

Assignment No. 01

Q.1. \rightarrow Let C.P. be 100, then S.P. will be 75, but
real S.P. is 450, so!

$$\begin{array}{rcl} \rightarrow 100 & \rightarrow 75 \\ \times \cancel{2} & \rightarrow 450 \\ \underline{x} & \underline{\cancel{3}} \\ 150 & \\ \hline 450 & \times 100 - 1 \\ \hline 75 & \\ \hline 3 & \end{array}$$

$$C.P. = 600$$

$$Ans = ⑥ 600$$

Q.2. C.P. = 1200 S.P. = 1440

$$\begin{aligned} P.I. &= \frac{1440 - 1200}{1200} \times 100 \\ &= \frac{240}{12} - 20\% \end{aligned}$$

$$Ans = ⑦ 20\%$$

Q.3. S.P. = 960 C.P. = 800

$$\begin{aligned} P.I. &= \frac{960 - 800}{800} \times 100 \\ &= \frac{160}{8} \\ &= 20\% \end{aligned}$$

$$Ans = ⑧ 20\%$$

Q.4. $S.P = 1200$ $L.\% = 20\%$. $C.P = ?$

$$L.\% = \frac{C.P - S.P}{C.P} \times 100$$

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

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

$$x + 5x = 6000$$

$$6x = 6000$$

$$C.P = x = 1500$$

$$Ans = \textcircled{B} 1500$$

Q.5. $C.P = 400$, $S.P = 480$

$$P.\% = \frac{80 - 20}{400} \times 100$$

$$= 20\%$$

$$Ans = \textcircled{B} 20\%$$

Q.6. $S(1\downarrow) \% = 20\% + 40\% + 2$

$$S \% = 32\%$$

$$Ans = \textcircled{B} 32\%$$

Q.7) $S.P = 800$ $\textcircled{D} \% = 20\% . M.P = ?$

$$D.\% = \frac{M.P - S.P}{M.P} \times 100$$

$$20 = \frac{x - 800}{x} \times 100$$

$$20x = 100x - 80000$$

$$80x = 80000$$

$$x = 1000$$

$$\text{Ans} = \textcircled{B} 1000$$

$$\text{Q.8. } S.P = 1800 \quad P\% = 25 \quad C.P = ?$$

$$P\% = \frac{-x + 1800}{x} \times 100$$

$$25x = -100x + 180000$$

$$125x = 180000$$

$$x = \frac{180000}{125}$$

$$x = 1440$$

$$\text{Q.9. } M.P = 1500 \quad D\% = 10\% \quad S.P = ?$$

$$S.P = 90\% \text{ of } 1500 \\ = 90 \times 15$$

$$S.P = 1350$$

$$\text{Ans} = \textcircled{B} 1350$$

$$\text{Q.10. } C.P = 150 \quad S.P = 200 \quad P\% = ?$$

$$P\% = \frac{200 - 150}{150} \times 100$$

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

$$= 100/3$$

$$= 33.\overline{33}\%$$

$$\text{Ans} = \textcircled{C} 33.\overline{33}\%$$

$$\text{Q.11. } D\% = 15\%, P\% = 20\%, M.P. = ?$$

Let C.P = 100, then S.P = 120

$$S.P = M.P + 15\% \text{ of } M.P$$

$$S.P = 85\% M.P$$

$$M.P = \frac{120}{85} \times 100$$

$$M.P = 141.18$$

$$M.P\% = (141.18 - 100)/100 \times 100$$

$$M.P\% = 41.18\%$$

$$\text{Q.12. } P\% = 12\%, D\% = 5\%, M.P = ? \text{ C.P} = 400$$

$$S.P = 112\% \text{ of } 400$$

$$S.P = 448$$

$$D\% = \frac{M.P - S.P}{M.P} \times 100$$

$$5 = \frac{x - 448}{x} \times 100$$

$$5x = 100x - 44800$$

$$95x = 44800$$

$$x = 44800/95$$

$$M.P = x = 471.58$$

$$\text{Ans} = 471.58$$

$$\text{Q.13. } C.P = 480 \quad S.P = 576 \quad P\% = ?$$

