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IDEAL ANSWERS

CA PCC/IPCC

Financial Management

May, 2011 Exam Paper

An analysis of exam paper

100% Questions from the concepts taught in NPA Classroom

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(Disclaimer: Questions asked in the exam may have wrong/inadequate information and/or ambiguous language. In that case the answers provided by institute may differ from these Ideal Answers. Every step has been taken to make accurate these answers, still if you find some errors, please bring it to our notice through email.)

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Que.1(c) A New customer with 10% risk of non-payment desires to establish business connection with you. He would require 1.5 months of credit and is likely to increase your sales by ₹ 1,20,000 p.a. Cost of sales amounted to 85% of sales. The tax rate is 30%. Should you accept the offer is required rate of return is 40% (after tax)? (5 marks)

Answer 1(c)

Step1: Profit = 120000 x 15% = 18000

Step 2: Bad Debts = 120000 x 10% = 12000

Step 3: Income Tax = (18000-12000) x 30% = 1800

Step 4: Required return = 120000 x 85% x 1.5/12 x 40% = 5100

Step 5: Net = 18000-12000-1800-5100 = -900

Decision: reject this offer.

Que.1(d) Beeta Ltd. has furnished the following information:

Earning per share (EPS)	₹ 4
Dividend pay out ratio	25%
Market price per share	₹ 40
Rate of Tax	30%
Growth rate of dividend	8%

The company wants to raise additional capital of ₹ 10 lakhs including debt of ₹ 4 Lakhs. The cost of debt (before tax) is 10% upto ₹ 2 lakhs and 15% beyond that. Compute the after tax cost of equity and debt and the weighted average cost of capital. (5 marks)

Answer 1(b)

Assumption: Let us assume that EPS given in the question is for the first year. Hence dividend of ₹1 per share is D_1 .

1) Cost of equity:

$$K_e = \frac{D_1}{P_0} + g = \frac{1}{40} + 0.08 = 10.5\%$$

2) Cost of debt:

Upto ₹2 lakhs = Interest rate (1-t) = 10% x 0.7 = 7%

Beyond ₹2 lakhs = 15% x 0.7 = 10.5%

3) Overall cost of capital:

$$K_0 = \frac{K_d \times d + K_e \times e}{d + e} = \frac{7\% \times 2 + 10.5\% \times 2 + 10.5\% \times 6}{10} = \frac{98}{10} = 9.8\%$$

Que.2(b) The financial statement of a company contain the following information for the year ending 31st March, 2011:

Particulars	₹
Cash	1,60,000
Sundry Debtors	4,00,000
Short-term Investment	3,20,000
Stock	21,60,000
Prepaid Expenses	10,000
Total Current Assets	30,50,000
Current Liabilities	10,00,000
10% Debentures	16,00,000

Equity Share Capital	20,00,000
Retained Earnings	8,00,000

Statement of profit for the year ended 31st March, 2011

Sales (20% cash sales)	40,00,000
Less: Cost of goods sold	28,00,000
Profit before interest & Tax	12,00,000
Less: Interest	1,60,000
Profit Before Tax	10,40,000
Less: Tax @ 30%	3,12,000
Profit After Tax	7,28,000

You are required to calculate:

- Quick Ratio
- Debt-equity Ratio
- Return on Capital Employed, and
- Average collection period (Assuming 360 days in a year). (8 marks)

Answer 2(b)

$$1) \text{ Quick Ratio} = \frac{\text{Quick Assets}}{\text{Quick Liabilities}} = \frac{880000}{1000000} = 0.88$$

Here Quick Assets = Cash+ Sundry Debtors + Short term investment

Quick Liabilities = Current Liabilities

$$2) \text{ Debt - equity ratio} = \frac{\text{Debt}}{\text{Equity}} = \frac{1600000}{2800000} = 0.57$$

Here Equity = Equity share capital + Retain earnings

$$3) \text{ Return on Capital Employed} = \frac{\text{Return(EBIT)}}{\text{Capital Employed}} = \frac{1200000}{4400000} = 27.27\%$$

Capital Employed = Debt + Equity = 1600000 + (2000000+800000) = 4400000

$$4) \text{ Average Collection Period} = \frac{\text{Debtors}}{\text{Credit Sales}} \times 360 = \frac{400000}{3200000} \times 360 = 45 \text{ days}$$

Que.3(b) Alpha Ltd. has furnished the following Balance Sheet as on March 31,2011:

Liabilities	₹	Assets	₹
Equity Share Capital (1,00,000 Equity share of ₹ 10 each)	10,00,000	Fixed Assets	30,00,000
General Reserve	2,00,000	Current Assets	18,00,000
15% Debentures	28,00,000		
Current Liabilities	8,00,000		
	48,00,000		48,00,000

Additional information:

