Marginal Costing

1. Marginal Costing

Sales	**xx**
(-) Variable cost	**xx**
Contribution	**xx**
(-) Fixed Cost	**xx**
Profit	**xx**

Marginal Costing

2. Cost Volume Profit (CVP) Analysis

3. Contribution = Sales – Variable Cost

4. Profit Volume (PV) Ratio or Contribution Ratio

This ratio doesn't change with change in level of output

This ratio changes with change in either selling price per unit or variable cost per unit

$$\text{PV Ratio} = \frac{Contribution}{Sales} \times 100 = \frac{Sales - Variable\ Costs}{Sales} \times 100 = \frac{Fixed\ cost + Profit}{Sales} \times 100$$

PV Ratio = 100 – Variable Cost Ratio

$$\text{Variable cost Ratio} = \frac{Variable\ cost}{Sales} \times 100$$

<u>If data given at two levels</u>

$$\text{PV Ratio} = \frac{Change\ in\ Contribution}{Change\ in\ Sales} \times 100 = \frac{Change\ in\ Profit}{Change\ in\ Sales} \times 100$$

Marginal Costing

5. Break-even point (BEP)

It is the level of sales at which there is neither any profit nor any sales

In other words, it is the level of sales at which contribution is just able to recovery FC.

$$\text{Break-even Point (units of sale)} = \frac{Fixed\ Cost}{Contribution\ per\ unit}$$

$$\text{Break-even Point (in sales value)} = \frac{Fixed\ Cost}{P/V\ Ratio} = \text{Break-even point units} \times \text{Selling price per unit}$$

Level of Sales	**Situation**
Sales > BES	Profit
Sales = BES	Profit or loss = 0
Sales < BES	Loss

Marginal Costing

6. Cash Break-even Point

It is level of sales at which cash profit or loss is zero.

$$\text{Cash Break-even Point (units of sale)} = \frac{Cash\ Fixed\ Cost}{Contribution\ per\ unit}$$

$$\text{Cash Break-even Point (in sales value)} = \frac{Cash\ Fixed\ Cost}{P/V\ Ratio}$$

7. Required sales for a given level of profit

$$\text{Sales to earn desired profit (units)} = \frac{Fixed\ cost + Desired\ profit}{Contribution\ per\ unit}$$

$$\text{Sales to earn desired profit (in ₹)} = \frac{Fixed\ cost + Desired\ profit}{P/V\ Ratio}$$

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8. Margin of Safety (MOS)

