Percentage And Its Applications Run Through

$+$ $\times$

$-$ $\div$

5. Let C.P of goods = ₹ 100

$P = 10 \%$.

S.P. of goods $= \left(\dfrac{100 + P\%}{100}\right)$ C.P.

$\qquad = \left(\dfrac{100 + 10}{100_1}\right) \times \cancel{100}^{\,1}$

$\qquad = ₹\ 110$

$D = 15\%$.

M.P. of goods $= \dfrac{100 \times S.P.}{100 - D\%}$

$\qquad = \dfrac{100 \times 110}{100 - 15}$

$\qquad = \dfrac{\overset{20}{\cancel{100}} \times 110}{\underset{17}{\cancel{85}}}$

$\qquad = ₹\ \dfrac{2200}{17}$

Difference $=$ M.P. $-$ C.P.

$\qquad = \dfrac{2200}{17} - 100$

$\qquad = \dfrac{2200 - 1700}{17}$

$\qquad = ₹\ \dfrac{500}{17}$

Required percentage $= \dfrac{\frac{500}{17}}{100_1} \times \cancel{100}^{\,1}$

$\qquad = \dfrac{500}{17}\ \%$

$\qquad \approx 29.41 \%$.

9. Let C.P. of goods = ₹100

M.P. of goods = $100 + 30$

$$= ₹130$$

$D = 15\%$

S.P of goods $= \left(\dfrac{100 - D\%}{100}\right) \times M.P.$

$$= \left(\dfrac{100 - 15}{100}\right) \times 130$$

$$= \dfrac{85}{10} \times 13$$

$$= \dfrac{1105}{10}$$

$$= ₹110.50$$

Gain $= S.P. - C.P.$

$$= 110.50 - 100$$

$$= ₹10.50$$

Gain $\% = \dfrac{Gain}{C.P.} \times 100$

$$= \dfrac{10\,50}{100} \times 100$$

$$= 10.5\%.$$

12. M.P. of TV = ₹12300

$D_1 = 10\%$

$D_2 = 10\%$

S.P. of TV $= \left(1 - \dfrac{D_1}{100}\right)\left(1 - \dfrac{D_2}{100}\right) M.P.$

$$= \left(1 - \dfrac{10}{100}\right)\left(1 - \dfrac{10}{100}\right) 12300$$

S.P. of TV $= \dfrac{9}{10} \times \dfrac{9}{10} \times 12300$

$\qquad\qquad = ₹\, 9963$

13. S.P. of article $= ₹\,15800$

M.P. of article $= ₹\,17200$

discount $=$ M.P. $-$ S.P.

$\qquad\qquad = 17200 - 15800$

$\qquad\qquad = ₹\,1400$

$D\% = \dfrac{D}{M.P.} \times 100$

$\qquad = \dfrac{\cancel{1400}^{\;\cancel{700}\;350}}{\cancel{17200}_{\;\cancel{86}\;43}} \times \cancel{100}$

$\qquad = \dfrac{350}{43}\,\%$

$\qquad \approx 8.14\,\%$

14. C.P. of computer $= ₹\,22000$

C.P. of scanner $= ₹\,9000$

C.P. of computer and scanner $= 22000 + 9000$

$\qquad\qquad\qquad\qquad\qquad = ₹\,31000$

GST $= 12\%$

S.P. of computer and scanner $= \left(\dfrac{100 + GST}{100}\right) M.P.$

$\qquad\qquad\qquad\qquad = \left(\dfrac{100 + 12}{\cancel{100}}\right) \cancel{31000}$

$\qquad\qquad\qquad\qquad = 112 \times 310$

$\qquad\qquad\qquad\qquad = ₹\,34720$

15. S.P. of article = ₹ 24192

GST = 28%

Original price of article = $\dfrac{100 \times S.P.}{100 + GST\%}$

$= \dfrac{100 \times 24192}{100 + 28}$

$= \dfrac{100 \times \cancel{24192}^{\;3024\;189}}{\cancel{128}\,\cancel{16}\,1}$

$= ₹ 18900$

16. M.P. of dress = ₹ 8000

discount = 20%

S.P. of dress $= \left(\dfrac{100 - D\%}{100}\right) \times M.P.$

$= \left(\dfrac{100 - 20}{\cancel{100}}\right) \times 80\cancel{00}$

$= 80 \times 80$

$= ₹ 6400$

GST = 18%

Amount paid by Megha $= \left(\dfrac{100 + 18}{\cancel{100}}\right) \times 64\cancel{00}$

$= 118 \times 64$

$= ₹ 7552$

17. Let the actual sale price be ₹ 100

G.S.T = 12% of ₹ 100

$= ₹ 12$

If the G.S.T is ₹ 12, actual sale price = ₹ 100

If the G.S.T is ₹ 1, actual sale price = ₹ $\dfrac{100}{12}$

If the GST is ₹ 1170, actual sale price $= \dfrac{\overset{25}{\cancel{100}}}{\underset{1}{\cancel{12}}} \times \overset{390}{\cancel{1170}}$

$= ₹ \ 9750$