

PROFIT, LOSS AND DISCOUNT

01) Let the c.p of the article be ₹100.

Then, when the merchant offers a discount of 30%.
the merchant will sell the article at:-

$$x - 30\% \text{ of } x = 70\% \text{ of } x \text{ --- (1)}$$

The loss made by the merchant when she offers
a discount of 30% = 16%.

$$\therefore 100 - 16\% \text{ of } 100 = \underline{84} \text{ when she offered} \\ \text{a discount of } 30\% \text{ --- (2)}$$

Equating (1) & (2)

$$0.7x = 84$$

$$\text{or } x = 120$$

If the list price is ₹120, then when the merchant
offers a discount of 10%, she will sell the
article at

$$120 - 10\% \text{ of } 120 = \underline{108}$$

As the c.p of the article was ₹100 & the merchant
gets ₹108 while offering a discount of 10%.
she will make a profit of 8%.

Q2) S.P = 18000
P.I = 25%
C.P = ?

$$C.P = \frac{100}{125} \times 18000 = 14,400$$

S.P = 18000, L.I = 25%
C.P = ?

$$C.P = \frac{100}{75} \times 18000 = 24000$$

Total S.P = 18000 + 18000 = 36000
Total C.P = 24000 + 14400 = 36400

Loss = 36400 - 36000
= 2400

L.Y. = $\frac{2400}{38400} \times 100 = 6.25\%$

$CP = x$ $MP = x + 30x$ $- CP$	let C.P be = 100 $MP = 100 + \frac{30}{100} \times 100$ $MP = 130$
--------------------------------------	--

Discount 30%

$$\begin{aligned}
 SP &= 130 - \frac{30}{100} \times 130 \\
 &= 130 - 39 \\
 &= \underline{91}
 \end{aligned}$$

$$\text{loss} = \frac{100 - 91}{100} = 9\%$$

$$04) \text{ S.P of remaining} = 4445 - 24660$$

$$= 19485$$

$$\text{Remaining bags} = 90 - 30 - 20$$

$$= 40$$

$$\text{So, S.P of each should be} = \frac{19485}{40} = 487.125$$

Now, S.P of 30 bags at 20% profit

$$\text{C.P of 30 bags} = 30 \times 450$$

$$= 13500$$

$$\text{So, S.P} = 13500 + \frac{20}{100} \times 13500$$

$$= 16200$$

Now, S.P of 20 bags at 6% loss

$$\text{C.P of 20 bags} = 450 \times 20$$

$$= 9000$$

$$\text{S.P} = 9000 - \frac{6}{100} \times 9000$$

$$= 9000 - 540$$

$$= 8460$$

$$\text{Total SP} = 8460 + 16200 = 24660$$

$$\text{C.P of 90 bags} = 90 \times 450 = 40500$$

Profit % = 9%

So, SP should be = $40500 + \frac{9}{100} \times 40500$
44145

Now, S.P of 30 bags at 20% profit
C.P of 30 bags = 30×450
13500

So, S.P = $13500 + \frac{20}{100} \times 13500$
16200