It is the level of sales over and above break-even sales

Margin of Safety (in ₹) = Actual sales – Break-even sales

Margin of Safety (in units) = Actual sale units – Break-even sales units

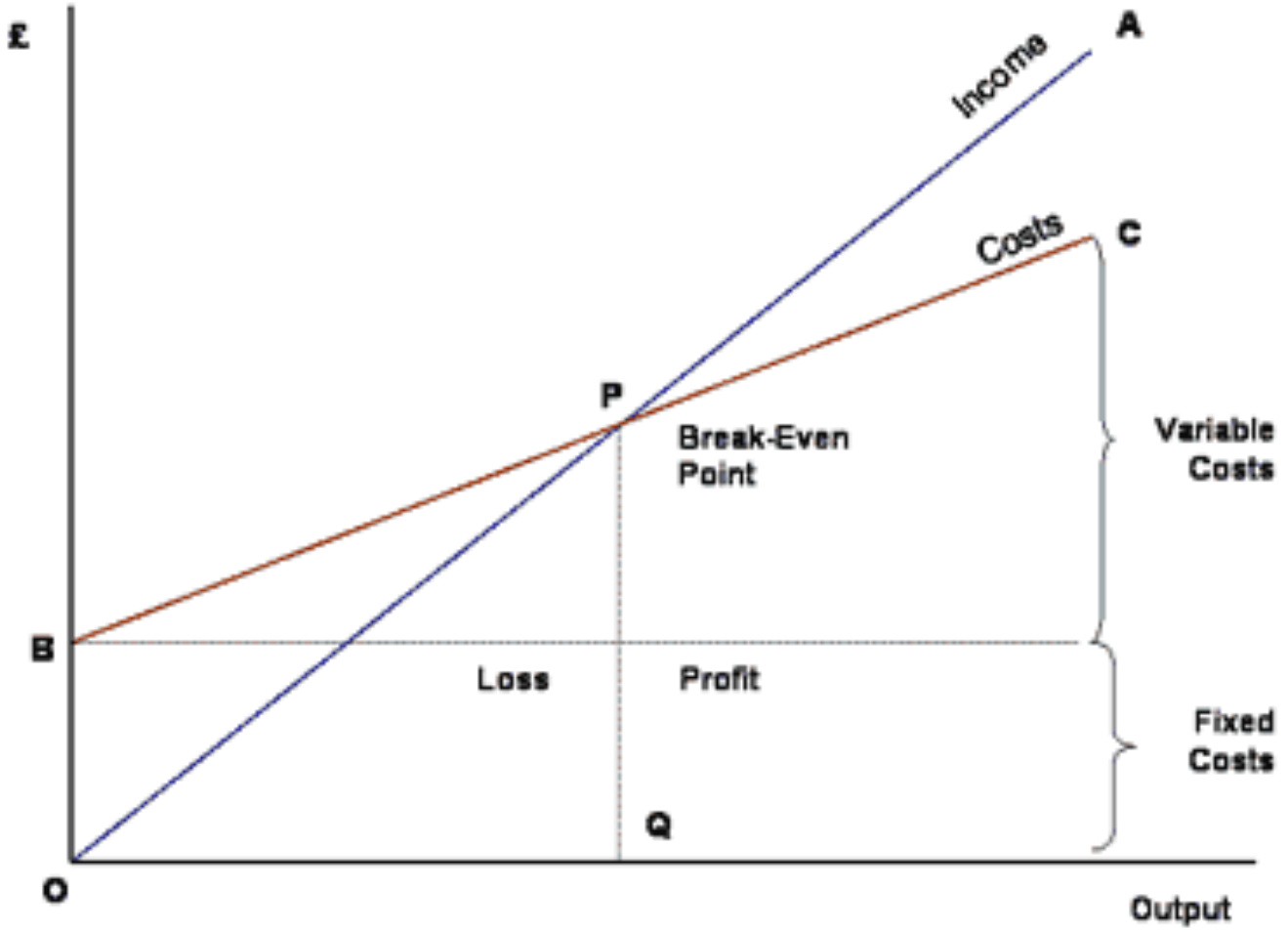
Margin of safety (in %) = $\frac{Margin\ of\ safety}{Total\ Sales} \times 100$

Margin of Safety (in %) = 100% - Break-even Sales %

Margin of safety (in ₹) = $\frac{Profit}{P/V\ Ratio}$

Margin of safety (in units) = $\frac{Profit}{Contribution\ per\ unit}$

Marginal Costing



Marginal Costing

9. Points to Remember (PTRs)

(A) If fixed cost per unit is given then multiply it with the level of units at which such fixed cost per unit was computed.

(B) Apply price effect of Total FC and never apply on FC per unit

10. Dual Selling price or Dual variable cost questions

- It will lead to generation of dual contribution per unit

Steps to solve

- Find both contribution per unit
- First calculate total contribution from 1st option which will be sold first.
- Recover the required value (FC or Profit etc.) from this and then calculate the balance required value.

Marginal Costing

11. Composite or Overall BEP

This concept is used when company deals in multiple products.

