

## 13. Profit-Loss

- The price at which an article is bought is called its **cost price** (CP).
- The price at which an article is sold is its **selling price** (SP).
  - Conditions of profit or loss:
    1. If  $CP < SP$  then profit is made and  $\text{Profit} = SP - CP$
    2. If  $CP = SP$  then there is a no profit, no loss.
    3. If  $CP > SP$  then loss is incurred and  $\text{Loss} = CP - SP$

For example, Suman bought a bottle for Rs 130 and sold it for Rs 142.

Here,  $SP = \text{Rs } 142$ ,  $CP = \text{Rs } 130$

As  $SP > CP$ , so profit is incurred.

$\text{Profit} = SP - CP = \text{Rs } 142 - \text{Rs } 130 = \text{Rs } 12$

- The formulae to calculate profit and loss are:
  - $\text{Profit \%} = \frac{\text{Profit}}{\text{C.P.}} \times 100$
  - $\text{Loss \%} = \frac{\text{Loss}}{\text{C.P.}} \times 100$

### Example:

A shopkeeper purchased 15 dozen cups for Rs 900. However, 9 cups cracked during transportation. The remaining cups were sold for Rs 9 each. Find the gain or loss percent.

### Solution:

Cost price of 15 dozen i.e., 180 cups = Rs 900

9 cups were cracked. Therefore, number of cups left =  $180 - 9 = 171$

These 171 cups were sold at Rs 9 each.

$\therefore \text{S.P. of 171 cups} = \text{Rs } 9 \times 171 = \text{Rs } 1539$

$\Rightarrow \text{Profit} = SP - CP = \text{Rs } (1539 - 900) = \text{Rs } 639$

$\text{Profit\%} = \frac{\text{Profit}}{\text{C.P.}} \times 100 = \frac{639}{900} \times 100 = 71\%$