

IPCC FM NOV 2009 SOLUTIONS

Question 5(i) Explain briefly the limitations of financial ratios.

(2 marks)

Answer 5(i) Following are some of the limitations for financial ratios:

Effect of Inflation: In financial accounting assets & liabilities are recorded at their historical value, which are very different from their true value. This distortion of financial data is also carried in the financial ratios. Example:

Seasonal Factors: Financial ratios are calculated using year end figures. In case of seasonal business, this year end figures may not represent average picture of the business. To overcome this difficulty, it is suggested that monthly average data should be used. But for external users it is difficult to get monthly data.

Window dressing: Businessman may try to give good shape to some popular ratios by making some manipulation in year end data. Mostly current ratio, debt equity ratio & net profit ratios are the target. After such window dressing, ratios will not be the true picture.

Difference in accounting policies and accounting periods make the data of two firms non comparable.

Question 5(ii) What do you understand by Business Risk and Financial Risk?

(2 marks)

Answer 5(ii) Business Risk: It is measured by operating leverage and is dependent upon operating fixed cost. Higher the fixed cost higher the operating leverage and vice versa. It is inversely related to margin of safety. Higher the sales, higher the MOS and lower business risk.

Financial Risk: It is measured by financial leverage and is dependent upon Interest and dividend on preference shares. It should be neither too high nor too low. Lower financial risk results in lower return to investors while higher financial risk results in higher expectations of equity shareholders which ultimately results in lower wealth. Hence it should be optimum.

Question 5(iii) Differentiate between Factoring and Bills discounting.

(2 marks)

Answer 5(iii) Factoring: Factoring is an ongoing relationship between the financial institution or banker (factor) and a business concern (the supplier) whereby the factor purchases the book debts with or without recourse to the supplier. Factor provides following services

- 1) Collection of debtors of supplier
- 2) Assumption of credit risk/credit control
- 3) Financing the receivables
- 4) Administration of sales ledger
- 5) Provide advisory services.

Bill Discounting: When a bill of exchange is presented by the holder to a bank before its maturity then bank provides an amount of advance after deducting discounting charges (Interest). On the maturity date bank presents this bill to the drawee/acceptor and recovers the full amount. Factoring is an ongoing arrangement while bill discounting is a one off arrangement.

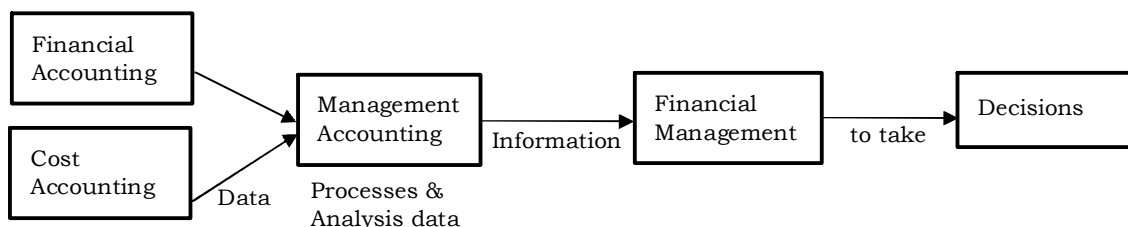
Question 5(iv) Differentiate between Financial Management and Financial Accounting.

(2 marks)

Answer 5(iv) There are three branches of accounting:

- (i). Financial accounting
- (ii). Cost accounting and
- (iii). Management Accounting (or financial management)

Major difference between financial accounting and financial management is that accounting records those transactions which have occurred, it means it looks into the past. While financial management looks into the future to arrive at a decision as of today. Interrelationship between the two is as follows:



Question 5(v) Y Ltd. retains Rs. 7,50,000 out of its current earning. The expected rate of return to the shareholders. If they had invested the funds elsewhere is 10%. The brokerage is 3% and the shareholders came in 30% tax bracket. Calculate the cost of retained earnings. (2 marks)

Answer 5(v)

If the company distributes dividend:

- 1) Net of tax receipt of shareholders $750000 \times 0.7 = 525000$
- 2) Net investment after brokerage $525000 - 3\% = 509250$
- 3) Net return elsewhere $509250 \times 10\% = 50925$

If the company does not distribute dividend, it will have to give a return of Rs. 50925 to the shareholders hence cost of retained earnings = $50925/750000 = 6.79\%$

Question 5(vi) From the information given below calculate the amount of Fixed assets and Proprietor's fund.