Particulars	Product A	Product B	Product C	Total
Sales	xx	xx	xx	xx
(-) Variable Cost	xx	xx	xx	xx
Contribution	xx	xx	xx	xx
(-) Fixed Cost				xx
Profit				xx

Marginal Costing

Overall Contribution per unit = Weighted average of contribution per unit = $\frac{Total\ Contribution}{Total\ Units}$

Overall P/V Ratio = Weighted average of P/V Ratio = $\frac{Total\ Contribution}{Total\ Sales} \times 100$

Overall Break-even Point (in units) = $\frac{Fixed\ Cost}{Overall\ Contribution\ Per\ unit}$

Overall Break-even Point (in Rs.) = $\frac{Fixed\ Cost}{Overall\ P/V\ Ratio}$

For product-wise BEP, distribute this in ratio of sales mix

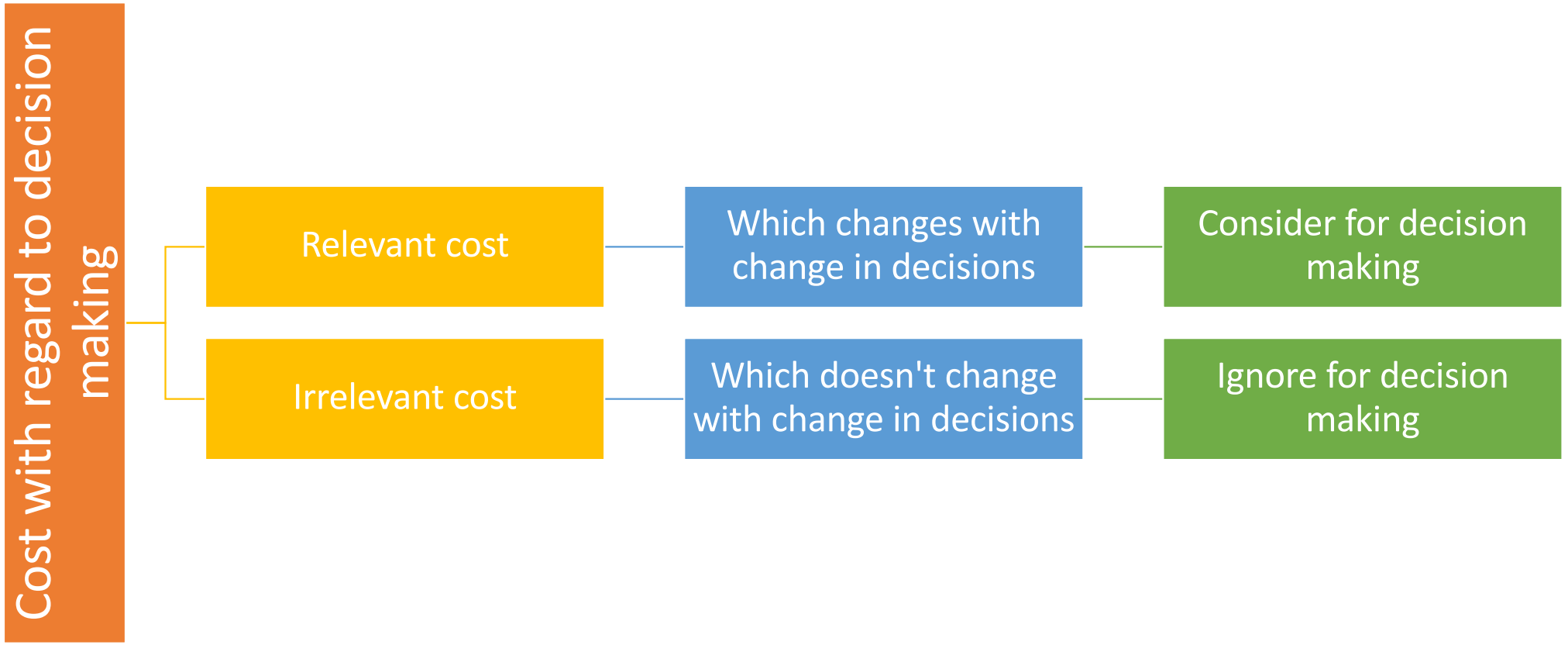
*Weights will be sales % of each product out of total sales or sales mix

