3.01	9.60	-36.92	0.751	-27.74
4	-49.54	1.59	9.60	-38.35	0.683	-26.19
5	0.00	0.00	9.60	9.60	0.621	5.96
						-158.36

Step 2: Terminal Cash Flow

Particulars	₹
Salvage Value	40
PVF (10%, 5 th)	X 0.621
PV	24.84

Step 3: Net Present Value

$$= -158.36 + 24.84 = -133.52$$

Decision: Lease is better than Loan

Question 4

A company is evaluating a project that requires initial investment of Rs.60 Lakhs in fixed assets and Rs. 12 lakhs towards additional working capital.

The project is expected to increase annual real cash inflow before taxes by Rs.24,00,000 during its life. The fixed assets would have been zero residential value at the end of life of 5 years. The company follows straight line method of depreciation which is expected for tax purposes also. Inflation is expected to be 6% per year. For evaluating similar projects, the company uses discounting rate of 12% in real terms. Company's tax rate is 30%.

Advise whether the company should accept the project, by calculating NPV in real terms.

PVIF (12%, Years)		PVIF (6%, Years)	
Year 1	0.893	Year 1	0.943
Year 2	0.797	Year 2	0.890
Year 3	0.712	Year 3	0.840
Year 4	0.636	Year 4	0.792
Year 5	0.567	Year 5	0.747

(10Marks)

Answer 4**Working Note 1:**

$$(1 + \text{Money Rate}) = (1 + \text{Real Rate}) (1 + \text{Inflation Rate})$$

$$\text{Money Rate} = (1.12 \times 1.06) - 1 = 18.72\%$$

Working Note 2: Calculation of CFBT after inflation

Year	CFBT after inflation @6%
1	$24 \times (1.06)^1 = 25.44$
2	$24 \times (1.06)^2 = 26.97$
3	$24 \times (1.06)^3 = 28.58$
4	$24 \times (1.06)^4 = 30.30$
5	$24 \times (1.06)^5 = 32.12$

Working Note 3: Calculation of Working Capital realization after inflation

$$12 \times (1.06)^5 = 16.06$$

Working Note 4: Cash flows due to change in working capital

Year	0	1	2	3	4	5
WC	12	12.72	13.48	14.29	15.15	0
Cash Flow	-12	-0.72	-0.76	-0.81	-0.86	15.15

Calculation of NPV

Year	CFBT after inflation @6%	Depn	CFAT = CFBT(1-t) + Dxt	Working Capital	Fixed Assets	Net Cash Flow	PV @18.72%
0				-12.00	-60.00	-72.00	-72.00
1	25.44	12.00	21.41	-0.72		20.69	17.43
2	26.97	12.00	22.48	-0.76		21.72	15.41
3	28.58	12.00	23.61	-0.81		22.80	13.63
4	30.30	12.00	24.81	-0.86		23.95	12.06
5	32.12	12.00	26.08	15.15	0.00	41.23	17.48
						NPV =	4.00

Note:

- 1) Tax benefit on depreciation is always a money cash flow.
- 2) It is assumed that working capital cash flows are also affected by inflation.
- 3) **If we take different assumptions then we will have a different solution.**

Question 5

Day Ltd., a newly formed company has applied to the private bank for the first time for financing its Working Capital Requirements. The following information are available about the projections for the current year:

Estimated level of Activity	Completed Units of Production 31,200 plus Units of work in progress 12000
Raw Material Cost	Rs. 40 per unit
Direct wages cost	Rs. 15 per unit
Overhead	Rs. 40 per unit (inclusive of depreciation Rs. 10 per unit)
Selling price	Rs. 130 per unit
Raw material in stock	Average 30 days consumption
Work in progress stock	Material 100% and Conversion Cost 50%
Finished goods stock	24,000 units
Credit allowed by the suppliers	30 days
Credit allowed to purchasers	60 days
Direct wages (lag in payment)	15 days
Expected cash balance	Rs. 2,00,000

Assume that production is carried on evenly throughout the year (360 days) and wages and overheads accrue similarly. All sales are on the credit basis.

You are required to calculate the Net Working Capital Requirement on Cash Cost Basis.

(10Marks)

Now International CFA[®] Course Video Tutorials will also be available on fmbytm android app from July-2018

**(Sample Videos of One Major
Chapter already uploaded in app in
“CFA Level 1 Folder”)**

Answer 5

Assumption: it is assumed that overheads given in the question are factory overheads.

