



# **GLOBAL CMA**

**COST & MANAGEMENT  
ACCOUNTING AND FINANCIAL  
MANAGEMENT**

Paper-10

Syllabus-2016

Answer of Postal test Paper  
Set-4

**Sol. 1 (a) Match the following**

- |                                 |                                |
|---------------------------------|--------------------------------|
| (i) Mgt Accounting is composed  | Mgt and accounting             |
| (ii) Variance analysis          | Technique to assist inter firm |
| (iii) Variable Cost per unit    | Fixed                          |
| (iv) Same industries covered by | The Tandon Committee           |

**Sol. 1 (b) MCQ**

- (i) B
- (ii) B
- (iii) C

**Sol. 1 (c) Fill in the blanks**

- (i) Performance
- (ii) Financial
- (iii)
- (iv) Negotiable Instrument

**Sol. 1 (d) True/False**

- (i) True
- (ii) True
- (iii) True



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Q. 2

A.

**Computation of Uniform Price:**

$$\begin{aligned}\text{Weighted Average Cost} &= [850 \times 40\%] + [800 \times 25\%] + [750 \times 20\%] + [690 \times 15\%] \\ &= 340 + 200 + 150 + 103.5 \\ &= ₹793.5\end{aligned}$$

$$\begin{aligned}\text{Weighted Average Return on Capital employed (profit)} &= [628 \times 40\%] + [430 \times 25\%] + [350 \times 20\%] + [230 \times 15\%] \\ &= 251.20 + 107.5 + 70 + 34.5 \\ &= ₹463.20\end{aligned}$$

$$\text{Uniform Price} = 793.5 + 463.20 = ₹1,256.70.$$

B.

**Difference between Fixed and Flexible Budgets:**

	<b>Fixed Budget</b>	<b>Flexible Budget</b>
(i)	It does not change with actual volume of activity achieved. Thus it is known as rigid or inflexible budget.	It can be recasted on the basis of activity level to be achieved. Thus it is not rigid.
(ii)	It operates on one level of activity and under one set of conditions. It assumes that there will be no change in the prevailing conditions, which is unrealistic.	It consists of various budgets for different levels of activity.
(iii)	Here as all costs like – fixed, variable and semi-variable are related to only one level of activity so variance analysis does not give useful information.	Here analysis of variance provides useful information as each cost is analysed according to its behaviour.
(iv)	If the budgeted and actual activity levels differ significantly, then the aspects like cost ascertainment and price fixation do not give a correct picture.	Flexible budgeting at different levels of activity facilitates the ascertainment of cost, fixation of selling price and tendering of quotations.
(v)	Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between the two activity levels.	It provides a meaningful basis of comparison of the actual performance with the budgeted targets.

C.

Calculation of Marginal Cost of Component X – 2370

	Per unit
	₹
Direct Material	2.75
Direct Labour	1.75
Other Variables	0.50
Marginal Cost	5.00

- (a) Since the marginal cost per unit of ₹ 5 is lower than the market price of ₹ 5.75, it is recommended to manufacture the component in the factory.
- (b) Since the purchase price of ₹ 4.85 is lower than the marginal cost, the component should be bought from outside supplier provided proper quality and regular supply are guaranteed.

Q. 3

A.

Computation of contribution per labour hour from external sales:

	X	Y	Z
Market price (₹)	48	46	40
Variable cost (₹)	33	24	28
Contribution (₹)	15	22	12
Labour hours required	3	4	2
Contribution per labour hour (₹)	5	5.50	6
Priority	III	II	I

Computation of transfer price when

(a) The capacity is 3800 hours:

Hours required for	Z = 300 x 2	= 600
	Y = 500 x 4	= 2000
	X = 800 x 3	= <u>2400</u>
		<u>5000</u>

The existing capacity is not sufficient to produce the units to meet the external sales. In order to transfer 300 units of Y, 1200 hours are required in which division A will give up the production of X to this extent.

	₹
Variable cost of Y	24
(+) contribution lost by giving up production of X to the extent of 1200 hours = 1200 x 5 = ₹ 6,000	
∴ Opportunity cost per unit = (6000/300)	20
Required transfer price	44

	₹
Variable cost	24
Contribution lost by giving up X to the extent of 600 hours (being opportunity cost) = $600 \times 5 = 3000$	
Opportunity cost per unit = $(6000/300)$	10
Required transfer price	34

B.