12. Activity level % at BES = $\frac{Break-even\ sales}{Total\ Sales\ at\ 100\%\ level} \times 100$

13. Shut down point = $\frac{Avoidable\ fixed\ cost}{Contribution\ per\ unit\ or\ PV\ Ratio}$

Marginal Costing

14. Cost with regard to decision making



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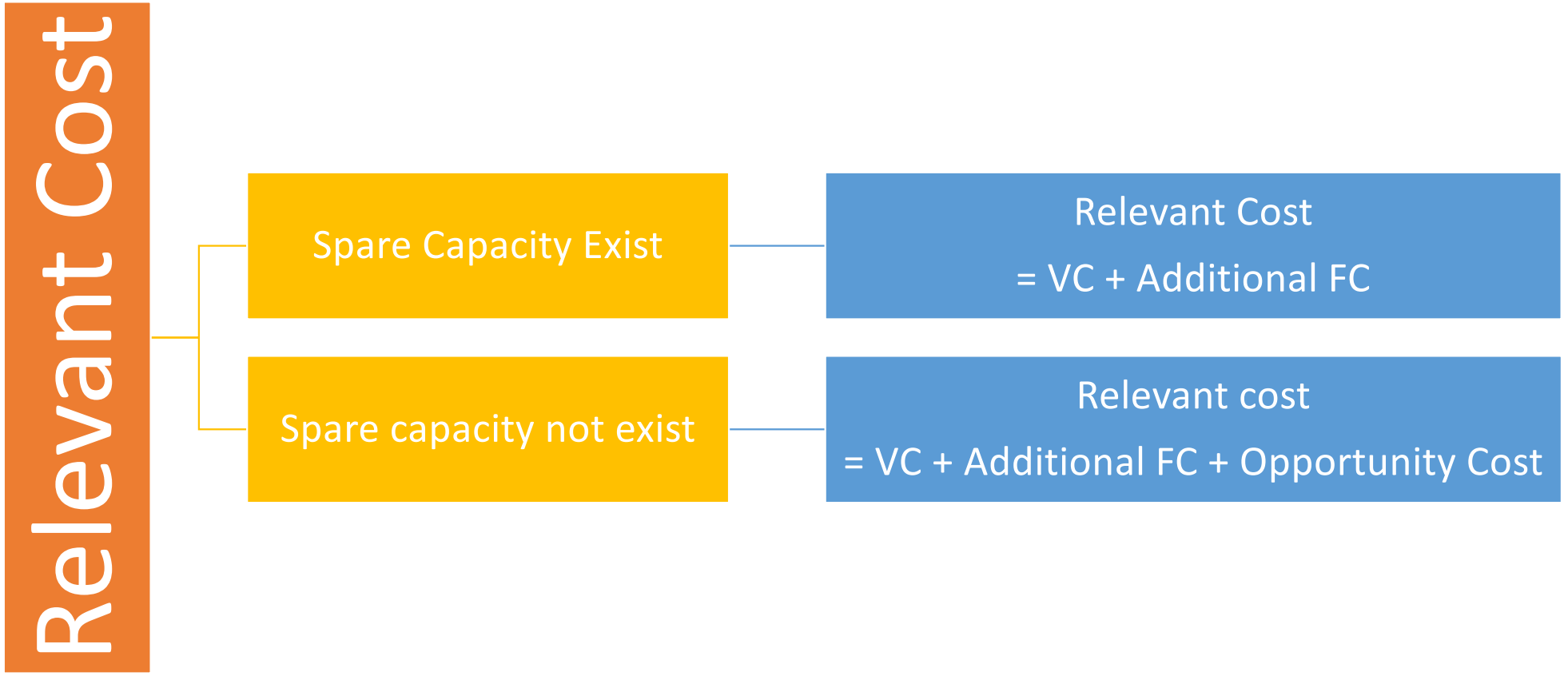
15. Make vs Buy



