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Solved Scanner Appendix

IPCC Gr. I Paper - 3

May - 2009

Solution of May 2009 Examination

Paper - 3A : Cost Accounting

Chapter - 1 : Basic Concepts

2009 - May [1] {C}

(ii) Product costs are associated with the purchase and sale of goods. In the production scenario, such costs are associated with the acquisition and conversion of materials and all other manufacturing inputs into finished product for sale. Hence under absorption cost, total manufacturing costs constitute inventoriable or product cost.

Periods costs are the costs, which are not assigned to the products but are charged as expense against revenue of the period in which they are incurred. General Administration, marketing, sales and distributor overheads are recognized as period costs.

Chapter - 2 : Material Cost

2009 - May [4] {C}

Please refer 2000 - May [3] (c) on page no. 412

Chapter - 3 : Employee Cost

2009 - May [1] {C}

	A	B
(i) Time Allowed (Hours)	100	100
Time Taken (Hours)	60	80
Time Saved (Hours)	40	20

Let the rate of wages of the worker
B is Rs. × per hour

	A	B
Normal Wages	1440	(80 × X)
(Time taken x Hourly rate of wages)	(60 × 24)	(80 × X)
Bonus	480	16 X
	(50% × 40 × 24)*	$\left(\frac{20}{100}\right) \times (80 \times X)$**
	1920	96x

According to the problem,

Total earnings of A = Total earnings of B

1920 = 96 X

$$X = \frac{1920}{96} = \text{Rs. } 20$$

Therefore, hourly rate of wages of the worker is Rs. 20 per hour.

* Bonus = Time Saved × 50% × Wage Rate

** $\text{Bonus} = \frac{\text{Time taken}}{\text{Time Allowed}} \times \text{Time Save} \times \text{Wage Rate}$

2009 - May [4] {C}(ii)

Idle Capacity: It represents the difference between practical capacity and the capacity based on long term sales expectancy.

If the actual capacity is different from the capacity based on sales expectancy, then the idle capacity is the difference between the practical capacity and the actual capacity.

∴ Idle capacity represents a part of practical capacity which has not been utilized due to regular interruptions and which may not be avoided.

Idle capacity cost can be determined as

$$\text{Idle capacity cost} = \frac{\text{Total OH related to plant}}{\text{Normal capacity}} \times \text{Idle capacity}$$

It may be normal or abnormal. The treatment can be done in the following ways :–

1. **Arising due to unavoidable reasons (Normal idle capacity):**
   Generally arises due to lack of demand or due to seasonal nature of the product.

   Treatment ↓

   Production OHs are absorbed into the cost of production either by the inflated OH absorption rate or by the supplementary OH rate.

2. **Arising due to avoidable reasons (Abnormal idle capacity):**
It may arise due to lack of proper planning control or due to lack of managements forecasting.

Treatment ↓

The cost of such idle treatment capacity should be changed to costing Profit and Loss A/c.

3. **If arises due to trade depression or any other external factors:**
Then it being normal in nature,

Treatment ↓

The cost should be charged to costing P/L A/c.

Chapter - 4 : Overheads

2009 - May [1] {C}(iv)

	Production (Units)	**Semi Variable Cost (Rs.)**
Quarter I	36,000	2,80,000
Quarter II	42,000	3,10,000
Difference	6,000	30,000

Variable Cost per Unit = $\frac{\text{Change in Semi Variable Cost}}{\text{Change in Production}}$

= $\frac{\text{Rs .30,000}}{\text{6,000units}}$

= Rs. 5 per units

Total Fixed Cost = Semi Variable Cost - (Production x Variable Cost per Unit)

Total fixed cost in Quarter I:

= 2,80,000 − (36,000 × 5)
= 2,80,000 − 1,80,000
= 1,00,000

Total fixed cost in Quarter II:

= 3,10,000 − (42,000 × 5)
= 3,10,000 − 2,10,000
= 1,00,000

Chapter - 6 : Reconciliation of Cost and Financial Accounts

2009 - May [3] {C} (a)

Memorandum Reconciliation Account

Particulars	Rs.	Particulars	Rs.
To Net loss as per costing books	2,13,000	By Administrative overhead over absorbed in costs	3,000
To Factory overheads under absorbed	5,000	By Depreciation over charged in cost books (80,000 − 70,000)	10,000
To Income tax not provided in cost books	65,000	By Interest on investments not included in cost books	20,000
To Preliminary expenses written off in financial books	3,000	By Transfer fees not considered in cost books	2,000
To Over-valuation of Closing Stock of finished goods in cost books	7,000	By Net loss as per financial books	2,58,000
	2,93,000		2,93,000

Chapter - 8 : Contract Costing

2009 - May [4] {C} (iii)

As the contract is 80% complete, So 2/3rd of the notional profit on cash basis has been transferred to Profit & Loss A/c in the first year of contract.

