Profit & Loss, Percentage.

Q.1 → Given data:-
loss of 25%, SP = ~~2~~ 450, CP = ?

$$CP = \frac{100}{100 - \text{loss}\%} \times SP$$

$$= \frac{100}{100-25} \times 450 = \frac{450 \times 100}{75}$$

$$CP = \frac{45000}{75} = 600.$$

Option - (c) 600

Q.2 →
Given data:
Cost price = 1200, SP = 1440, P% = ?

Profit = SP - CP
= 1440 - 1200
= 240.

$$\text{Profit \%} = \frac{240}{1200} \times 100 = 20\%.$$

Option - (c) 20%.

Q.3 →
Given data:-
SP = 960, CP = 800, P% = ?

P = SP - CP
= 960 - 800
P = 160.

$$P\% = \frac{160}{800} \times 100 = 20\%.$$

Option - (b) 20%.

Q.4
→ Given data:-
loss% = 20, SP = 1200, C

$$CP = \frac{100 \times SP}{100 - 10\text{loss}\%}$$

$$= \frac{100 \times 1200}{100 - 20}$$

$$= \frac{12000}{80}$$

$$= 1500$$

Option - (b) 1500.

Q.5 →

Q.7 →

Q.9 →

Q.5

→ Given data:-

CP = 400, SP = 480, P% = ?

$P = SP - CP$

$= 480 - 400$

$P = 80$

$P\% = \frac{80}{400} \times 100$

$P\% = 20$

Option = (b) 20%

Q.6

→ Given data:-

1st discount = 20%, 2nd = 10%

Net discount $= D_1 + D_2 - \frac{D_1 \times D_2}{100}$

$= 20 + 10 - \left(\frac{20 \times 10}{100}\right)$

$= 30 - 2$

$= 28\%$

Option = (a) 28%

Q.7

→ Given data:-

SP = 800, discount = 20%, MP = ?

$MP = \frac{SP}{1 - \text{Discount}}$

$= \frac{800}{1 - 0.20}$

$= \frac{800}{0.80}$

$MP = 1000$

Option = (b) ₹ 1000

Q.8

→ Given data:-

SP = 18000, P = 25%, CP = ?

$CP = \frac{100}{100 + P\%} \times SP$

$= \frac{100}{100 + 25} \times 1800 = \frac{180000}{125}$

$CP = 1440$

Option = ₹ 1440

Q.9

→ Given data:-

MP = 1500, D = 10%, SP = ?

$MP = \frac{SP}{1 - D}$

$1500 = \frac{SP}{1 - 10}$

$SP = 1500\ (1 - 10\%)$

$= 1500 \times 0.9$

$= 1350$

Option = (b) ₹ 1350

Q.10

→ Given data:-

CP of 10 Pen = 150

SP of 10 Pen = 200, P% = ?

$CP\% = \frac{50}{150} \times 100$

$= 33.33\%$

Option = (c) 33.33%

Q.11
→ Given Data
D = 15%, P = 20% MP = ?

$MP = \frac{35}{85} \times 100 = 41.18\%$

MP = 41.18%

Q.12
→ Given Data
SP = 2250, P = 10%, CP = ?

$CP = \frac{2250 \times 100}{110} = 2045$

CP = 2045.45 ₹

Q.13
→ Given Data:-
CP = 800, P = 25%, SP = ?
SP = 800 × 1.25
= 1000

Option: (B) 1000

Q.14
→ Given Data
L = 10%, SP = 15000, CP = ?

$CP = \frac{15000}{0.90}$

= 16,6667

Option = 16,6667

Q.15
→ Given Data:-
CP = 100, MP = 150, P% = ?
SP 20% = 150 × 0.80
= 120

$P = \frac{120 - 100}{100} \times 100$

= 20%

Option = (a) 20%

Q.16
→ Given Data
CP = 400, P = 12%, D = 5%
SP 12% = 400 × 1.12
= 448

$MP = \frac{448}{1 - 0.05} = \frac{448}{0.95}$

= 471

Option = ₹ 471

Q.17
→ Given Data:-
CP = 480, SP = 576, P = ?
P = 576 − 480 ⇒ 96

$P\% = \frac{96}{480} \times 100 \Rightarrow 20\%$

Option = (c) 20%

Q.18
→ Given Data =
P = 50, CP = 500

$Profit = \frac{50}{500} \times 100$

= 10%

Option = (c) 10%

Q.19
→ Given data =
P = 15%, SP = 2300, CP = ?

$$CP = \frac{2300}{1.15}$$

$$= 2000$$

Option = (b) 2000

Q.20
→ Given data -
CP = 750, SP = 900, P% = ?
Profit = 900 - 750 = 150

$$P\% = \frac{150}{750} \times 100 \Rightarrow 20\%$$

Option = (c) 20%

Q.21
→ Given data :-
loss = 20%, SP = 640

$$CP = \frac{640 \times 100}{100 - 20}$$

$$= 800$$

Option = (c) 800

Q.22
→ Given data :-
Profit = 20%, SP = 9600.

$$CP = \frac{9600 \times 100}{100 + 20}$$

$$= 8000$$

Option = ₹ (b) 8000

Q.23
→ Given Data
Profit = 20%, SP = 500.