Ratio of fixed assets to proprietors fund = 0.75
 Net working capital = Rs. 6,00,000 (2 marks)

Answer 5(vi)

In the present question no long term debt is given hence proprietor's fund is equal to Capital employed and capital employed is equal to fixed assets plus working capital.

$$0.75 = \frac{\text{Fixed Assets}}{\text{Proprietors Fund}} = \frac{\text{Fixed Assets}}{\text{Fixed Assets} + \text{Working Capital}} = \frac{\text{FA}}{\text{FA} + 6,00,000}$$

$$\text{FA} = 18,00,000 \text{ Prop. Fund: } 18,00,000 + 6,00,000 = 24,00,000$$

Question 6 The Balance Sheets of a Company as on 31st March, 2008 and 2009 are given below:

Liabilities	31.3.08	31.3.09	Assets	31.3.08	31.3.09
Equity share capital	14,40,000	19,20,000	Fixed assets	38,40,000	45,60,000
Capital reserve	-	48,000	Less depreciation	11,04,000	13,92,000
General reserve	8,16,000	9,60,000		27,36,000	31,68,000
Profit & Loss A/c	2,88,000	3,60,000	Investment	4,80,000	3,84,000
9% Debentures	9,60,000	6,72,000	Sundry debtors	12,00,000	14,00,000
Sundry creditors	5,50,000	5,90,000	Stock	1,40,000	1,84,000
Bills payables	26,000	34,000	Cash in hand	4,000	-
Proposed dividend	1,44,000	1,72,800	Preliminary		
Provision for tax	4,32,000	4,08,000	Expenses	96,000	48,000
Unpaid dividend	-	19,200			
	46,56,000	51,84,000		46,56,000	51,84,000

- (i). Additional information: During the year ended 31st March, 2009 the company:
- (ii). Sold a machine for Rs. 1,20,000; the cost of machine was Rs. 2,40,000 and depreciation provided on it was Rs. 84,000.
- (iii). Provided Rs. 4,20,000 as depreciation fixed assets.
- (iv). Sold some investment and profit credited to capital reserve.
- (v). Redeemed 30% of the debentures @ 105.
- (vi). Decided to write off fixed assets costing Rs. 60,000 on which depreciation amounting to Rs. 48,000 has been provided.

You are required to prepare Cash Flow Statement as per AS-3. (15 marks)

Answer 6

Particulars	Amount (Rs.)	Amount (Rs.)
Cash Flow from Operating Activities		
Net Profit after tax	388800	
Adjustment for:		
Depreciation on Fixed Assets	420000	
Fixed Assets written off	12000	
Loss on sale of Fixed Assets	36000	
Preliminary Exp. Written off	48000	
Premium of redemption of debentures	14400	
Interest on Debentures	86400	
Income Tax	408000	
Operating profit before working capital changes	1413600	
Increase in stock	-44000	
Increase in debtors	-200000	
Increase in bills payable	8000	
Increase in creditors	40000	
Cash generated from operations	1217600	
Tax payment	-432000	
Net Cash from Operating Activities		785600
Cash Flow from Investing Activities		
Purchase of plant	-1020000	
Sale of plant	120000	
Sale of investments	144000	
Sale of plant	-	
Net cash from Investing Activities		-756000
Cash flow from Financing Activities		
Issue of Equity shares	480000	
Redemption of Debentures	-302400	
Interest payment	-86400	
Dividend payment	-124800	
Net cash from Financing Activities		-33600
Net Increase in cash & cash equivalents		-4000
Cash & cash equivalents at the beginning of period		4000
Cash & cash equivalents at the end of period		0

Fixed Assets A/c

Particulars	Amount	Particulars	Amount
To Balance b/d	27,36,000	By Cash (Sale of plant)	1,20,000
To Cash (Purchase)	10,20,000	By Loss on sale of plant	36,000
		By Dep.	4,20,000
		By P&L (asset written off)	12,000
		By Balance c/d	31,68,000
	37,56,000		37,56,000

P&L Appropriation A/c

Particulars	Amount	Particulars	Amount
To Transfer to general reserve	1,44,000	By Balance b/d	2,88,000
To Proposed Dividend	1,72,800	By Net profit for the year	3,88,800
To Balance c/d	3,60,000	By P&L (F.Y. 2008-09)	1,00,000
	6,76,800		6,76,800

Question 7(a) From the following Financial data of company A and company B:
Prepare their Income statement.

	Company A	Company B
Variable cost	56,000	60% of Sales
Fixed cost	20,000	-
Interest expenses	12,000	9,000
Financial Leverage	5 : 1	-
Operating Leverage	-	4: 1
Income tax rate	30%	30%
Sales	-	1,05,000

(8 marks)

Answer 7(a)

Particulars	Company A	Company B
Sales	91000	105000
Variable Cost	-56000	-63000
Contribution	35000	42000
Fixed Cost	-20000	-31500
EBIT	15000	10500
Interest	-12000	-9000
EBT	3000	1500
Tax @ 30%	900	-450
EAT	2100	1050

Company A:

$$DFL = \frac{EBIT}{EBIT - Interest} \quad 5 = \frac{E}{E - 12000} \quad E = 15000$$

Company B

$$DFL = \frac{Contribution}{Contribution - Fixed Cost} \quad 4 = \frac{42000}{42000 - FC} \quad FC = 315000$$

Question 7(b) A hospital is considering to purchase a diagnostic machine costing Rs. 80,000. The projected life of the machine is 8 years and has an expected salvage value of Rs. 6,000 at the end of 8 years. The annual operating cost of the machine is Rs. 7,500. It is expected to generate revenues of Rs.