Particulars	₹
Raw Material Consumed [(31200 + 12000) x 40]	17,28,000
Direct Wages [(31200 x 15)+(12000 x 7.5)]	5,58,000
Cash Overheads [(31200 x 30)+(12000 x 15)]	11,16,000
Total	34,02,000
Less: Closing WIP [12000 x (40+7.5+15)]	7,50,000
Cash Cost of Production	26,52,000
Less: Closing Stock of Finished Goods [26,52,000 x 24000/31200]	20,40,000
Cash Cost of Goods Sold/Cash Cost of Sales	6,12,000

Step 1:

Expected Cash Balance = 2,00,000

Step 2:

$$\text{Raw Material Stock} = \text{Raw Material Consumed} \times \frac{\text{RM storage period}}{360}$$

$$\text{Raw Material Stock} = 1728000 \times \frac{30}{360} = 1,44,000$$

Step 3:

$$\text{Debtors} = \text{Cash Cost of Credit Sales} \times \frac{\text{Debtors Collection Period}}{360}$$

$$\text{Debtors} = 612000 \times \frac{60}{360} = 1,02,000$$

Step 4:

$$\text{Creditors} = \text{Credit Purchase} \times \frac{\text{Creditors Payment Period}}{360}$$

Here Credit Purchase = Raw Material Consumed + Closing stock of RM
 = 1728000 + 144000
 = 18,72,000

$$\text{Creditors} = 1872000 \times \frac{30}{360} = 1,56,000$$

Step 5:

$$\text{Outstanding Wages} = \text{Wages} \times \frac{\text{Outstanding Period}}{360}$$

$$\text{Outstanding Wages} = 558000 \times \frac{15}{360} = 23,250$$

Step 6: Working Capital

Particulars	Amount
Cash in hand	2,00,000
Raw Material Stock	1,44,000
Work in Progress	7,50,000
Finished Good stock	20,40,000
Debtors	1,02,000
Current Assets (A)	32,36,000
Creditors	1,56,000
Outstanding Wages	23,250
Current Liabilities (B)	1,79,250
Working Capital (A-B)	30,56,750

Question 6

(a) What are the sources of short term financial requirement of the company ? (4Marks)

Answer Sources of short term financial requirements:

There are numerous short term sources of finance. A few of them are as follows:

- 1) Trade Credit: it arises automatically in the business and increases with the size of business. It is interest free but you certainly lose opportunity of taking cash discount
- 2) Bank loans like Cash Credit Limit: it is given against hypothecation of stock. Interest is charged only on amount used. Drawing power is decided every month on the basis of stock statement submitted
- 3) Bank Loan like Bank overdraft: it is given against the security of fixed deposit. Upto 90% of the amount of FD. Interest rate remains 2% higher than FD rate.
- 4) Commercial Papers: a transferable instrument issued by highly rated corporate borrowers. Issued at discount and redeemed at par.
- 5) Packing Credit Limit: Given to exporters who have confirm export order in their hand. It is a one off arrangement. For any new export again a new limit is sanctioned.

(b) What is certainty Equivalent ? (4Marks)

Answer Certainty Equivalent:

Under this approach the riskiness of the project is handled by adjusting (reducing) the expected cash flows and not the discounting rate. Under this approach uncertain cash flows are converted into certain cash flows by multiplying them by the certainty equivalent factor. If the uncertainty is more than the certainty equivalent factor will be less and vice versa. Once the cash flows are converted into certain cash flows, these are discounted at risk free rate of interest.

$$\text{Certainty Equivalent} = \frac{\text{Certain Cash Flow}}{\text{Estimated Cash Flow}}$$

Or, Certain Cash Flow = Estimated Cash Flow x Certainty Equivalent.

(c) What are the roles of Finance Executive in modern world ? (2Marks)

Answer Roles of finance executive in modern world

Modern Financial Management has come a long way from the traditional corporate finance. The Finance manager is working in a challenging environment which changes continuously. A few instances of this can be mentioned as:

1. **Interest rates** risk management.
2. Management of Foreign Exchange Risk
3. **Capital market** is very vibrant now. The dividend and bonus policies framed by finance managers have a direct bearing on the share prices.
4. Ensuring **management control** is vital especially in the light of foreign participation in, equity which is backed by huge resources making the firm an easy takeover target.

Or

(c) What are the two main aspects of the Finance function ?

Answer Two main aspects of finance function

- 1) Investment decision: Whether to invest money in a project or not. It is accepted only if it increases wealth of the company.
- 2) Capital Structure Decision: From where to procure money required for business. There are numerous sources of finance and each source has its own plus and minus points. Chose the source which has minimum cost and risk and which ensures control of management.