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Std : 12th

Sub : Math - II

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Q .1. (Solve any 3)

1)

→ Sales = 36,000

Rate of Commission = 12 %

Agent's earnings = Commission

$$= 36,000 \times \frac{12}{100}$$

$$\therefore \text{Agent's earnings} = 4320$$

$$\therefore \text{Seller gets} = 36000 - 4320$$

$$\therefore \text{Seller get} = 31680$$

2)

→ Total income = Total Commission

$$= 10,000 \times 4\% + [35,000 - 10,000] \times 5\%$$

$$= 10,000 \times \frac{4}{100} + 25,000 \times \frac{5}{100}$$

$$= 400 + 1250$$

$$\therefore \text{Total income} = 1650$$

3)

→ Normal Commission = 892

$$[12,400 \times 8\%]$$

Del credere Commission = 248

$$[12,400 \times 2\%]$$

$$\text{Total earning of agent} = \underline{\underline{1240}}$$

Q. 2 [solve any 1]

Let, us assume cash sales be x

$$\therefore \text{Total sales} = 51000$$

$$\therefore \text{Credit sales} = \text{Total sales} - \text{Cash sales} \\ = 51000 - x$$

$$\therefore \text{Total Commission} = 4\% \text{ on cash sale} + 6\% \text{ on credit sale}$$

$$2700 = x \times \frac{4}{100} + (51000 - x) \times \frac{6}{100}$$

$$2700 = \frac{4x + 306000 - 6x}{100}$$

$$2700 \times 100 = 4x + 306000 - 6x$$

$$270000 = 4x + 306000 - 6x$$

$$270000 - 306000 = 4x - 6x$$

$$-36000 = -2x$$

$$\frac{-36000}{-2} = x$$

$$\therefore \boxed{x = 18000}$$

$$\therefore \boxed{\text{cash sales} = 18000}$$

$$\therefore \text{credit sales} = 51000 - 18000 \\ = 33000$$

$$\therefore \boxed{\text{credit sales} = 33000}$$

Q. 3. (Solve any 1)

1)

$$P.W = 8000, R = 12.5\%, n = \frac{4}{12} = \frac{1}{3}$$

$$S.D = ?$$

$$\therefore T.D = \frac{P.W \times R \times n}{100}$$

$$= \frac{8000 \times 12.5 \times \frac{1}{3}}{100}$$

$$= \frac{80 \times 125 \times 1}{3}$$

$$= \frac{8 \times 125 \times 1}{3}$$

$$= \frac{1000 \times 1}{3}$$

$$\therefore T.D = 333.33$$

$$\therefore S.D = P.W + T.D = 8000 + 333.33$$

$$\therefore S.D = 8333.33$$

Q4 (Solve any 2)

1)

$$\rightarrow T.D = ₹ 560, n = \frac{8}{12} = \frac{2}{3}, R = 12\%$$

$$S.D = ?, P.W = ?$$

$$T.D = \frac{P.W \times R \times n}{100}$$

$$560 = \frac{P.W \times 12 \times \frac{2}{3}}{100}$$

$$560 = \frac{x \times 12 \times \frac{2}{3}}{100}$$

$$560 \times 100 = \frac{x \times 12 \times 2}{3}$$

$$56000 = \frac{x \times 12 \times 2}{3}$$

$$56000 = 8x$$

$$\underline{56000} = x$$

$$(1.12)^{8.4} \approx 1.12$$

$$\therefore \boxed{x = 7000}$$

$$\therefore \boxed{P.W = 7000}$$

$$\therefore S.D = P.W + T.D$$

$$= 7000 + 560$$

$$\boxed{S.D = 7560}$$

Q.4.

3)

→

S.D = 51000, Date of drawing = 18/02/2010

Date of discount = 28/06/2010

R = 5%, n = 9

∴ Date of drawing 18/02/2021
 (+) period of bill (+) 9 m
 Nominal due date 18/11/2021
 (+) Grace day + 3 day
 legal due date 21/11/2021

∴ No. of day from date of discount to legal due date

= 28/06/2010 to 21/11/2010

June	July	Aug	Sept	Oct	Nov	Total
2	31	31	30	31	21	146

$$n = \frac{146}{365} = \frac{2}{5}$$

$$\therefore \text{sum due} = P.W \left(\frac{1 + R.n}{100} \right)$$

$$51000 = P.W \left(\frac{1 + 5 \times \frac{2}{5}}{100} \right)$$

$$51000 = P.W \left(\frac{1 + \frac{2}{5}}{100} \right)$$

$$51000 = P.W \left(\frac{102}{100} \right)$$

$$\frac{51000 \times 100}{102} = P.W$$

$$\therefore \boxed{P.W = 50,000}$$

$$\therefore T.D = \frac{P.W \times R \times n}{100}$$

$$= \frac{50,000 \times 5 \times 2}{100}$$

$$\therefore \boxed{T.D = 1000}$$

$$B.G = \frac{T.D \times R \times n}{100}$$

$$= \frac{1000 \times 5 \times 2}{100}$$

$$\boxed{B.G = 20}$$