

Key words and formulae.

- 1) Break even point (B.E.P.) → This is a situation of no profit no loss. It means contribution is just enough to cover the fixed cost.  
ie. Contribution = fixed cost  
It also means contribution generated by all sales beyond break-even point will directly result into profit. So every business should reach B.E.P. as early as possible.

$$\text{B.E.P. (in quantity)} = \frac{\text{F.C.}}{\text{Contribution/unit}} \left[ \frac{\text{F.C.}}{C/\text{unit}} \right]$$

$$\text{B.E.P. (in amount)} = \frac{\text{F.C.}}{1/V \text{ ratio}}$$

- 2) Contribution = (i) sales - variable cost  
                  (ii) fixed cost + profit
- 3) Fixed cost → It is the cost that remains fixed or constant irrespective the level of activity. It tends to vary with time rather than amount of activity.
- 4) Marginal cost → It is defined as the amount at any given volume of output by which the aggregate cost area changes if the volume of output is increased or decreased by one unit.

5 Margin of safety - These are the sales beyond Break-Even point.

$$i) M.O.S. = \text{Sales} - \text{Break Even Sales}$$

$$= \text{Sales} - \frac{P.C.}{P.V. \text{ ratio}}$$

$$= \frac{\text{Profit}}{P.V. \text{ ratio}}$$

6 P/V ratio - profit-volume ratio

- This ratio indicates the contribution earned with respect to one rupee of sales.

$$P/V \text{ ratio} = \frac{\text{contribution}}{\text{sales}} \times 100.$$

As in the short run, fixed cost remains the same if there is any change in profits, that is due to change in contribution.

$$\frac{\text{change in profit}}{\text{change in sales}} \times 100$$

7 Variable cost  $\Rightarrow$  The cost varies in direct proportion with the level of activity or volume of operation.