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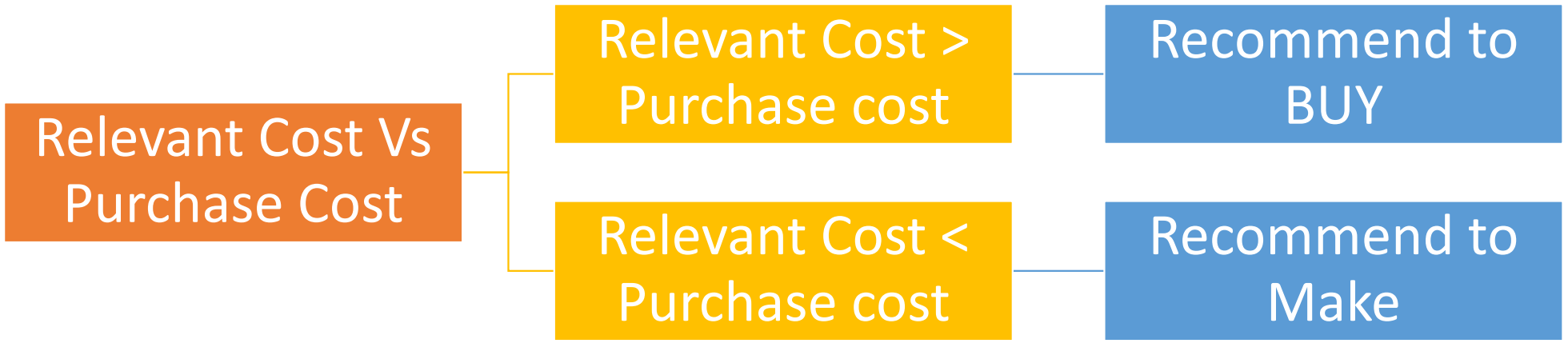
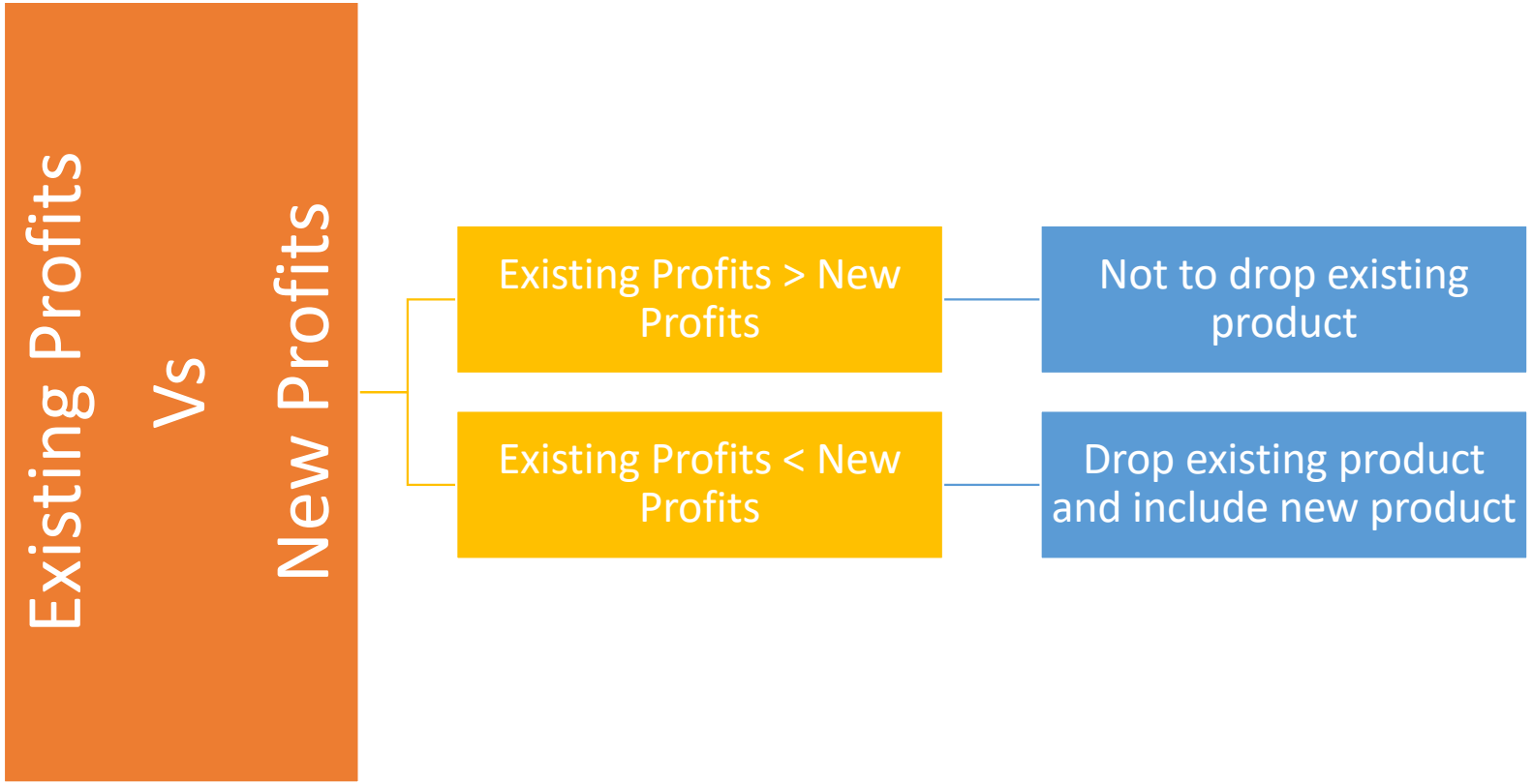


