Quadrant II – Transcript and Related Materials				
Programme	: Bachelor of Commerce (Third Year)			
Subject	: Commerce			
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Paper Title	: DSE-3 Major-III Techniques of Costing			
Unit II	: Application of Marginal Costing in Decision Making			
Module Name	: Profit Planning			
Module No	: 6			
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## **Glossary of terms/words:**

Cost-Volume-Profit Analys	is: The cost volume profit analysis is marginal costing technique commonly referred to as C-V-P analysis. It represents the net effect of changes in cost, volume and price on profits of the firm.
Sales Volume	: Sales volume is the number of units that are sold in a given time period.
Fixed Cost	: Fixed Cost is cost which remains constant irrespective of output produced.
Variable Cost	: Variable Cost is cost that change with level of output

## Additional Examples/Illustrations

#### Illustration 1:

Quality products Ltd manufactures and markets a single product. Following data is available:

Particulars	Per Unit (₹)
Materials	16
Conversion Cost (Variable)	12
Dealer's Margin (Variable)	4
Selling Price	40
Fixed Cost : ₹ 5,00,000	
Present Sales:90,000 units	
Plant Utilization :60 %	

There is acute competition. Extra efforts are necessary to sell. Suggestions have been made for increasing sales:

- a. By reducing sales price by 5%
- b. By increasing dealers' margin by 25 % over the existing rate.

Which of these two suggestions you would recommend, if the company desires to maintain the present profit. Give Reasons.

Solution on illustration 1:

#### **Marginal Cost Statement**

Particulars	Per unit Amount ₹.	Total cost Amount ₹.
A) Sales Rs.40 x 90,000 units	40	36,00,000
Less: Variable cost		
Material (16 x 90000)	16	14,40,000
Conversion cost (12x 90,000	12	10,80,000
Dealer's margin (4 x 90,000)	4	3,60,000
(B)Total variable	32	2,88,000
cost		
Contribution (A-B)	8	7,20,000
Less Fixed cost		5,00,000
Profit		2,20,000

#### a. Reduce sales price by 5%

Selling price reduced by 5% =₹40x5%

=₹2

New Selling Price=₹40-₹2 =₹38

Required sales = Fixed Cost +Desired Profit (inunits) Contribution Per Unit = 5,00,000+2,20,00038-32= 7,20,0006= 1,20,000Units.

Required Sales(in ₹)=1,20,000 units x ₹38 =₹45,60,000

## b. Dealers Margin (VC) increases by 25%:

New Dealers Margin =₹4+25% increase =₹ 4+1 =₹5

New Variable Cost =16+12+5=₹.33

New C.P.U= ₹40-33= ₹7

# Required sales = Fixed Cost +Desired Profit (in units) Contribution Per Unit $=\frac{5,00,000+2,20,000}{7}$ $=\frac{7,20,000}{7}$ =102857.14 UnitsApprox. Sales=102857Units x₹40 =₹41,14,280

Would prefer Suggestion (b), as its cost is reduced but same time profit is maintain and sales in units are increase with present Selling Price.

## Illustration 2:

50,000 units of an item are produced and sold in the home market at ₹50 per unit. The home market cannot absorb more than 50,000 units in a year but there is an export for this item at ₹30 per unit. It is proposed to increase the production and sell additional quantities in the foreign market at ₹30 per unit. The variable cost works out to ₹ 25 per unit and the fixed charges amounts to ₹8,00,000 in a year.

Calculate the number additional units to be made and sold abroad to achieve a total profit of ₹6,00,000 in a year both on domestic and foreign sales together.

## Marginal Cost Statement for 50000 Units

Particulars	Per Unit	Total Cost
	Amount₹	Amount₹
(A)Sales Rs.50x 50,000 units	50	25,00,000
(B) Less: Variable Cost(25 x 50000 units)	25	12,50,000
Contribution	25	12,50,000
Less : Fixed Cost		8,00,000
Profit(Current)		4,00,000

## Let additional units produced and sold units be X units at ₹30.

So, additional Sales will be 30x and additional Variable Cost will be 25x.

Desired Profit =₹ 6,00,000 Profit=Sales –Variable cost –Fixed cost Sales =25,00,000 +30 x Variable cost=12,50,000 +25x Fixed cost =Rs.8,00,000 Therefore, Profit=Sales -Variable cost -Fixed cost 6,00,000 = 25,00,000 + 30x - (12,50,000 + 25x) - 8,00,000 6,00,000 = 25,00,000 + 30x - 12,50,000 - 25x - 8,00,000 6,00,000 = 25,00,000 - 12,50,000 - - 8,00,000 + 30x - 25x 6,00,000 = 4,50,000 + 5x 6,00,000 - 4,50,000 = 5x 1,50,000/5 = xx = 30,000 Units

Therefore , Additional units to be produced and sold are 30,000 units.