$\therefore$ Amount transferred to Profit & Loss A/c= $\frac{2}{3}$ × Notional Profit x % of cost received or, 60,000 $= \frac{2}{3}$ x Notional Profit x $\frac{75}{100}$

or, Notional Profit $= \frac{60,000 \times 3 \times 100}{2 \times 75}$

= Rs. 1,20,000

Computation of Value of Work Certified:

Cost of work to date		=	Rs. 88,000
Add: Notional Profit		=	Rs. 1,20,000
			Rs. 2,08,000
Less:	Cost of Work Uncertified	=	8,000
	Value of Work Certified	=	Rs. 2,00,000

Since the Value of Work Certified is 80% of the Contract Price, therefore

Contract Price $= \dfrac{\text{Value of work Certified}}{80\%}$

$= \dfrac{\text{Rs. 2,00,000}}{80\%}$

= Rs. 2,50,000

Therefore sales revenue required to achieved a quarterly profit.

Contract Account

Particulars	Amount Rs.	Particulars	Amount Rs.
To Cost to date	88,000	By Work in Progress	
To National Profit	1,20,000	- Work Certified	2,00,000
		- Work uncertified	8,000
	2,08,000		2,08,000
To P/L A/c	60,000	By Notional Profit	1,20,000
To Work in Progress	60,000		
	1,20,000		1,20,000

Chapter - 9 : Operating Costing

2009 - May [1] {C} (iii)

Absolute tonnes kms

= tonnes (unit of weight) × Km (Unit of distance)

= (24 tonnes × 270 kms) + (14 tonnes × 150 kms) + (18 tonnes × 325 kms)

= 6480 + 2,100 + 5850

= 14430 tonnes kms

Commercial Tonnes kms

= Average load x Total kms travelled

$= \left[\dfrac{24+14+18}{3}\right]$tonnes × 745 kms

= 13906.67 Tonnes km

Chapter - 11 : Joint Products & By Products

2009 - May [3] {C} (b)

Methods of apportioning joint cost among the joint products:

(i) **Average Unit Cost Method:**

- In this method, total process cost (upto the point of separation) is divided by total units of joint products produced.

- On division average cost per unit of production is obtained. The effect of application of this method is that all joint products will have uniform cost per unit.

(ii) **Contribution Margin Method:**

- In this method joint costs are segregated into two parts - variable and fixed. The variable costs are apportioned over the joint products on the basis of units produced (average method) or physical quantities.
- When the products are further processed, then all variable cost incurred be added to the variable cost determined earlier.
- After that contribution is calculated by deducting variable cost from their respective sales values.
- The fixed costs are then apportioned over the joint products on the basis of contribution ratios.

(iii) **Market Value at the Time of Separation:**

- This method is used for apportioning joint costs to joint products upto the split off point.
- This method is difficult to apply if the market value of the products at the point of separation are not available.
- The joint cost may be apportioned in the ratio of sales values of different joint products.

(iv) **Market Value after further Processing:**

- Under this method the basis of apportionment of joint costs is the total sales value of finished products at the further processing.
- The use of this method is unfair where further processing costs after the point of separation are disproportionate or when all the joint products are not subjected to further processing.

(v) **Net Realisable Value Method:**

- Under this method joint costs is apportioned on the basis of net realisable value of the joint products,

Net Realisable Value = Sale value of joint products (at finished stage)
(-) estimated profit margin
(-) selling & distribution expenses, if any
(-) post split-off cost

Chapter - 12 : Standard Costing

2009 - May [1] {C}(iv)

Material price variance = AQ (Std. price per kg - Actual price per kg)

= (−) 9800 = AQ (40 − 42)

= (−) 9800 = AQ (− 2)

$\therefore$ AQ = $\frac{9800}{2}$ = 4,900

Actual quantity of material used during the month of April = 4,900 kg.

Chapter - 13 : Marginal Costing

2009 - May [4] {C} (iv)

P/V ratio = 28%

Quarterly fixed Cost	=	Rs. 2,80,000
Desired Profit	=	Rs. 70,000

Sales revenue required to achieve desired profit

$$= \frac{\text{Fixed Cost + Desired Profit}}{\text{P/V ratio}}$$

$$= \frac{2,80,000 + 70,000}{28\%}$$

$$= \frac{3,50,000}{0.28} = \text{Rs. } 12,50,000$$

Chapter - 14 : Budgets & Budgetary Control

2009 - May [1] {C} (v)

Components of budgetary control system: There are a number of bases for classifing the budgets into two or more categories. But the most important and widely used bases are functional classification and classification according to flexibility.

The policy of a business for a defined period is represented by the master budget the details of which are given in a number of individual budgets called functional budgets. The functional budgets are broadly grouped under the following heads:

(a) Physical Budgets - This budget contains information in terms of physical units e.g. Sales Qty, Product Qty, Inventory, Manpower budget.

(b) Cost Budgets - Manufacturing Cost, Administration Cost, sales & distribution cost, R & D Cost.

(c) Profit Budget - A budget which enable in the ascertainment of profit, e.g. Sales budget, profit & loss budget etc.

On the other hand, budgets may be classified into two categories on the basis of flexibility as fixed budgets and flexibility budgets.