80% Learning Curve results are given below:

Production (Units)	Cumulative Average Time (hours)	Total Time (hours)
1	10	10
2	8	16
4	6.4	25.6
8	5.12	40.96
16	4.096	65.54
32	3.2768	104.86

Labour time required for first eight units = 40.96 hours

Labour cost required for 8 units = 40.96 hours  $\times$  ₹ 12/hr = ₹ 491.52

Labour time for 32 units = 104.86 hours

Labour time for first eight units = 40.96 hours

Labour time required for 2<sup>nd</sup> order for 24 units = 63.90 hours

Labour cost for 24 units = 63.90 hours  $\times$  ₹ 12/hr = ₹ 766.80

Q. 4 A

**Statement showing computation of comparative cost of three alternatives**

	Taxi (₹)	New Small car (₹)	Old Bigger Car (₹)
Fixed Costs:			
Depreciation $(1,35,000 - 19,000/5)$ ; $(2,00,000 - 12,000/5)$	---	3,200	1,600
Repairs & Servicing	---	1,000	1,200
Taxes & Insurance	---	1,700	700
		5,900	3,500
Variable cost:			
Petrol per km.	0.90	0.35	0.5
Cost at 10,000 kms.	9,000 $(10,000 \times 0.9)$	9,400 $[5,900 + (10,000 \times 0.35)]$	8,500 $[3,500 + (10,000 \times 0.5)]$
Cost at 19,000 kms.	17,100 $(19,000 \times 0.9)$	12,550 $[5,900 + (19,000 \times 0.35)]$	13,000 $[3,500 + (19,000 \times 0.5)]$

(i) At 10,000 kms, old bigger car is cheaper.

(ii) At 19,000 kms, new smaller car is cheaper.

The distance at which cost of two cars is equal is =  $(5,900 - 3,500) / (0.5 - 0.35) = 16,000$  Kms

Indifference point for firm's old bigger car and taxi =  $3500 / 0.4 = 8,750$  kms

Indifference point for firm's new small car and taxi =  $5,900 / 0.55 = 10,727$  kms

Q. 5

A.

**Features of Marginal Costing:**

The main features of Marginal Costing may be summed up as follows:

1. Appropriate and accurate division of total cost into fixed and variable by picking out variable portion of semi variable costs also.
2. Valuation of stocks such as finished goods, work-in-progress is valued at variable cost only.
3. The fixed costs are written off soon after they are incurred and do not find place in product cost or inventories.
4. Prices are based on Marginal Cost and Marginal Contribution.
5. It combines the techniques of cost recording and cost reporting.

B.

**Labour efficiency** - Workers become physically more dexterous. They become mentally more confident and spend less time hesitating, learning, experimenting, or making mistakes. Over time they learn short-cuts and improvements. This applies to all employees and managers, not just those directly involved in production.

**Standardization, specialization, and methods improvements** - As processes, parts, and products become more standardized, efficiency tends to increase. When employees specialize in a limited set of tasks, they gain more experience with these tasks and operate at a faster rate.

**Technology-Driven Learning** - Automated production technology and information technology can introduce efficiencies as they are implemented and people learn how to use them efficiently and effectively.

**Better use of equipment** - as total production has increased; manufacturing equipment will have been more fully exploited, lowering fully accounted unit costs. In addition, purchase of more productive equipment can be justifiable.

**Changes in the resource mix** - As a company acquires experience, it can alter its mix of inputs and thereby become more efficient.

**Product redesign** - As the manufacturers and consumers have more experience with the product, they can usually find improvements. This filters through to the manufacturing process. A good example of this is Cadillac's testing of various "bells and whistles" specialty accessories. The ones that did not break became mass produced in other General Motors products; the ones that didn't stand the test of user "beatings" were discontinued, saving the car company money. As General Motors produced more cars, they learned how to best produce products that work for the least money.

**Value chain effects** - Experience curve effects are not limited to the company. Suppliers and distributors will also ride down the learning curve, making the whole value chain more efficient.

**Network-building and use-cost reductions** - As a product enters more widespread use, the consumer uses it more efficiently because they're familiar with it. One fax machine in the world can do nothing, but if everyone has one, they build an increasingly efficient network of communications. Another example is email accounts; the more there are, the more efficient the network is, the lower everyone's cost per utility of using it.

Q. 7

A.

a) Determination of pattern for raising additional finance:

Total additional finance required = ₹10,00,000

Debt Equity mix = 30:70

Therefore

Additional Debt = 10,00,000 x 30% = ₹3,00,000

Additional Equity = 10,00,000 x 70% = ₹7,00,000

Detailed pattern

Total equity:	₹	₹
Retained earnings	2,10,000	
Equity share Capital	4,90,000	7,00,000
Debt:		
10% debt	1,80,000	
16% debt	1,20,000	3,00,000
Total Additional finance		10,00,000

b) Calculation of Average Cost of additional debt:

Post Tax Cost of 10% debt = 10% (1-0.5) = 5%

Post Tax Cost of 16% debt = 16% (1-0.5) = 8%

Average cost (after tax) of total debt =  $5 \times \frac{1,80,000}{3,00,000} + 8 \times \frac{1,20,000}{3,00,000} = 6.2\%$

c) Computation of Cost of equity and cost of retained earnings:

$$\text{Cost of equity } (K_e) = \frac{D_1}{P_0} + g$$

$$= \frac{2 \times 1.10}{44} + 0.10 = 0.15 \text{ or } 15\%$$

Cost of Retained Earnings ( $K_r$ )

$K_r = K_e$  (as there is no flotation cost)

$K_r = 15\%$

d) Calculation of Weighted Cost of Capital

Element	Amount (₹)	Weight	Specific Cost	Overall cost
Equity Share Capital	4,90,000	0.49	0.15	0.0735
Reserves	2,10,000	0.21	0.15	0.0315
10% Debt	1,80,000	0.18	0.05	0.0090
16% Debt	1,20,000	0.12	0.08	0.0096
Total	10,00,000	1.00		0.1236

WACC = 12.36%



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B.

i) Calculation of value of firm (Vf) under Traditional approach:

Value of firm = Value of Debt + Value of equity

1. EBIT	4,00,000
2. Interest (10,00,000 × 10%)	1,00,000
3. Equity Earnings (1-2)	3,00,000
4. Equity Capitalisation rate	15%
5. Value of Equity $\left[ \frac{3}{4} \right]$	20,00,000
6. Value of Debt	10,00,000
7. Value of firm (5+6)	30,00,000

ii) Calculation overall capitalization rate and leverage ratios

$$\text{Overall Capital Rate (K}_o\text{)} = \frac{\text{EBIT}}{\text{Value of firm}} \times 100 = \frac{4,00,000}{30,00,000} \times 100 = 13.33\%$$

#### Leverage Ratios

$$\text{a) B/S Ratio} = \frac{\text{Borrowing}}{\text{Share Holders Funds}} = \frac{10,00,000}{20,00,000} = 0.5$$

$$\text{b) B/V Ratio} = \frac{\text{Borrowing}}{\text{Share Holders Funds}} = \frac{10,00,000}{30,00,000} = 0.33$$

Q.9

A.

#### Factoring vs. Bill Discounting

Factoring differs from discounting in many respects. They are:

- (i) Factoring is a broader term covering the entire trade debts of a client whereas discounting covers only those trade debts which are backed by Account Receivables.
- (ii) Under factoring, the factor purchases the trade debt and thus becomes a holder for value. But, under discounting the financier acts simply as an agent of his customer and he does not become the owner. In other words, discounting is a kind of advance against bills whereas factoring is an outright purchase of trade debts.
- (iii) The factors may extend credit without any recourse to the client in the event of non-payment by customers. But, discounting is always made with recourse to the client.
- (iv) Account Receivables under discount are subject to rediscounting whereas it is not possible under factoring.
- (v) Factoring involves purchase and collection of debts, management of sales ledger, assumption of credit risk, provision of finance and rendering of consultancy services. But, discounting involves simply the provision of finance alone.
- (vi) Bill discounting finance is a specific one in the sense that it is based on an individual bill arising out of an individual transaction only. On the other hand, factoring is based on the 'whole turnover' i.e., a bulk finance is provided against a number of unpaid invoices.
- (vii) Under discounting, the drawee is always aware of the bank's charge on receivables. But, under undisclosed factoring everything is kept highly confidential.
- (viii) Bill financing through discounting requires registration of charges with the Registrar of Companies. Infact, factoring does not require such registration.
- (ix) Discounting is always a kind of "in-balance sheet financing". That is, both the amount of receivables and bank credit are shown in the balance sheet itself due to its 'with recourse' nature. But, factoring is always "off-balance sheet financing".



B.

Calculation of operating cycle

	Year 1	Year 2
<b>Current Assets:</b>		
1. Raw material stock = $\frac{\text{Stock of raw material}}{\text{Purchases}} \times 360$	$(20 / 96) \times 360 =$ 75 days	$(27 / 135) \times 360 =$ 72 days
2. WIP turnover = $(\text{WIP} / \text{COGS}) \times 360$	$(14 / 140) \times 360 =$ 36 days	$(18 / 180) \times 360 =$ 36 days
3. Finished goods turnover = $(\text{Finished good} / \text{COGS}) \times 360$	$(21 / 140) \times 360 =$ 54 days	$(24 / 180) \times 360 =$ 48 days
4. Debtors turnover = $(\text{Debtors} / \text{Sales}) \times 360$	$(32 / 160) \times 360 =$ 72 days	$(50 / 200) \times 360 =$ 90 days
Total (A)	237 days	246 days
Creditors period = $(\text{Creditors} / \text{Purchases}) \times 360$	$(16 / 96) \times 360 =$ 60 days	$(18 / 135) \times 360 =$ 48 days
Total (B)	60 days	48 days
Operating cycle (A-B)	177 days	198 days

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