Assignment-2

Profit & Loss, Percentage

Q.1. → Given data

loss of 25%. SP = ₹450, CP = ?

$$CP = \frac{100}{100 - \text{loss}\%} \times S.P.$$

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

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

Ans – (C) 600

Q.2. Given data:

cost price = 1200, SP = 1440, P% = ?

Profit = SP − CP

= 1440 − 1200

= 240

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

Ans – (C) 20%

Q.3. Given data

SP = 960, CP = 800, P% = ?

P = SP − CP

= 960 − 800

P = 160

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

Ans – (B) 20%

Q.4. Given data

→ loss % = 20, SP = 1200, CP = ?

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

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

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

$$= 1500$$

Ans – (b) 1500

Q.5. Given data

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

$$P = SP - CP$$

$$= 480 - 400$$

$$P = 80$$

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

$$P\% = 20$$

Ans – (b) 20%

Q.6. → Given data

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

$$\text{Net discount} = D1 + D2 - \frac{D1 \times D2}{100}$$

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

$$= 30 - 2$$

$$= 28\%$$

Ans → (a) 28%.

Q.7. Given data

SP = 800, discount 20%, MP = ?

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

$$= \frac{800}{1 - 0.20} = \frac{800}{0.80}$$

$$MP = 1000$$

Ans → (b) 1000

Q.8. → Given data

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

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

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

$$CP = 1440$$

Ans → 1440

Q.9. Given data

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

$MP = \frac{S.P}{1-D}$

$1500 = \frac{S.P}{1-10}$

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

$= 1500 \times 0.9$

$= 1350$

Ans → (b) 1350

Q.10. Given data

C.P. of 1 pen = 150

S.P of 1 pen = 200, P% = ?

$C.P\% = \frac{50}{150} \times 100$

$= 33.33\%$

Ans → (c) 33.33%

Q.11. Given data

D = 15%, P = 20%, MP = ?

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

MP = 41.18%

Ans → 41.18%

Q.12. Given data

SP = 2250, P = 10%, CP = ?

$CP = \frac{2250 \times 100}{100} = 2045.45$

CP = 2045.45 ₹

Q.13. Given data

CP = 800, P = 25%, SP = ?

SP = 800 × 1.25

= 1000

Ans → (b) 1000

Q.14. Given data

L = 10%, SP = 15000, CP = ?

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

= 16.6667

Ans → 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%

Ans → (a) 20%

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Q.16 → Given data
CP=400, P=12%, D=5%.
SP=12% = 400 × 12
= 448
MP = 448 / 1-0.05 = 448 / 0.95
= 471
Ans → 471

Q.17. Given data
CP=480, SP=576, P=?
P=576−480=96
P% = 96/480 × 100 = 20%.
Ans → (C) 20%.

Q.18. Given data
P=50, CP=500
Profit = 50/500 × 100
= 10%.
Ans → (B) 10%.

Q.19. Given data
P=15%, SP=2300, CP=?
CP = 2300/1.15
= 2000
Ans → (B) 2000

Q.20. → Given data
CP=750, SP=900, P%=?
Profit = 900−750 = 150
P% = 150/750 × 100 = 20%.
Ans → (C) 20%.

Q.21. Given data
loss=20%, SP=640
CP = 640 × 100 / 100−20
= 800
Ans → (C) 800

Q.22. Given data
Profit = 20%, SP=9600
CP = 9600 × 100 / 100+20
= 8000
Ans → (B) 8000

Q.23. Given data.
Profit = 20%, SP=500
CP = 500 × 100 / 100+120
= 416.67
Ans → 416.67

Q.24. Given data

TCP(2) = 1500 + 1500 ⇒ 3000

SP(20% P) = 1500 × 1.20 ⇒ 1800

SP(10% loss) = 1500 × 0.90

= 1350

Total SP = 1800 + 1350

= 3150

Net Profit = 3150 − 3000

= 150

Profit = $\frac{150}{3000} \times 100$

= 5%

Ans → Q 5% Profit

Q.25. Given data

loss = 12%, SP = 1250

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

= 1420.45

Ans → 1420.45 ₹

Q.26. Given data :-

let :- CP for 1 article 100

1 SP for 0.5 = 200

Total SP = 200 × 2 ⇒ 400

Profit = $\frac{400 - 100}{100} \times 100$

P = 300%

Ans → 300%

Q.27 → Given data

let no. be x

eqn $2x(x \times 0.20x)$

= 490

$0.40x^2 = 490$

$x^2 = 1225$

$x = 35$

Ans → $x = 35$

Q.28 Given data

SP − 50 = 5% of SP

SP = $\frac{50}{0.05}$ = 1000

CP(20% Loss) = $\frac{1000}{0.80}$ ⇒ 1250

Total Loss = CP − SP + Cost

= 1250 − 1000 + 150

loss = 300.