2009 - May [2] {C}

(a) **Statement showing monthly production quantity budget:**

Production Budget for January to March 2009

Particulars (in Unit)	Jan	Feb	Mar	April
Budgeted Sales (in Unit)	10,000	12,000	14,000	15,000
Add: Budgeted Closing Stock (20% of sales of next month)	2,400	2,800	3,000	3,000
	12,400	14,800	17,000	18,000
Less: Opening Stock	2,700	2,400	2,800	3,000
Budgeted Output	9,700	12,400	14,200	15,000

Total Budgeted Output for the Quarter ended March 31, 2009

= (9,700 + 12,400 + 14,200)

= 36,300 units,

(ii) Monthly Raw Material consumption quantity budget from Jan 2009 to April 2009

Raw Material Consumption Budget (in quantity)

Month	Budgeted Output (Units)	Material 'X' @ 4 kg per unit (Kg)	Material 'Y' @ 6 kg per unit (Kg)
Jan	9,700	38,800	58,200
Feb	12,400	49,600	74,400
Mar	14,200	56,800	85,200
Apr	15,000	60,000	90,000
Total		2,05,200	3,07,800

(iii) Material purchase quantity budget for the quarter:

Raw Materials Purchase Budget (in quantity)
for the Quarter ended (March 31,2009)
Material X

	Jan	Feb	Mar	Total
Raw material required for production (x)	38800	49600	56800	145200
Add: Closing stock of raw material	24800	28400	30000	83200
	63600	78000	86800	228400
Less: Opening stock of raw material X	19000	24800	28400	72200
Materials to be purchased X	44600	53200	58400	156200

Raw Materials Purchase Budget (in quantity)
for the Quarter ended (March 31,2009)
Material Y

	Jan	Feb	Mar	Apr
Raw material required for production (Y)	58200	74400	85200	217800
Add: Closing stock of raw material	37200	42600	45000	124800
	95400	117000	130200	342600
Less: Opening stock of raw material Y	29000	37200	42600	108800
Materials to be purchased Y	66400	79800	87600	233800

(b) **Calculation of Material Cost Variance:**

Material Variance

	(1)	(2)	(3)	(4)
	SP X SQ	SP X SM	SP X AQ used	AP X AQ used
X	10 × 1,60,000	10 × 1,61,200	10 × 1,65,000	10.20 × 1,65,000
Y	15 × 2,40,000	15 × 2,41,800	15 × 2,38,000	15.10 × 2,38,000
	52,00,000	52,39,000	52,20,000	52,76,800

SM = Std. mix i.e. total actual quantity used in std. mix ratio

Total Actual quantity used = 1,65,000 + 2,38,000

= 4,03,000 kgs.

Std. mix ratio = 4 : 6 i.e. x : y

Std mix for X = $\frac{4}{10} \times 4{,}03{,}000$

= 161200 kgs.

Std. mix for y = $\frac{6}{10} \times 4{,}03{,}000$

= 2,41,800 kgs.

Std. quantity i.e. std. qty for actual output.

Actual output = 40,000 kg.

∴ material x required = 40000 × 4 = 1,60,000

material y required = 40,000 × 6 = 2,40,000

Here: SP = Standard Price per kg of RM

SQ = Standard quantity for actual output.

SM = Standard mix i.e. Total actual quantity used in standard mix ratio

AQ used = Actual quantity used.

(i) Material cost variance = 1 − 4 = 76,800 (Adv.)

(ii) Material Price variance = 3 − 4 = 56,800 (Adv.)

(iii) Material uses variance = 1 − 3 = 20,000 (Adv.)

Working notes:

Labour Variance

(1)	(2)	(3)	(4)	(5)
SR × ST	SR × SM	SR × ATW	SR × ATP	AR × ATP
40 × (40,000 × .75)	40 × 32,000	40 × 32,000	40 × 32,000	13,12,000
12,00,000	12,80,000	12,80,000	12,80,000	13,12,000

Budgeted Hours = Budget Production x Budgeted Time per unit

Budget Production = 9700 + 12400 + 14200

$= 36,300 \times \frac{3}{4}$

= 27,225 hours

$= \frac{\text{Budgeted labours cost}}{\text{Budgeted hours}}$

$= \frac{10,89,000}{27,225}$

= 40 Rs.

Let Actual time worked = Actual time paid

Here: SR = Standard rate of labour per hour

ST = Standard time for Actual output

SM = Standard mix i.e. total at worked in ltd. mix ratio.

ATW = Actual time worked

ATP = Actual time paid for

(iv) Direct Labour Cost Variance = 1 − 5
= 1,12,000 (Adv)

(iv) Direct Labour rate variance = 4 − 5
= 32,000 (Adv)

(vi) Direct Labour efficiency variance = 1 − 2
= 80,000 (Adv)

Paper - 3B : Financial Management

Chapter - 1 : Scope and Objectives of Financial Management
2009 - May [5] {C} (iv)
Financial management is basically concerned with procurement and use of funds. In the light of these, the main objectives of financial management are:–
1. Profit Maximisation.
2. Wealth Maximisation.

Profit Maximisation :
Profit Maximisation is the main objective of business because :
(i) Profit acts as a measure of efficiency and
(ii) It serves as a protection against risk.

Agreements in favour of profit maximisation :
(i) When profit earning is the main aim of business the ultimate objective should be profit maximisation.
(ii) Future is uncertain. A firm should earn more and more profit to meet the future contingencies.
(iii) The main source of finance for growth of a business is profit. Hence, profits maximisation is required.
(iv) Profit maximisation is justified on the grounds of rationality as profits act as a measure of efficiency and economic prosperity.