$$P\% = \frac{576 - 480}{480} \times 100 = 20\%$$

$$\text{Ans} = 20\%$$

$$Q.14. CP = 500 \quad SP = 60 \quad P\% = ?$$

$$SP = CP + P = 550$$

$$P\% = \frac{50}{500} \times 100$$

$$P\% = 10\%$$

$$Ans = 10\%$$

$$Q.15. P\% = 15\%. \quad SP = 2300 \quad CP = ?$$

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

$$15\% = (2300 - x) / 100$$

$$3x = (2300 - x) 20$$

$$3x = 46000 - 20x$$

$$23x = 46000$$

$$x = 46000 / 23$$

$$x = CP = 2000$$

$$Ans = 2000$$

$$Q.16. CP = 750 \quad SP = 900 \quad P\% = ?$$

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

$$P\% = 20\%$$

$$Ans = 20\%$$

$$Q.17. L\% = 20\%. \quad SP = 640 \quad CP = ?$$

$$L\% = \frac{x - 640}{x} \times 100$$

$$20x = 100x - 64000$$

$$80x = 64000$$

$$x = \frac{64000}{80}$$

$$C.P = x = 800$$

$$Ans = 800$$

$$Q.18. S.P = 9600 \quad P\% = 20\% \quad C.P = ?(x)$$

$$P\% = \frac{9600 - x}{x} \times 100$$

$$20x = 960000 - 100x$$

$$120x = 960000$$

$$x = \frac{960000}{12}$$

$$C.P = x = 8000$$

$$Ans = 8000$$

$$Q.19. S.P = 500 \quad P\% = 20\% \quad C.P = ?(x)$$

$$P\% = \frac{500 - x}{x} \times 100$$

$$20x = 50000 - 100x$$

$$120x = 50000$$

$$x = \frac{50000}{12}$$

$$= 416.67 \text{ C.P.}$$

$$Q.20. C.P_1 = C.P_2 = 1500 \quad P\% = 20\% \quad L\% = 10\%$$

$$S.P_1 = 120\% \cdot 1500$$

$$= 1800$$

$$S.P_2 = 90\% \cdot 1500$$

$$= 1350$$

$$\text{Total CP} = 3000$$

$$\text{Total SP} = 3150$$

$$L\% / P\% = \frac{1505}{3000} \times 100$$

P% = 5% profit.

Ans = 5% profit.

$$Q.21. S.P = 1250 \quad L\% = 12\% \quad C.P = ? (x)$$

$$12x = (x - 1250) / 100$$

$$12x = 100x - 125000$$

$$88x = 125000$$

$$x = 125000 / 88$$

$$C.P = x = 1420.45.$$

$$Q.22. \text{Perv quantity} = 100 \quad \text{Price} = 100$$

$$\text{After quantity} = 50 \quad \text{Price} = 200$$

$$P\% = \frac{200 - 50}{50} \times \frac{100}{100}$$

$$= 150 \times 2$$

$$P\% = 300\%$$

$$\text{Ans} = 300\%$$

$$Q.23. \text{Let } n \text{ be number}$$

$$\frac{n * (n * 20)}{100} = 0.2n^2$$

$$2(0.2n^2) = 490$$

$$0.4n^2 = 490$$

$$n^2 = \frac{490 \times 100}{4}$$

$$n^2 = 12.25 \times 100$$

$$n^2 = 1225.$$

$$n = 35.$$

Ans = ₹ 35.

(Q-24)

L.I. = 20% S.I. SP = S.C

5% SP = 50

$$SP = \frac{50}{5} \times 100$$

$$SP = 1000$$

$$L.I. = \frac{CP - SP}{CP} \times 100$$

$$20 = \frac{x - 1000}{x} \times 100$$

$$x = 5x - 5000$$

$$4x = 5000$$

$$x = 5000/4$$

$$x = 1250$$

$$L = CP - SP$$

$$= 1250 - 1000$$

$$L = 250 \text{ rupees.}$$

Ans = ₹ 250 rupees.

$$Q.25. \quad CP_1 = 100 \quad CP_1 = 50 \quad CP_2 = 50 \quad SP_1 = 840 \\ SP_2 = 75.$$

$$\text{Total } SP = 115.$$

$$P\% = \frac{115 - 100}{100} \times 100$$

P% = 15%. profit.