- Annual Fixed cost other than Interest 28,00,000
- Variable Cost Ratio 60%
- Total Assets Turnover Ratio 2.5
- Tax Rate 30%

You are required to calculate:

- Earnings Per Share (EPS), and
- Combined Leverage. (8 marks)

Answer 3(b)

$$\text{Total Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Total Assets}} \quad 2.5 = \frac{\text{Sales}}{4800000} \quad \text{Sales} = 1,20,00,000$$

(i) Calculation of EPS

Particulars	Amount (₹ in lakhs)
Sales	120
Variable Cost (60%)	-72
Contribution	48
Fixed Cost	-28
EBIT	20
Interest (28 x 15%)	-4.2
PBT	15.8
Tax @30%	-4.74
PAT	11.06
No. of equity shares	1
EPS	₹11.06

(ii) Combined Leverage

$$DTL = \frac{\text{Contribution}}{\text{Contribution} - \text{Fixed Cost} - \text{Interest}} = \frac{4800000}{4800000 - 2800000 - 420000} = 3.04$$

Que.4(a) The Trading and Profit and Loss Account of Beta Ltd. for the year ended 31st March, 2011 is given below:

Particulars	Amount ₹	Particulars	Amount ₹
To Opening Stock:		By Sales (Credit)	20,00,000
Raw Materials		By Closing Stock:	
1,80,000		Raw Materials	
Work-in-Progress		2,00,000	
60,000		Work-In-Progress	
Finished Goods	5,00,000	1,00,000	
<u>2,60,000</u>		Finished Goods	6,00,000
To purchase (Credit)	11,00,000	<u>3,00,000</u>	
To Wages	3,00,000		
To Production Expenses	2,00,000		
To Gross Profit C/d	5,00,000		
	26,00,000		26,00,000
To Administration Expenses	1,75,000	By Gross Profit b/d	5,00,000
To Selling Expenses	75,000		
To Net Profit	2,50,000		
	5,00,000		5,00,000

The opening and closing balances of debtors were ₹ 1,50,000 and ₹ 2,00,000 respectively where as opening and closing creditors were ₹ 2,00,000 and ₹ 2,40,000 respectively. You are required to ascertain the working capital requirement by operating cycle method. (8 marks)

Answer 4(a)

$$1) \text{ Raw material storage period} = \frac{\text{Average stock of raw material}}{\text{Raw material consumed}} \times 360$$

$$= \frac{\frac{180000 + 200000}{2}}{1080000} \times 360 = 63.33 \text{ days}$$

$$2) \text{ Work in process period} = \frac{\text{Average WIP}}{\text{Cost of production}} \times 360$$

$$= \frac{\frac{60000 + 100000}{2}}{1540000} \times 360 = 18.70 \text{ days}$$

$$3) \text{ Finished goods storage period} = \frac{\text{Average stock of finished goods}}{\text{Cost of goods sold}} \times 360$$

$$= \frac{\frac{260000 + 300000}{2}}{1500000} \times 360 = 67.2 \text{ days}$$

$$4) \text{ Debtors collection period} = \frac{\text{Average debtors}}{\text{Credit sales}} \times 360$$

$$= \frac{\frac{150000 + 200000}{2}}{2000000} \times 360 = 31.5 \text{ days}$$

$$5) \text{ Creditors payment period} = \frac{\text{Average creditors}}{\text{Credit purchase}} \times 360$$

$$= \frac{\frac{200000 + 240000}{2}}{1100000} \times 360 = 72 \text{ days}$$

$$6) \text{ Period of operating cycle} = 63.33 + 18.70 + 67.2 + 31.5 - 72 = 108.73 \text{ days}$$

$$7) \text{ No. of cycles} = 360 / 108.73 = 3.311$$

$$8) \text{ Working capital} = \frac{\text{Cost of production}}{\text{No. of cycles}} = \frac{1540000}{3.311} = 465116$$

Note: instead of taking cost of production in the above formula one can also take COGS or cost of sales.

Que.5 Distinguish between:

(iii) Operating lease and financial lease, and

(iv) Net Present Value method and internal rate return method. (8 marks)

Answer 5(iii)

Salient features of Financial Lease

- (i) An intermediate term to long-term arrangement.
- (ii) During the primary lease period, the lease cannot be cancelled.
- (iii) The lease is more or less fully amortized during the primary lease period.
- (iv) The cost of maintenance, taxes, insurance etc., are to be incurred by the lessee unless the contract provides otherwise.

- (v) The lessee is required to take the risk of obsolescence.
- (vi) The lessor is only the Financier and is not interested in the asset.

