

CMA TEST- 6 (Solution)		
Time Allowed: 50 mint.	Jan. 13, 2019	Total Marks: 30 Marks

**Answer to Question no.1: Benefits of studying of Marginal Costing**

1. Marginal costing is very effective in cost control. It is necessary to segregate various expenses in to fixed and variable parts. Such behavior of cost is also compared with past data. As such, the management is able to control if there is variance as compared to past period or standard cost.
2. It is helpful in taking the decision regarding price fixation. Normally the price is to be fixed above total cost for earning some profit. But, under certain circumstances, price can be fixed at below total cost but above Variable cost because fixed cost becomes irrelevant in the decision – making process.
3. It is helpful in deciding the most suitable sales mix for obtaining the maximum profit. If the situation of key factor or limiting factor is prevailing, the product which yields highest contribution per unit of key factor is considered most profitable.
4. In case of “Make or Buy decisions”, the decision is to be taken by comparing the supplier’s price with the variable manufacturing cost. Here, fixed cost is to be ignored. The study of Marginal Costing is helpful in taking such decisions.
5. If new product has been developed & management is faced with the problem of deciding whether to employ machine or labour oriented activities, the management should select such method which yields maximum contribution.

**Answer to Question no.2:**

(a) The variable cost of producing the component is shown below: -

Particulars	Amount (₹)
Materials	2.75
Labour	1.75
Other variable costs	0.50
Variable or Marginal cost	5.00
Fixed cost	1.25

On the face of it, it appears that it is cheaper to buy the component at ₹ 5.75 each because it is less than own cost of ₹ 6.25 each but it should be understood that the fixed costs cannot be saved if it is decided to buy the component instead of making it. Thus if the component is purchased then it will really cost ₹ 7 per component i.e., ₹ 5.75 paid for purchase plus ₹ 1.25 of fixed cost which will continue to be incurred and cannot be saved. It is therefore, advised to make the component.

(b) If the price offered is ₹ 4.85 per unit, then the offer can be accepted as there will be a saving of 15 paise per unit.

**Answer to Question no.3: Evaluation of existing situation**

Particulars		Amount (₹)
Selling Price per unit		40
(-) Variable cost per unit		
Material	16	
Conversion cost	12	
Dealer's Margin	4	(32)
Contribution per unit		8
Total contribution (90,000 units × ₹ 8 per unit)		7,20,000
(-) Fixed Cost		(5,00,000)
Profit		2,20,000

(a) If SP per unit reduces by 5%, it becomes ₹ 40 less 5% i.e. ₹ 38.

**New Variable cost per unit is:**

Materials	₹ 16	
Conversion Cost	₹ 12	
Dealer's Margin (10% of Selling Price)	₹ 3.80	
		<b>₹ 31.80</b>

Contribution per unit = Selling Price per unit – Variable Cost per unit = ₹ 38 - ₹ 31.80 = ₹ 6.20

**Hence,** units to be sold to maintain the present level of profit is computed below: -

$$= \frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{Contribution per unit}} = \frac{\text{₹ 5,00,000} + \text{₹ 2,20,000}}{\text{₹ 6.20}} = 1,16,129 \text{ units.}$$

(b) At present, the dealer's margin is 10% of selling price. If it is increased by 25%, it will become 12.5% of selling price, i.e. 12.5% of ₹ 40 = ₹ 5. **Hence,** Variable cost becomes:

Materials	₹ 16	
Conversion Cost	₹ 12	
Dealer's Margin	₹ 5	<b>₹ 33</b>

Contribution per unit = SP / Unit – VC / Unit = ₹ 40 – ₹ 33 = ₹ 7

Units to be sold to maintain the present profit is computed below: -

$$\frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{Contribution per unit}} = \frac{\text{₹ 5,00,000} + \text{₹ 2,20,000}}{\text{₹ 7}} = 1,02,857 \text{ units.}$$

**Answer to Question no.4:**

**Basic calculations:-**

Present sales at 80% capacity = ₹ 8,00,000 (output at 80% capacity = 8,00,000/25 = 32,000 units)

**1) Variable cost per units:**

Material cost		₹ 7.50
Labour cost		₹ 6.25
Variable overheads		₹ 3.75
		<b>₹ 17.50</b>

**2) Contribution/unit = SP/unit – VC/unit = ₹ 25 – ₹ 17.50 = ₹ 7.50**

**3) Fixed Cost**

Present amount of total cost (Semi-variable)	₹ 1,80,000
(-) Present amount of variable cost included in semi-variable cost	
(32,000 units × ₹ 3.75 p.u.)	(1,20,000)
Fixed cost included in semi-variable cost	₹ 60,000

Total fixed cost = 60,000 + 90,000 = ₹ 1,50,000

**4) Present Profit**

Present contribution (32,000 units × ₹ 7.50)	₹ 2,40,000
(-) Fixed cost	(1,50,000)
Present profit	₹ 90,000

**Requirements:**

$$\text{a) BEP (units)} = \frac{\text{Fixed Cost}}{\text{Contribution/Unit}} = \frac{\text{₹ 1,50,000}}{\text{₹ 7.50 p.u.}} = 20,000 \text{ units}$$

At 80% level, sales level is 32,000 units. Hence, for break-even level of 20,000 units, the company will have to operate at 50% capacity

$$\text{b) Units to sold for profit of 8% of sales} = \frac{\text{Fixed Cost}}{\text{Contribution/Unit}}$$

$$x \text{ Units} = \frac{\text{₹ 1,50,000} + \frac{8}{100}(25x)}{\text{₹ 7.50 p.u.}}$$

**Solving**, we get  $x = 27,273$  units.

Hence, at the level of 27,273 units, the company will realize profit of 8% of sales.

$$\begin{aligned} \text{c) Units to be sold for profit of ₹ 95,000} &= \frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{Contribution/Unit}} \\ &= \frac{\text{₹ 1,50,000} + \text{₹ 95,000}}{\text{₹ 7.50 p.u.}} = 32,667 \text{ units} \end{aligned}$$

**d) 40% of activity level = 16,000 units.**

$$\text{BEP (Units)} = \frac{\text{Fixed Cost}}{\text{SP/Unit} - \text{VC/Unit}} \Rightarrow 16,000 \text{ units} = \frac{\text{₹ 15,000}}{\text{SP/unit} - \text{₹ 17.50}}$$

Solving, we get SP/unit = ₹ 26.875. Hence, for obtaining the break-even situation at the level of 16,000 units, the selling price per unit should be fixed at ₹ 26.875.