Arguments against profit maximisation :
(i) It leads to exploitation of workers and consumers.
(ii) It ignores the risk factors associated with profit.
(iii) Profit in itself is a vague concept and means differently to different people.
(iv) It is a narrow concept at the cost of social and moral obligations.

Thus, profit maximisation as an objective of financial management has been considered inadequate.

2. **Wealth Maximisation :** Wealth maximisation is considered as the appropriate objective of an enterprise. When the firms maximises the stock holder's wealth, the individual stockholder can use this wealth to maximise his individual utility. Wealth maximisation is the single substitute for a stock holder's utility.

A stock holder's wealth is shown by :
Stock holder's wealth = No. of shares owned × Current stock price per share

Higher the stock price per share, the greater will be the stock holder's wealth, the greater will be the stock price per share.

$$\begin{array}{c}\text{Maximum Utility}\\ \downarrow \text{ Refers to}\\ \text{Maximum stock holder's wealth}\\ \downarrow \text{ Refers to}\\ \text{Maximum stock price per share}\end{array}$$

Arguments in favour of wealth maximisation:

(i) Due to wealth maximisation, the short term money lenders get their payments in time.

(ii) The long time lenders too get a fixed rate of interest on their investments.

(iii) The employees share in the wealth gets increased.

(iv) The various resources are put to economical and efficient use.

Argument against wealth maximisation :

(i) It is socially undesirable.

(ii) It is not a descriptive idea.

(iii) Only stock holders wealth maximisation does not lead to firm's wealth maximisation.

(iv) The objective of wealth maximisation is endangered when ownership and management are separated.

Inspite of the arguments against wealth maximisation, it is the most appropriative objective of a firm.

Chapter - 3 : Financial Analysis and Planning

2009 - May [5] {C} (iii)

- This ratio is the vital indicator to the lender to assess the extent of ability of the borrower to service the loan in regard to timely payment of interest and repayment of principal amount.
  - It shows whether the business is earning sufficient profits to pay not only the interest charges, but also the instalment due of the principal amount.
  - Debt service coverage ratio of 1:2 is considered ideal by the financial institutions.
  - This ratio will enable the lender to take correct view of the borrower's repayment capacity.
  - The ratio is calculated as follows :

$$= \frac{\text{Earning available for debt service}^{*}}{\text{Interest on loan} + \text{Instalment of the principal amount}}$$

* Where earning available for debt service = Profit after tax + Depreciation + Interest on Loan.

2009 - May [6] {C}

(a) **Schedule of Changes in Working Capital**

Particulars	31.3.08	31.3.09	Effect on Working Capital	
			Increase	Decrease
	Rs.	Rs.	Rs.	Rs.
Current Assets:				
Stock	3,60,000	3,50,000	–	10,000
Debtors	3,00,000	3,90,000	90,000	–
Cash and Bank	1,00,000	95,000	–	5,000
Prepaid Expenses	15,000	20,000	5,000	–
Total (A)	7,75,000	8,55,000		
Current Liabilities:				
Creditors	2,05,000	3,00,000	–	95,000
Bills Payable	45,000	81,000	–	36,000
Total (B)	2,50,000	3,81,000		
Net Working Capital (A-B)	5,25,000	4,74,000	–	
Net Decrease in Working Capital	–	51,000	51,000	–
	5,25,000	5,25,000	1,46,000	1,46,000

(b) **Funds Flow Statement for the year ended 31st March, 2009**

Particulars	**Rs.**
Sources of Fund	
Funds from Operation	7,49,000
Issue of 9% Preference Shares	5,00,000
Sales of Plant & Machinery	32,000
Refund of Income Tax	4,000
Financial Resources Provided (A)	12,85,000
Applications of Fund	
Purchase of Land and Building	1,50,000
Purchase of Plant & Machinery	3,60,000
Redemption of Debentures	2,06,000
Redemption of Preference Shares	3,15,000
Payment of Tax	1,05,000
Payment of Interim Dividend	50,000
Payment of Dividend (2007-08)	1,50,000
	13,36,000

Financial Resources Applied (B) Net Decrease in Working Capital (A-B)	51,000

Working Notes:

Estimation of Funds from Operation

Particulars	Rs.	Rs.
Profit and Loss A/c Balance on 31.3.2009		3,00,000
Add: Depreciation on Land and Building	50,000	
Depreciation on Plant and Machinery	1,20,000	
Loss on Sale of Plant and Machinery (40,000 - 32,000)	8,000	
Preliminary Expenses written off (40,000 - 35,000)	5,000	
Transfer to General Reserve	50,000	
Proposed Dividend	2,60,000	
Provision for Taxation	1,06,000	
Interim Dividend paid	50,000	
		6,49,000
		9,49,000
Less: Profit and Loss A/c balance on 31.3.08		2,00,000
Funds from Operation		7,49,000

Plant & Machinery A/c

Particulars	Rs.	Particulars	Rs.
To Balance b/d	9,00,000	By Depreciation	1,20,000
To Bank (Purchase) (Bal. Fig.)	3,60,000	By Bank (Sale)	32,000
		By P/L A/c (Loss on Sale)	8,000
		By Balance c/d	11,00,000
	12,60,000		12,60,000