Salient features of Operating Lease

- (i) The lease term is significantly less than the economic life of the equipment.
- (ii) It can be cancelled by the lessee prior to its expiration date.
- (iii) The lease rental is generally not sufficient to fully amortize the cost of the asset.
- (iv) The cost of maintenance, taxes, insurance are the responsibility of the lessor.
- (v) The lessee is protected against the risk of obsolescence.
- (vi) The lessor has the option to recover the cost of the asset from another party on cancellation of the lease by leasing out the asset.

Answer 5(iv)

Net Present Value:

- 1) It is difference between present value of inflows & present value of outflows discounted at cost of capital.
- 2) If NPV is positive it indicates that cash inflows of the project are able to recover principle amount plus desired return plus it will give a surplus equal to NPV.
- 3) In case of an independent project we will accept it if NPV is zero or positive.

Internal Rate of Return:

- 1) It is the discounting rate at which NPV is zero.
- 2) If IRR is 12% it indicates that cash inflows of the project are able to recover initial investment plus it will give a return of 12% p.a.
- 3) In case of an independent project we will accept it if IRR is equal to more than the cost of capital.

Que.6(a) A Ltd. is considering the purchase of a machine which will perform some operations which are at present performed by workers. Machine X and Y are alternative models. The following details are available:

	Machine X ₹	Machine Y ₹
Cost of machine	1,50,000	2,40,000
Estimated life of machine	5 years	6 years
Estimated cost of maintenance p.a.	7,000	11,000
Estimated cost of indirect material p.a.	6,000	8,000
Estimated savings in scrap p.a.	10,000	15,000
Estimated cost of supervision p.a.	12,000	16,000
Estimated savings in wages p.a.	90,000	1,20,000

Depreciation will be charged on straight line basis. The tax rate is 30% Evaluate the alternatives according to:

- i. Average rate of return method, and
- ii. Present value index method assuming cost of capital being 10%

(The present value of ₹ 1.00 @ 10% p.a. for 5 years is 3.79 and for 6 years is 4.354) (8 marks)

Answer 6(a)

Particulars	Machine X	Machine Y
Saving in wages	90000	120000
Saving in scrap	10000	15000

Maintenance cost	-7000	-11000
Indirect material	-6000	-8000
Supervision cost	-12000	-16000
CFBT	75000	100000
Depreciation	-30000	-40000
PBT	45000	60000
Tax@30%	-13500	-18000
PAT	31500	42000
Depreciation	30000	40000
CFAT	61500	82000
PVAF@10%	X3.79	X4.354
PV _i	233075	357028
Initial outflow	150000	240000
PI	1.55	1.49

$$\text{Average Rate of Return} = \frac{\text{Average annual profit after tax}}{\text{Average Investment}} \times 100$$

$$\text{Machine X} = \frac{31500}{\frac{150000 + 0}{2}} \times 100 = 42\%$$

$$\text{Machine Y} = \frac{42000}{\frac{240000 + 0}{2}} \times 100 = 35\%$$

Decision: Machine X is better than Machine Y from the point of view of PI as well as ARR.

Que.7 Answer any **Two** of the following:

- Elucidate the responsibilities of Chief Financial Officer.
- Explain the relevance of time value of money.
- Bridge finance. (8 marks)

Answer 7(a)

The Chief financial officer is required to look into the financial implications of any decision in the firm. Thus all decisions involving management of funds comes under the preview of the finance manager. Some of these have been listed below:

- Decision regarding capital structure
- Investment decision
- Dividend decision
- Evaluating financial performance
- Financial negotiations
- Keeping touch with stock exchange quotations and behavior of share prices

Answer 7(b)

A rupee today is more valuable than a rupee a year hence. If you have to invest Rs.10000 today and you will be getting Rs.10100 after one year. Then it is not good to say that you will be earning Rs.100 profit. Because Rs.10100 receivable after one year is worth Rs.9017 (10100/1.12) only if the rate of interest is 12% p.a. and you are actually sustaining a loss of Rs.983. Therefore one can not take a better decision without considering time value of money. It can be divided into following two part:

- Future value of money

$$FV = PV(1 + r)^n$$

2) Present value of money

$$PV = \frac{A}{(1 + r)^n}$$

Answer 7(e)

Bridge finance refers to loans taken by a company normally **from commercial banks** for a short period, pending disbursement of loans sanctioned by financial institutions. Normally, it takes time for financial institutions to disburse loans to companies. However, once the loans are approved by the term lending institutions, companies, in order not to lose further time in starting their projects, arrange short term loans from commercial banks.

Bridge loans are also provided **by financial institutions** pending the signing of regular term loan agreement, which may be delayed due to non-compliance of conditions stipulated by the institutions while sanctioning the loan.

The bridge loans are repaid/ adjusted out of the term loans as and when disbursed by the concerned institutions. Bridge loans are normally secured by **hypothecating** movable assets, personal **guarantees** and demand promissory notes. Generally, the **rate of interest** on bridge finance is higher as compared with that on term loans.