Marginal Costing

16. Dropping an existing product for new product



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17. Key factor or limiting factor

It is the factor which is limited in its availability

Decision will be taken on the basis of contribution per unit of key factor

Key Factor	**Basis of Decision**
Sales (in units)	Contribution per unit
Sales (in Rs.)	P/V Ratio
Material	Contribution per unit of material
Labour hour	Contribution per labour hour
Machine hour	Contribution per machine hour

Marginal Costing

18. Indifference Level

Level at which cost of two options will be equal

$$\text{Indifference level} = \frac{Difference\ in\ Fixed\ cost}{Difference\ in\ variable\ cost\ per\ unit}$$

OR Total cost of option (i) = Total cost of option (ii)

(VC1)(Q) + FC1 = (VC2)(Q) + FC2

Solve and find Q i.e. indifference level

Level	Recommendation
Actual quantity > Indifference level	Select option having variable cost per unit is low
Actual quantity < Indifference level	Select option where fixed cost is low
Actual quantity = Indifference level	Select any option

In case if there are three 3 options, then compute as follows:

(a) Case 1 & 2 (b) Case 2 & 3 (c) Case 1 & 3

Marginal Costing

19. Income statement under Marginal Costing

Particulars	Amount
Revenue (A)	-
Direct Material	-
Direct Labour	-
Direct expenses	-
Variable manufacturing overheads	-
Variable GFC/NFC/COP	-
Add: Opening stock of finished goods	-
Less: Closing stock of finished goods	-
Variable COGS	-
Add: Variable administration overheads	-
Add: Variable selling & distribution overheads	-
Variable COS (B)	-
Contribution (A – B)	-
Less: Fixed manufacturing overheads	-
Less: Fixed administration overheads	-
Less: Fixed selling & distribution overheads	-
Profit	-

Marginal Costing

20. Income statement under Absorption Costing

Particulars	Amount
Revenue (A)	-
Direct Material	-
Direct Labour	-
Direct expenses	-
Variable manufacturing overheads	-
Fixed manufacturing overheads	-
GFC/NFC/COP	-
Add: Opening stock of finished goods	-
Less: Closing stock of finished goods	-
COGS	-
Add: Fixed & Variable administration overheads	-
Add: Fixed & Variable selling & distribution overheads	-
COS	-
Add: Under absorbed fixed manufacturing overheads	-
Less: Over absorbed fixed manufacturing overheads	-
Total Cost (B)	-
Profit/(loss) (A – B)	-

Marginal Costing

Profit of Marginal and Absorption differ due to difference in the stock values under both methods

Particulars	Amount
Profit as per Marginal Costing	xx
(-) Opening stock under valued in Marginal	xx
(+) Closing stock over valued in Marginal	xx
Profit as per absorption	xx