$$CP = \frac{500 \times 100}{100 + 20}$$

$$= 416.67$$

Q.24
→ Given data.
T(P%) = 1500 + 1500 ⇒ 3000.
SP (20%) = 1500 × 1.20 ⇒ 1800.
SP (10% loss) = 1500 × 0.93 ⇒ 1350
Total SP = 1800 + 1950
= 3150.
Net Profit = 3150 - 3000 ⇒ 150

$$\text{Profit} = \frac{150}{3000} \times 100 \Rightarrow 5\%$$

Option = (a) 5% Profit

Q.25
→ Given data :-
loss = 12%, SP = 1250.

$$CP = \frac{1250 \times 100}{100 - 12}$$

$$= 1420.45$$

Option = ₹ 1420.45

Q.26
→ Given Data:-
let:- CP for 1 article = 100
& SP for 0.5 = 200.
Total SP = 200 × 2 ⇒ 400
Profit = $\frac{400-100}{100} \times 100$

P = 300%.

Q.27
→ Given data.
let:- no. be x.
Eqn - $2x(x \times 0.20x)$
$= 490$
$0.40x^2 = 490$
$x^2 = 1225$
x = 35

Q.28
→ Given data
SP = 50 ⇒ 5% of SP
$SP = \frac{50}{0.05} = 1000$.
$CP(20\%\ L) = \frac{1000}{0.80} \Rightarrow 1250$
Total L = CP - SP + Scost.
$= 1250 - 1000 + 150$
Loss = 300.

Q.29
→ let CP = 100.
SP (half at 20% L) = 50×0.80
$= 40$
SP (1/2 50% P) = 50×1.50
$= 75$.
Total SP = 40 + 75 = 115.
$P\% = \frac{115-100}{100} \times 100$
P% = 15%

Q.30
→ Given data = CP = 6000, SP = 80
$Loss = \frac{50}{1.10} = 45.45$
$Loss\% = \frac{45.45}{6000} \times 100$
Loss% = 0.76%

Q.91
→ let CP of 1 article = 100
P = 200,
SP = CP + P ⇒ 100 + 200 = 3
$P\% = \frac{200}{100} \times 100$
P% = 200%

Q.92
→ let CP = 100, SP = 125
New CP (↓ 10%) = 100×0.90
$= 90$
New P% = $\frac{125-90}{90} \times 100$
Profit = 38.8%

Q.94
→ Given data.
initial SP = 50% Profit = 6
New CP = $100 \times 2 = 200$
New SP = $600/2 = 300$
New P% = $\frac{300-200}{200} \times 100$
New P% = 50%

Q.35 → Initial Price = 100, New = 125

To spend some amount consume ↓ by $= \frac{125-100}{125} \times 100$

$= 25\%$

Q.36 → Let CP = 100, then CP of 15 = 1500

Profit = 200

Profit % $= \frac{200}{1500} \times 100$

Profit % = 13.33 %

Q.37 → Given data:-

$0.40a = 0.50b$

$\frac{a}{b} = \frac{0.50}{0.40} = \frac{5}{4}$

Q.38 → Let D = ₹ x then MP = 5x

SP = MP − D.

= 5x − x ⇒ 4x

x = 4 time discount

Q.39 → Given data:-

x = 20% of 12% of 120% of 6250

$x = 0.20 \times 0.12 \times 1.20 \times 6250$

$= 0.20 \times 0.12 \times 7500$

$= 0.20 \times 900$

x = 180

Q.40 → Given data CP = 500

desired profit = 100% of SP = 1000

MP (35% dis) $= \frac{1000}{0.65}$

MP = ₹1538.46

Q.41 → Let B = 100, then A = 125

B < A by $\frac{125-100}{125} \times 100$

B < A = 20 %

Q.42 → Let CP = x, then D = x.

Given:- SP = CP

MP = SP + D ⇒ 1000 − x + 2x

x = ₹ 3333.33

Q.43 → CP = 70% of SP, D = 40% of SP

MP = SP + D

= 12600 ⇒ SP + 0.40SP

= 9000

CP = 70% of SP ⇒ 6300

Q.44 → Let x.

$0.20x = 20 + 0.20 \times 20$

$0.20x = 20 + 4$

$0.20x = 24$

x = 120

Q.46

→ Let x

After doubling & tripling twice.

$x \times 2 \times 3 \times 2 \times 3$

$= 36x$

% change $= \frac{36x - x}{x} \times 100$

% change = 3500%

Q.47

→ 65% of 234

$0.65 \times 234 = 152.1$

Reduction needed $= 234 - 152.1$

Reduction needed = 81.9

Q.48

→ $0.90 \times 9 \times 90 \times 9$

$= 0.90 \times 9 \times 810$

$= 0.90 \times 7290$

$= 6561$

Q.49

→ 1 salary/emp = 100

total initial expenditure = 2500

After layoff :- 12 emp,

new salary = 124

new expenditure = 12×124

$= 1488$

↓ % $= \frac{2500 - 1488}{2500} \times 100$

↓ % = 40.48%

Q.50

→ Given data

CP = 3500

D = 15%

$= 0.15 \times 3500$

$= 525$

₹ 525