Provision for Taxation A/c

Particulars	Rs.	Particulars	Rs.
To Advance tax payment A/c	76,000	By Balance c/d	70,000
To Balance c/d	1,00,000	By P/L A/c (additional provision for 2007-08)	6,000
		By P/L A/c (Provision for 08-09)	1,00,000
	1,76,000		1,76,000

Advance Tax Payment A/c

Particulars	Rs.	Particulars	Rs.
To Balance b/d	80,000	By Provision for taxation A/c	76,000
To Bank (paid for (08-09)	1,05,000	By Bank (Refund of tax)	4,000
		By Balance c/d	1,05,000
	1,85,000		1,85,000

8% Debentures A/c

Particulars	Rs.	Particulars	Rs.
To Bank (2,00,000 × 103%)(redemption)	2,06,000	By Balance b/d	3,00,000
		By Premium on redemption of Debentures A/c	6,000
To Balance c/d	1,00,000		
	3,06,000		3,06,000

9% Preference Share Capital A/c

Particulars	Rs.	Particulars	Rs.
To Bank A/c (3,00,000 × 105%)(redemption)	3,15,000	By Balance b/d	3,00,000
		By Premium on redemption of Preference shares A/c	15,000
To Balance c/d	5,00,000	By Bank (Issue)	5,00,000
	815000		815000

Securities Premium A/c

Particulars	Rs.	Particulars	Rs.
To Premium on redemption of debentures A/c	6,000	By Balance b/d	25,000
To Premium on redemption of preference shares A/c	15,000		
To Balance c/d	4,000		
	25,000		25,000

General Reserve A/c

Particulars	Rs.	Particulars	Rs.
To Bonus to Shareholders A/c	2,00,000	By Balance b/d	3,50,000
To Balance c/d	2,00,000	By P/L A/c (transfer) b/f	50,000
	4,00,000		4,00,000

Land & Building A/c

Particulars	Rs.	Particulars	Rs.
To Balance b/d	6,00,000	By Depreciation	50,000
To Bank (Purchase) (Bal. Fig.)	1,50,000	By Balance c/d	7,00,000
	7,50,000		7,50,000

2009 - May [8] {C}

Composition of Return on Equity using the DuPont Model

There are three components in the computation of return on equity using the traditional DuPont model - the net profit margin, asset turnover, and the equity multiplier. By examining each input individually, the sources of a company's return on equity can be discovered and compared to its competitors.

(i) ***Net Profit Margin:*** The net profit margin is simply the after-tax profit a company generates for each rupee of revenue.
Net profit margin = Net Income + Revenue
Net profit margin is a safety cushion; the lower the margin, lesser the room for error.

(ii) ***Asset Turnover:*** The asset turnover ratio is a measures of how effectively a company converts its assets into sales. It is calculated as follows:
Asset Turnover = Revenue + Assets
The asset turnover ratio tends to be inversely related to the net profit margin; i.e., the higher the net profit margin, the lower the asset turnover.

(iii) ***Equity Multiplier:*** It is possible for a company with terrible sales and margins to take on excessive debt and artificially increase its return on equity. The equity multiplier, a measure of financial leverage, allows the investor to see what portion of the return on equity is the result of debt. The equity multiplier is calculated as follows:
Equity Multiplier = Assets + Shareholders' Equity

Computation of Return on Equity

To calculate the return on equity using the DuPont model, simply multiply the three components (net profit margin, asset turnover, and equity multiplier.)

Return on Equity = Net profit margin × Asset turnover × Equity multiplier

Chapter - 4 : Financing Decision-Cost of Capital & Capital Structure

2009 - May [5] {C}

Concept of Debt-Equity or EBIT-EPS Indifference Point while Determining the Capital Structure of a Company

The determination of optimum level of debt in the capital structure of a company is a formidable task and is a major policy decision. It ensures that the firm is able to service its debt as well as contain its interest cost. Determination of optimum level of debt involves equalizing between return and risk.

EBIT-EPS analysis is a widely used tool to determine level of debt in a firm. Through this analysis, comparison can be drawn for various methods of financing by obtaining indifference point. It is point to the EBIT level at which EPS remain unchanged irrespective of debt level equity mix. For example indifference point for the capital mix (equity share capital and debt) can be determined as follows:

$$\frac{(EBIT - I_1)(1 - T)}{E_1} = \frac{(EBIT - I_2)(1 - T)}{E_2}$$

Where,

EBIT = Indifference point

E_1 = Number of equity shares in Alternative 1

E_2 = Number of equity shares in Alternative 2

I_1 = Interest charged in Alternative 1

I_2 = Interest charged in Alternative 2

T = Tax-rate

Alternative 1 = All equity finance

Alternative 2 = Debt-equity finance

2009 - May [7] {C} (a)

Calculation of weighted average cost of capital by using market value might.