40,000 per year for eight years. Presently, the hospital is outsourcing the diagnostic work and is earning commission income is Rs. 12,000 per annum; net of taxes.

Required: Whether it would be profitable for the hospital to purchase the machine. Give your recommendation under:

- (i). Net Present Value method
- (ii). Profitability Index method.

PV factors at 10% are given blow:

Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8
0.909	0.826	0.751	0.683	0.621	0.564	0.513	0.467

(8 marks)

Answer 7(b)

Assumption: Ignore Income Tax

Step 1: Initial Cash Flow = -80,00

Step 2: Terminal Cash Flow = 6,000

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$$PV = 6,000 \times 0.467 = 2,802$$

Step 3: Annual Cash Flows:

Revenue	40,000
Operating Cost	-7,500
Opportunity Loss (of commission income)	<u>-12,000</u>
Net Annual Cash Flow	20,500
Present Value Annuity Factor @10% for 8 years	<u>$\times 5.335$</u>
	109368

- (i). Net Present Value = Present Value of Inflows – Present Value of Outflows
 $= (109368 + 2802) - 80000$
 $= 112170 - 80000$
 $= 32170$

Decision: NPV is positive hence hospital should purchase the machine.

- (ii). Profitability Index = Present Value of Inflows / Present Value of Outflows
 $= 112170 / 80000 = 1.40$

Decision: P1 is more than one hence hospital should purchase the machine.

Question 8(i) Explain the two basic functions of Financial Management.

(3 marks)

Answer 8(i) Two basic functions of financial management are as follows:

- 1) Procurement of Funds: this is also known as financing decision. Under this function finance manager first estimates future requirement of funds for the organization. Then he determines the capital structure keeping in mind .the cost of capital, financial risk and control of existing owners. Capital structure means the mix of various sources of finance.
- 2) Utilization of funds: this is also known as investment decision. Here the finance manager has to decide whether to invest money in a project or not. There are various methods for evaluation of such projects. Net present Value & Internal Rate of Return are the two widely used methods.

Question 8(ii) Explain the following terms:

- (a). Ploughing back of profits
- (b). Desirability factor.

(3 marks)

Answer 8(ii)

(a) **Ploughing back of profits:** profit earned by a business is used in the following two manners:

- 1) Distribution of dividend
- 2) Retention of profits for the purpose of reinvestment

This second use may also be termed as ploughing back of profits. Retained earning is an important source of long term finance for a business. It arises in the business automatically and rises with rise in business. Equity shareholders are owners of the retained earnings hence cost of retained. earnings is same as cost of equity.

(b) Desirability Factor: It is also known as profitability Index. It is one of the methods of evaluation of a capital budgeting projects. Following is the formula:

$$\text{Profitability Index} = \frac{\text{Present Value of Inflows}}{\text{Present Value of outflows}}$$

If PI is more than one it means NPV is positive, if it is less than one it shows negative NPV and if it is equal to one it shows zero NPV. This method is basically used for the purpose of capital rationing. Capital rationing is a situation where availability of funds is less than its requirement.

Question 8(iii) What do you understand by Weighted average cost of Capital? (3 marks)

Answer 8(iii) Weighted Average Cost of Capital: Also known as overall cost of capital. It is calculated by taking weighted average of cost of individual sources of finance. Following is the formula:

$$K_o = \frac{K_D D + K_E E}{D + E}$$

Here D is weight of debt and E is weight of equity. Weights may be either book value weights or market value weight. But market value weights are preferable. To calculate marginal cost of capital we should assign marginal weights in place of total weights.

Weighted average cost of capital is used as a hurdle rate in investment decisions. An Investment proposal is accepted only if its rate of return is more than weighted average cost of capital.

Question 8(iv) There are two firms P and Q which are identical except P does not use any debt in its capital structure while Q has Rs. 8,00,000, 9% debentures in its capital structure. Both the firms have earnings before interest and tax of Rs. 2,60,000 p.a. and the capitalization rates is 10%. Assuming the corporate tax of 30%, calculate the value of these firms according to MM Hypothesis

(3 marks)

Answer 8(iv)

$$\text{Value of P (Unlevered firm)} = \frac{\text{EBIT (1 tax rate)}}{\text{Capitalization Rate}} = \frac{260000 \times 0.70}{0.10} = 18,20,000$$

$$\begin{aligned} \text{Value of Q (Levered Firm)} &= \text{Value of Unlevered Firm} + \text{Debt} \times \text{tax rate} \\ &= 18,20,000 + 8,00,000 \times 0.30 \\ &= 18,20,000 + 2,40,000 \\ &= 20,60,00 \end{aligned}$$