

Formula's Of Unit # 1:-

1. Technical Efficiency:-

$$T.E = \frac{\text{Input}}{\text{Output}} \times 100$$

$$= \frac{\text{Heat equivalent of mechanical energy produced}}{\text{Heat equivalent of fuel used}} \times 100$$

2. Economic Efficiency:-

$$E.E = \frac{\text{Output}}{\text{Input}} \times 100 = \frac{\text{Worth}}{\text{cost}} \times 100$$

Note to ponder:-

S = selling price per unit

v = Variable price per unit

FC = fixed cost per period

Q = volume of production.

3. Total Sales Revenue

$$T.S.R = S = S \times Q$$

4. Total cost of firm:-

$$TC = v \times Q + FC$$

5. Profit..

$$P = \text{Sales} - (V \times Q + FC)$$

OR

$$P = \text{Contribution} - \text{Sales } FC.$$

6. Break-even-Sales-Quantity.

$$BESQ = \frac{FC}{S - V} \quad \text{*S}$$

7. Break-even-Sales..

$$BES = \frac{FC}{S - V} \times S(Rs)$$

8. Contribution:

$$C = S - V$$

9. Margin of Safety..

Method 1:

$$M.S = \text{Actual Sale} - \text{Break-even sale}$$

Method 2:

$$M.S = \frac{\text{Profit}}{\text{Contribution}} \times \text{Sales}$$

$$M.S(\text{as per unit of sales}) = \left(\frac{M.S}{\text{sales}} \right) \times 100$$

10. Profit / Volume Ratio..

$$PV = \frac{\text{Contribution}}{\text{Sales}} = \frac{S - VC}{S}$$

- $BEP = \frac{FC}{P/V}$

- $MOS = \frac{\text{Profit}}{P/V}$