Particulars	Market Value (Rs.)	Weight	Cost	WACC
9% Debenture	2,88,750	0.167	6.11%	1.020
11% Preference share	2,38,500	0.138	11.47%	1.583
Equity share @ reach	12,00,000	0.695	15.00%	10.425
	17,27,250	1		13.028%

WACC using market value weight = 13.02%

Working Notes:

Calculation of cost of Redeemable debenture:

$$Kd = \frac{\text{Interest}\,(1-\text{tax rate}) + \left[\dfrac{\text{Redeemable value} - \text{Issue price}}{\text{No. of years}}\right]}{\left[\dfrac{\text{Redeemable value} + \text{Issue Price}}{\text{No. of years}}\right]} \times 100$$

OR

$$k\varnothing = \frac{(I-t)\ +\ (RV-NP)/N}{(RV\ +\ NP)/2}$$

$$Kd = \frac{9(1-.35) + \left[\dfrac{100-98}{10}\right]}{\left[\dfrac{100+98}{2}\right]} \times 100$$

Kd = 6.11%

$$\frac{\text{Preference dividend} + \left[\dfrac{\text{Redeemable value} - \text{Issue price}}{\text{No. of years}}\right]}{\left[\dfrac{\text{Redeemable value} + \text{Issue Price}}{2}\right]} \times 100$$

Or

$$Kp = \frac{PD + (RV - NP)/N}{(RV + NP)2}$$

$$Kp = \frac{11 + \frac{100-97}{10}}{\frac{100+97}{2}} \times 100$$

Kp = 11.47%

Cost of equity:

$$\text{Ke} = \frac{D_1}{Po} + g$$

$$\text{Ke} = \frac{2}{(24-4)} + 0.05$$

= 15%

$$\text{Ke} = \frac{\text{Expected Dividend}}{\text{Current market price}} + \text{Growth rate}$$

Chapter - 6 : Types of Financing

2009 - May [5] {C}

Benefits to the Originator of Debt Securitization

The benefits to the originator of debt securitization are as follows:

(a) The assets are shifted off the balance sheet, thus giving the originator recourse to off balance sheet funding.

(b) It converts illiquid assets to liquid portfolio.

(c) It facilitates better balance sheet management as assets are transferred off balance sheet facilitating satisfaction of capital adequacy norms.

(d) The originator's credit rating enhances.

Chapter - 7 : International Financing

2009 - May [5] {C}

American depository receipt :– Deposit receipt issued by an Indian company in USA is known as American depository receipt (ADRs). Such receipt have to be issued in accordance with the provisions stipulated by the security and exchange commission of USA. An ADR is generally created by the deposit of the securities of a outsider company with a custodian bank in the country of incorporation of issuing company. The custodian bank informs the depository in USA that the ADRs can be issued. ADRs are dollar denominated and are traded in the same way as are security of U.S. company.

ADRs can be traded either by trading existing ADRs or purchasing the shares in the issuer's home market and having new ADRs created, based upon availability and market conditions. When trading in existing ADRs, the trade is executed on the secondary market on the New York Stock Exchange through

Depository Trust Company (DTC) without involvement from foreign brokers or custodians.

Chapter - 8 : Capital Budgeting and Investment Decisions

2009 - May [7] {C} (b)

Advise to the Management Regarding Buying of Machines

Statement Showing Evaluation of Two Machines

Machines	A	B
Purchase cost (Rs.): (i)	6,00,000	4,00,000
Life of machines (years)	3	2
Running cost of machine per year (Rs.): (ii)	1,20,000	1,80,000
Cumulative present value factor for 1-3 years @ 10%: (iii)	2.4868	–
Cumulative present value factor for 1-2 years @ 10%: (iv)	–	1.7355
Present value of running cost of machines (Rs.): (v)	2,98,416	3,12,390
	[(ii) x (iii)]	[(ii) x (iv)]
Cash outflow of machines (Rs.): (vi)=(i)+(v)	8,98,416	7,12,390
Equivalent present value of annual cash outflow	3,61,273.93	4,10,481.13
	[(vi) ÷ (iii)]	[(vi) + (iv)]

Alternatively:

Calculation of Annualized cash outflow of machine 'A'

Year	Cash of	D.F @ 10%	DF
0	6,00,000	1	6,00,000
1	1,20,000	0.9091	10,90,92
2	1,20,000	0.8264	99,168
3	1,20,000	0.7513	90,156
			8,98,416

Annulized cash outflow = $\frac{8,98,416}{2.4868}$ = 3,61,274/-

Note: 0.9091 + 0.8264 + 0.7513 = 2.4868

Calculation of Annualized cash outflow of machine 'B'

Year	Cash of	D.F @ 10%	DF
0	4,00,000	1	4,00,000
1	1,80,000	0.9091	1,63,638
2	1,80,000	0.8264	1,48,752
			7,12,390

Annulized cash outflow = $\frac{7,12,390}{1.7353}$ = 4,10,481/-

Note: 0.9091 + 0.8264 = 1.7353

Recomendation: Machine 'A's Annulized cash out flow is lower than machine 'B'. Therefore machine 'A' should be adopted.

Recomendation: The Company should buy Machine A since its equivalent cash outflow is less than Machine B.

2009 - May [8] {C} (iii)

Concept of Discounted Payback Period

- Payback period is time taken to recover the original investment from project cash flows. It is also termed as break even period. The focus of the analysis is on liquidity aspect and it suffers from the limitation of ignoring time value of money and profitability.
- Discounted payback period considers present value of cash flows, discounted at company's cost of capital to estimate breakeven period i.e. it is that period in which future discounted cash flows equal the initial outflow.
- The shorter the period, better it is. It also ignores post discounted payback period cash flows.
- It takes care of the time value of money.