Ans → 300

Q.29. → let CP = 100

SP(half at 20% P) = 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%

Ans → 15%

Q.30. → Given data = CP = 6000, SP = 80

$$\text{Loss} = \frac{50}{1.10} = 45.45$$

$$\text{loss \%} = \frac{45.45}{6000} \times 100$$

$$\text{Loss \%} = 0.76\%$$

Q.31. let CP of 1 article = 100

P = 200

SP = CP + P → 100 + 200 = 300

$$P\% = \frac{200}{100} \times 100$$

$$P\% = 200\%$$

Q.32. Let CP = 100, SP = 125.

New CP (↓ 10%) = 100 × 0.90 = 90

$$\text{New } P\% = \frac{125 - 90}{90} \times 100$$

$$\text{Profit} = 38.8\%$$

Ans → 38.8 %.

Q.33. Given data.

→ Initial SP = 150%, Profit = 60%

New CP = 100 × 2 = 200

New SP = 600/2 = 300

$$\text{New } P\% = \frac{300 - 200}{200} \times 100$$

$$\text{New } P\% = 50\%$$

Ans → 50%.

Q.34. Initial price = 100, New = 125

To spend some amount consumed by

$$= \frac{125 - 100}{125} \times 100$$

$$= 25\%$$

Ans → 25%.

Q.35. let CP = 100 the CP of 15 = 1500

Profit = 200

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

Profit % → 13.33%.

Q.36. Given data

$0.40a = 0.50b$

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

Q.38. let $p = 2x$ then $MP = 5x$

$SP = MP - D$

$= 5x - x \Rightarrow 4x$

$x = 4$. Hm + discount.

Q.39. Given data

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

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

$= 0.20 \times 0.12 \times 7500$

$= 0.20 \times 900$

$x = 180$

Ans → 180

Q.40. Given data :- $CP = 500$

desired Profit = 100% of SP

$= 1000$

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

$MP = 21538.46$

Q.41. → let $B = 100$, then $A = 125$

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

$B < A = 20\%$.

Ans = 20%.

Q.42. let $CP = x$, then $= x$

Given $\Rightarrow SP = CP$

$MP = SP + D \Rightarrow 1000 - x + 2x$

$x = ₹3333.33$

Q.43. $CP = 70\%$ of SP,

$n = 40\%$ of SP

$MP = SP + D$

$= 12600 \Rightarrow SP + 0.40SP$

$= 9000$

$CP = 70\%$ of SP.

Ans ⇒ 6300.

Q.44. let x

$0.20x = 20 + 0.20 \times 20$

$0.2x = 20 + 4$

$0.20x = 24$

$x = 120$

Ans ⇒ 120

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Q.46. → let x
After doubling & tripling
Choice
$x \times 2 \times 3 \times 2 \times 3$
$= 36x$
% change $= \frac{36x}{x} - x \times 100$
% change = 3500%

Q.47. → 65% of 234
$0.65 \times 234 = 1529.$
Reduction needed $= 234 - 1529$
Reduction needed $= 81.9$
Ans ⇒ 81.9

Q.48. $0.9 \times 9 \times 90 \times 9$
$= 0.90 \times 9 \times 810$
$= 0.90 \times 7290$
$= 6561.$
Ans → 6561.

Q.49. → let salary/emp = 100
Total initial expedes = 2500
After pay off = 12 emp
new salary = 124.
new expedure = 12×124
$= 1488$
Decrease % $= \frac{2500 - 1488}{2500} \times 100$
↓ % = 40.48%
Ans → 40.48%

Q.50 → Given data
CP = 3500
D = 15%
$= 0.15 \times 3500$
$= 525.$
Ans → 525 ₹