

## **Profit and Loss**

### ***IMPORTANT FACTS***

#### ***Cost Price:***

The price, at which an article is purchased, is called its *cost price*, abbreviated as *C.P.*

#### ***Selling Price:***

The price, at which an article is sold, is called its *selling price*, abbreviated as *S.P.*

#### ***Profit or Gain:***

If S.P. is greater than C.P., the seller is said to have a *profit* or *gain*.

#### ***Loss:***

If S.P. is less than C.P., the seller is said to have incurred a *loss*.

### ***IMPORTANT FORMULAE***

1. Gain = (S.P.) - (C.P.)
2. Loss = (C.P.) - (S.P.)
3. Loss or gain is always reckoned on C.P.
4. Gain Percentage: (Gain %)

$$\text{Gain \%} = \left( \frac{\text{Gain} \times 100}{\text{C.P.}} \right)$$

5. Loss Percentage: (Loss %)

$$\text{Loss \%} = \left( \frac{\text{Loss} \times 100}{\text{C.P.}} \right)$$

6. Selling Price: (S.P.)

$$\text{SP} = \left[ \frac{(100 + \text{Gain \%})}{100} \times \text{C.P.} \right]$$

7. Selling Price: (S.P.)

$$\text{SP} = \left[ \frac{(100 - \text{Loss \%})}{100} \times \text{C.P.} \right]$$

8. Cost Price: (C.P.)

$$\text{C.P.} = \left[ \frac{100}{(100 + \text{Gain \%})} \times \text{S.P.} \right]$$

9. Cost Price: (C.P.)

$$\text{C.P.} = \left[ \frac{100}{(100 - \text{Loss } \%)} \times \text{S.P.} \right]$$

10. If an article is sold at a gain of say 35%, then S.P. = 135% of C.P.

11. If an article is sold at a loss of say, 35% then S.P. = 65% of C.P.

12. When a person sells two similar items, one at a gain of say  $x\%$ , and the other at a loss of  $x\%$ , then the seller always incurs a loss given by:

$$\text{Loss } \% = \left( \frac{\text{Common Loss and Gain } \%}{10} \right)^2 = \left( \frac{x}{10} \right)^2.$$

13. If a trader professes to sell his goods at cost price, but uses false weights, then

$$\text{Gain } \% = \left[ \frac{\text{Error}}{(\text{True Value}) - (\text{Error})} \times 100 \right] \%$$