Chapter - 10 : Treasury & Cash Management

2009 - May [5] {C} (i)

Please refer 2002 - Nov [7] (a) on page no. 487

2009 - May [8] {C}(i)

Detemination of Optimal Cash Balance according to William J. Baumol Model

Optimum Cash Balance = $\sqrt{\frac{2AB}{C}}$

Where,

A = Annual disbursement

B = Administrative and transaction cost

C = Marketable securities yeild.

$$C = \sqrt{\frac{2 \times 2{,}62{,}500 \times 12 \times 25}{0.075}}$$

$$= \sqrt{\frac{15{,}75{,}00{,}000}{0.075}}$$

$$= \sqrt{2{,}10{,}00{,}00{,}000}$$

Optimum Cash Balance, C, = Rs. 45,826

6. **Verification:**

Debtors A/c				Creditors A/c				Cash A/c			
To bal b/d	3,00,000	By Cash (bal fig)	19,65,000	To bal b/d		By bal b/d	3,00,000	To bal b/d	3,00,000	By Invests	2,96,600
To sales	21,60,000	By bal c/d	4,95,000	To cash (bal fig)	16,25,000	By Purchase	17,40,000	To Debtors	19,65,000	By Creditor	16,25,000
										By Expenses (bal fig)	23,400
				Total c /d	4,15,000			To Asset	90,000		
										By bal b/d	3,10,000
	24,60,000		24,60,000		20,40,000		20,40,000		23,55,000		23,55,000

Chapter - 12 : Management of Receivables

2009 - May [8] {C}(ii)

Computation of Effective Cost of Factoring

Average level of Receivables	=	12,00,000 × 90/360	3,00,000
Factoring Commission	=	3,00,000 × 2/100	6,000
Factoring Reserve	=	3,00,000 × 10/100	30,000
Amount Available for Advance = Rs. 3,00,000-(6,000+30,000)			2,64,000

Factor will deduct his interest @ 16%:-

Interest = $\frac{\text{Rs. } 2{,}64{,}000 \times 16 \times 90}{360 \times 100}$ = Rs. 10,560

Advance to be paid = Rs. 2,64,000 - Rs. 10,560 = Rs. 2,53,440

Annual Cost of Factoring to the Firm:	Rs.
Factoring Commission (Rs. 6,000 × 360/90)	24,000
Interest Charges (Rs. 10,560 × 360/90)	42,240
Total	66,240
Firm's Savings on taking Factoring Service:	Rs.
Cost of Administration Saved	50,000
Cost of Bad Debts (Rs. 12,00,000 x 1.5/100) avoided	18,000
Total	68,000
Net Benefit to the Firm (Rs. 68,000 - Rs. 66,240)	1,760
Effective Cost of Factoring = $\frac{\text{Rs. } 66{,}240 \times 100}{2{,}53{,}440}$	26.136%

Effective Cost of Factoring = 26.136%

Note: In the same manner we can also calculate effective rate of cost saving to the firm.

= $\frac{1760 \times 100}{2{,}53{,}440}$ = 0.694%

Question Paper of November2009 Examination

Paper - 3A : Cost Accounting

Chapter-1 : Basic Concepts

2009 - Nov [1] Answer the following :

(i) Define the following :

(a) Imputed cost

(b) Capitalised cost. (2 marks)

Chapter-2 : Material Cost

2009 - Nov [4] Answer the following :

(iii) The following information relating to a type of Raw material is available:

Annual demand	2000 units
Unit price	Rs. 20.00
Ordering cost per order	Rs. 20.00
Storage cost	2% p.a.
Interest rate	8% p.a.
Lead time	Half-month

Calculate economic order quantity and total annual inventory cost of the raw material. (3 marks)

Chapter-3 : Employee Cost

2009 - Nov [4] Answer the following :

(i) Standard Time for a job is 90 hours. The hourly rate of Guaranteed wages is Rs. 50. Because of the saving in time a worker a gets an effective hourly rate of wages of Rs. 60 under Rowan premium bonus system. For the same saving in time, calculate the hourly rate of wages a worker B will get under Halsey premium bonus system assuring 40% to worker. (3 marks)

Chapter-6 : Reconciliation of Cost and Financial Accounts

2009 - Nov [1] Answer the following :

(iii) List the Financial expenses which are not included in cost. (2 marks)

(vi) When is the reconciliation statement of Cost and Financial accounts not required ? (2 marks)

Chapter-8 : Contract Costing

2009 - Nov [1] Answer the following :

(iv) Mention the main advantage of cost plus contracts. (2 marks)

Chapter-9 : Operating Costing

2009 - Nov [4] Answer the following :

(ii) Explain briefly, what do you understand by Operating Costing. How are composite units computed ? (3 marks)

Chapter-10 : Process Costing

2009 - Nov [3] (a) XP Ltd. furnishes you the following information relating to process II.

(i) Opening work-in-progress—NIL

(ii) Units introduced 42,000 units @ Rs. 12

(iii) Expenses debited to the process :

	Rs.
Direct material	61,530
Labour	88,820
Overheads	1,76,400

(iv) Normal loss in the process = 2% of input.

(v) Closing work-in-progress— 1200 units

Degree of completion —	Materials	100%
	Labour	50%
	Overhead	40%

(vi) Finished output— 39500 units

(vii) Degree of completion of abnormal loss :

Material	100%
Labour	80%
Overhead	60%

(viii) Units scraped as normal loss were sold at Rs. 4.50 per unit.