$$Ans = 15\%.$$

$$Q.26 \quad \text{Selling expense} = L + 10\% \cdot L \\ 50 = L + 1.1L$$

$$L = 45.45 \text{ rupees.}$$

$$L\% = \frac{(45.45)}{6000} \times 100 \approx 0.758\%.$$

$$L\% \approx 0.76\%.$$

$$Q.27. \quad P\% = \frac{300 - 100}{100} \times 100$$

$$P\% = 200\%.$$

$$Ans = 200\%.$$

$$Q.28 \quad P = SP - CP \\ 500 = 20\% \cdot CP$$

$$\text{Initial } CP = \frac{500}{20} \times 100$$

$$= 2500$$

$$SP = 3000 - (2500 + 500)$$

$$\text{New } CP = CP - 20\% \cdot CP$$

$$= 2500 - 500$$

$$= 2000\%.$$

$$\text{New Profit} = \frac{3000 - 2000}{2000} \times 100$$

$$\text{New Profit} = 1000$$

$$\text{Ans} = 100\%$$

Q. 29. $CP_1 = 100$ $CP_2 = 90$ $SP_1 = SP_2$
 $SP_1 = 125 = SP_2$ (25% profit)

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

$$\text{New Profit} = \frac{350}{9} \times 100$$

$$= 38.8\%$$

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

Q. 30. $CP_1 = 100 \rightarrow CP_2 = 200$ $SP_1 = 600$ $SP_2 = 300$
 $P\% = \frac{300 - 200}{200} \times 100$

$$P\% = 100\%$$

$$\text{Ans} = 100\%$$

Q. 31. $CP_1 = 100$ $CP_2 = 125$.

Expenditure: $100x$

New consumption: y kg

$$125y = 100x$$

$$y = 0.8x$$

Decrease in consumption = $x - y$

$$= x - 0.8x = 0.2x$$

$$35x = 100x - 100000$$

$$65x = 100000$$

$$x = 100000 / 65$$

$$= 15384$$

$$M \cdot P = x \approx 1539.$$

$$\text{Ans} = \textcircled{A} 1539.$$

Q-37. Let B be 100, then A = 125.

$$\text{Ans} = \frac{23}{25} \times 100 \cdot 20$$

$$\text{Ans} = 20\% \textcircled{B}$$

A

Q-38. $D = 2C$ $MP = 10000$ $SP = ?$

$$CP = SP$$

$$D = MP - SP$$

$$2C = MP - C$$

$$2C = 10000 - C$$

$$3C = 10000$$

$$C = \frac{10000}{3}$$

$$C = S \cdot P = 3333.33 \text{ ₹}$$

$$\text{Ans} = \textcircled{B} 3333.33 \text{ ₹}$$

Q-39. $MP = 12600$ $CP = 20\% \cdot SP - D = 40\%$.

$$CP = ?$$

$$D\% = \frac{MP - SP}{MP} \times 100$$

$$40 = 12600 - x \times 100$$

$$12600$$

$$S.O.P = 12600 - x$$

$$S.P = 2 \times 7560$$

$$C.P = 70\% \text{ of } 7560$$

$$\therefore C.P = 7 \times 7560 \times \frac{1}{100}$$

$$C.P = 5292$$

Ans = $\textcircled{1} 5600$ (Closest)

$$Q.40. \quad x \rightarrow 33, 33 \times 1.2 = 20 + 16.66 \times 1.2$$

$$\frac{x}{3} = 20 + \frac{x}{6}$$

$$\frac{x}{3} - \frac{x}{6} = 20$$

$$\frac{2x - x}{6} = 20$$

$$\frac{x}{6} = 20$$

$$x = 120$$

$$120 \times 1.2 = 120 \times 1.20 = 144.$$

Ans = $\textcircled{1} 144$

$$Q.41 \quad 20 \times 1.2 = 20 \times 1.20 + 20$$

$$\frac{x}{5} = \frac{20}{5} + 20$$

$$x = 5(4+20)$$

$$x = 120$$

Ans = $\textcircled{1} 120$

$$Q.42. \quad 100 \rightarrow 200 \rightarrow 600 \rightarrow 1200 \rightarrow 3600$$

$$\% \text{ change} = \frac{3600 - 100}{100} \times 100$$

$$\% \text{ change} = 3500\%$$

Ans = $\textcircled{D} 3500\%$.

$$Q.43 \quad 234 - x = \frac{65}{100} \times 234$$

$$\frac{65}{100} \times 234 = 152.1$$

$$234 - x = 152.1$$

$$x = 81.9$$

Ans = $\textcircled{D} 81.9$

$$Q.44. \quad \frac{90}{100} \times \frac{900}{100} \times \frac{9000}{100} \times 9$$

Ans = $6561 \textcircled{D}$

Q.45. Initial expenditure = 255.

Salaries of 13 employees = 135.

remaining employees = $255 - 13 = 12$

As salary of 12 employees increase by 24%.

$$5 + 0.245 = 5.245$$

$$12 \times 5.245 = 14.885.$$

$$\text{Net change} = \left(\frac{-10.125}{255} \right) \times 100$$

$$= -40.48\%$$

\therefore Net change = $40.48\% \downarrow$

Q.46

$$C.P = 3500 \quad D\% = 15\%$$

$$S = \frac{3500}{15} = D$$

$$D = Rs 525.$$

$$Ans = @ 525/-$$

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