(ix) All the units of abnormal loss were sold at Rs. 9 per unit.

Prepare :

(a) Statement of equivalent production.

(b) Statement showing the cost of finished goods, abnormal loss and closing work-in-progress.

(c) Process II account and abnormal loss account. (8 marks)

Chapter-12 : Standard Costing

2009 - Nov [3](b) The following information is available from the cost records of Vatika & Co. For the month of August, 2009 :

Material purchased 24,000 kg Rs. 1,05,600

Material consumed 22,800 kg

Actual wages paid for 5,940 hours Rs. 29,700

Unit produced 2160 units.

Standard rates and prices are :

Direct material rate is Rs. 4.00 per unit

Direct labour rate is Rs. 4.00 per hour

Standard input is 10 kg. for one unit.
Standard requirement is 2.5 hours per unit.
Calculate all material and labour variances for the month of August, 2009.
(8 marks)

Chapter-13 : Marginal Costing

2009 - Nov [1] Answer the following :

(v) A company sells two products, J and K. The sales mix is 4 units of J and 3 units of K. The contribution margins per unit are Rs. 40 for J and Rs. 20 for K. Fixed costs are Rs. 6,16,000 per month. Compute the break-even point. (2 marks)

2009 - Nov [2] Mega Company has just completed its first year of operations. The unit costs on a normal costing basis are as under :

		Rs.
Direct material 4 kg @ Rs. 4	=	16.00
Direct labour 3 hrs @ Rs. 18	=	54.00
Variable overhead 3 hrs @ Rs. 4	=	12.00
Fixed overhead 3 hrs @ Rs. 6	=	18.00
		100.00

Selling and administrative costs :

Variable	Rs. 20 per unit
Fixed	Rs. 7,60,000

During the year the company has the following activity :

Units produced	=	24,000
Units sold	=	21,500
Unit selling price	=	Rs. 168
Direct labour hours worked	=	72,000

Actual fixed overhead was Rs. 48,000 less than the budgeted fixed overhead. Budgeted variable overhead was Rs. 20,000 less than the actual variable overhead. The company used an expected actual activity level of 72,000 direct labour hours to compute the predetermine overhead rates.

Required :

(i) Compute the unit cost and total income under :
 (a) Absorption costing
 (b) Marginal costing.

(ii) Under or over absorption of overhead.

(iii) Reconcile the difference between the total income under absorption and marginal costing. (15 marks)

Chapter-14 : Budgets & Budgetary Control

2009 - Nov [1] Answer the following :

(ii) Calculate efficiency and activity ratio from the following data :

Capacity ratio	=	75%

Budgeted output	=	6000 units	
Actual output	=	5000 units	
Standard Time per unit	=	4 hours	(2 marks)

2009 - Nov [4] Answer the following :

(iv) List the eight functional budgets prepared by a business. (3 marks)

Paper - 3B : Financial Management

Chapter-1 : Scope and Objectives of Financial Management

2009 - Nov [5] Answer the following :

(iv) Differentiate between Financial Management and Financial Accounting. (2 marks)

2009 - Nov [8] Answer the following :

(i) Explain the two basic functions of Financial Management. (3 marks)

Chapter-3 : Financial Analysis and Planning

2009 - Nov [5] Answer the following :

(i) Explain briefly the limitations of Financial ratios. (2 marks)

(vi) From the informations 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)

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

Liabilities	31.3.08 Rs.	31.3.09 Rs.	Assets	31.3.08 Rs.	31.3.09 Rs.
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

Additional informations :

During the year ended 31st March, 2009 the company :

(i) 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.
(ii) Provided Rs. 4,20,000 as depreciation fixed assets.
(iii) Sold some investment and profit credited to capital reserve.
(iv) Redeemed 30% of the debenture @ 105
(v) 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)

Chapter-4 : Financing Decision-Cost of Capital & Capital Structure

2009 - Nov [5] Answer the following :

(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 earning. (2 marks)

2009 - Nov [8] Answer the following :

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

(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 earning before interest and tax of Rs. 2,60,000 p.a. and the capitalisation rate is 10%. Assuming the corporate tax of 30%, calculate the value of these firms according to MM Hypothesis. (3 marks)

Chapter-5 : Business Risk, Financial Risk & Leverage

2009 - Nov [5] Answer the following :

(ii) What do you understand by Business Risk and Financial Risk ? (2 marks)

2009 - Nov [7] (a) From the following Financial data of Company A and Company B :

Prepare their Income statements.

	Company A Rs.	Company B Rs.
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	—	105000

(8 marks)

Chapter-6 : Types of Financing

2009 - Nov [8] Answer the following :

(ii) Explain the following terms :

(a) Ploughing back of profits (1.5 marks)

Chapter-8 : Capital Budgeting and Investment Decisions

2009 - Nov [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 below :

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)

2009 - Nov [8] Answer the following :

(ii) Explain the following terms :

(b) Desirability factor. (1.5 marks)

New Chapter : Financing of working Capital

2009 - Nov [5] Answer the following :

(iii) Differentiate between Factoring and Bills discounting. (2 marks)

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