## (A) :- SIMPLE INTEREST :- (7)

1. (d) $SI = \left(\frac{2560 \times 8 \times 15}{100}\right) = ₹\ 3072$

$\therefore$ Amount $= (P + SI) = (2560 + 3072) = ₹\ 5632$

2. (c) Let the part of Raju be ₹ $x$ and Anil be ₹ $(15900 - x)$.

According to the question:-

$$\frac{x \times 6 \times 4}{100} + \frac{(15900 - x) \times 5 \times 4}{100} = (19372 - 15900)$$

$$\Rightarrow 24x + 318000 - 20x = 347600$$

$$\Rightarrow 4x = 29600$$

$$\Rightarrow x = 7400$$

$\therefore$ Anil $= (15900 - 7400) = ₹\ 8500$

$\therefore$ Total amount of Anil $= 8500 + \left(\frac{8500 \times 4 \times 5}{100}\right)$

$= ₹\ 10200$

3. (b) Let the another amount be ₹ $x$.

$\therefore$ According to the question:-

$$\frac{24000 \times 4 \times 1}{100} + \frac{x \times 10 \times 1}{100} = \frac{(24000 + x) \times 6 \times 1}{100}$$

$$\Rightarrow 96000 + 10x = 144000 + 6x$$

$$\Rightarrow 4x = 48000$$

$$\Rightarrow x = 12000$$

$\therefore$ Total amount $= (24,000 + 12,000)$

$= ₹\ 36000$

## (A) :- Simple Interest :- (8)

1. (b) $p$ = principal

$$\therefore p + \frac{p \times 7 \times 3}{100} = 1815$$

$$\frac{121p}{100} = 1815 \Rightarrow p = \boxed{1500}$$

5. (c) Let the Sums are ₹ $x$ and ₹ $y$.

$$\therefore x + y = 21600 \longrightarrow (i)$$

again; $\frac{x}{y} = \frac{51}{57} \longrightarrow (ii)$

Now; Solving eq$^n$ (i) & eq$^n$ (ii); We get →

$$x = \left(\frac{21600 \times 51}{108}\right) = ₹\ 10200$$

$$y = (200 \times 57) = ₹\ 11400$$

∴ According to the question :-

$$10200 + \frac{10200 \times 10 \times (x-9)}{100} = 11400 + \frac{11400 \times 10 \times (x-11)}{100}$$

$$\Rightarrow 1020x - 9180 + 10200 = 11400 + 1140x - 12540$$

$$\Rightarrow 1020 + 1020x = 1140x - 1140$$

$$\Rightarrow 120x = 2160$$

$$\Rightarrow x = \boxed{18\text{ yr}}$$

6. (d) Let the Sum be ₹ $x$.

$$\therefore \frac{1}{3}x = \frac{x \times R \times 16}{3 \times 100} \Rightarrow R = \frac{25}{3} = \boxed{8.3\%}$$

## {A} :- SIMPLE INTEREST :- <9>

7. (d) Let the Sum be ₹ P.

$\therefore P = [CI - SI] \times \left(\frac{100}{R}\right)^2$

$= 100 \times \left(\frac{100}{10}\right)^2 =$ ₹ 10,000

8. (d) $T\,(\text{Time}) = \left(\frac{6600}{\frac{11000 \times 12 \times 1}{100}}\right) = \frac{6600 \times 1}{110 \times 12} = 5$

9. (a) Let the Sum of money be ₹ x.

$\therefore \frac{x \times 5 \times 6}{100} = \frac{650 \times 12 \times 9}{100}$

$\Rightarrow x =$ ₹ 2340

10. (b) Now; $(13 - 8)\% = 4800 \Rightarrow 1 =$ 96000

$\Rightarrow \frac{5}{100} = 4800$

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11. (d) Let x be the rate of interest.

$\therefore \frac{8000 \times 3x}{100} + \frac{(8000 + 7000) \times (8-3) \times x}{100} = 8415$

$\Rightarrow \frac{8000 \times 3 \times x}{100} + \frac{15000 \times 5 \times x}{100} = 8415$

$\Rightarrow 990x = 8415$

$\Rightarrow x =$ 8.5 %

## (A) :- Simple Interest :- <10>

12. (d) Let the respective sums are ₹x and ₹y.

$\therefore$ ₹ (Total income) = $\frac{8x}{100} + \frac{3y}{100}$

$x + y = 8500 \longrightarrow (i)$

Now, again; $8x = 3(3y) \Rightarrow 8x = 9y \Rightarrow x : y = 9 : 8 \longrightarrow (ii)$

By solving eq$^n$(i) & eq$^n$(ii); We get →

$x$ = ₹ 4500 and $y$ = ₹ 4000

₹ (Total income) = $\left(\frac{4500 \times 8 \times 1}{100} + \frac{4000 \times 3 \times 1}{100}\right)$

= ₹ (360 + 120) = **₹ 480**

13. (b) SI on ₹ 30,000 ⇒ $\left(\frac{30000 \times 6 \times 1}{100}\right)$ = ₹ 1800

Profit to made on ₹ 50000 = $\left(\frac{50,000 \times 10 \times 1}{100}\right)$

= ₹ 5000

$\therefore$ SI on ₹ 20,000 = (5000 − 1800) = ₹ 3200

$\therefore R = \frac{3200 \times 100}{20,000}$ = **16 %**

14. (b) Let $R_1 = 5x$ ; $R_2 = 7x$ ; $T_1 = T_2 = \frac{1}{2}$ yr

$\therefore$ According to the question :-

$\Rightarrow \frac{P_1 \times 5x \times 1}{100 \times 2} = \frac{P_2 \times 7x \times 1}{100 \times 2}$

$\Rightarrow P_1 : P_2$ = **7 : 5**

## (A) Simple Interest :- (11)

15. (b) $[(5\% \text{ for } 3 \text{ yrs}) + (6\% \text{ for } 4 \text{ yrs}) + (7.5\% \text{ of } 4 \text{ yrs})]$

$= (15 + 24 + 30)\% = 69\%$

$\therefore$ 69% of 1800 ⇒ $\frac{69 \times 1800}{100} \Rightarrow \boxed{1242}$

16. (a) Let the respective principal are $x_1$, $x_2$ and $x_3$.

$\therefore (x_1 \times 1 \times \frac{5}{10}) = (x_2 \times \frac{4}{8} \times \frac{3}{15}) = (x_3 \times \frac{3}{12} \times \frac{10}{20})^{2}$

$x_1 = 3x_2 = 6x_3$

$\therefore x_1 : x_2 : x_3 = (1 : \frac{1}{3} : \frac{1}{6}) = \boxed{6:2:1}$

17. (d) According to the question:-

$(9-6)\% = 267$

$\Rightarrow \frac{3}{100} = \frac{89}{267}$ ⇒ $1 = \boxed{8900}$

18. (b) Let the time be $x$ years.

According to the question:-

$1000 + \frac{1000 \times 12 \times x}{100} = 1050 + \frac{1050 \times 10 \times x}{100}$

$\Rightarrow (120x - 105x) = (1050 - 1000)$

$\Rightarrow 15x = 50 \Rightarrow x = \boxed{\frac{10}{3} \text{ yrs}}$

19. (a) Let the respective Sums are $\text{₹}x$, $\text{₹}y$ and $\text{₹}z$.

$\therefore \frac{x \times 5 \times 1}{100} = \frac{y \times 5 \times 2}{100} = \frac{z \times 5 \times 3}{100}$

$\therefore x : y : z = 6 : 3 : 2$

Then, the required answer is $= (\frac{4}{11} \times 8800)$

$= \boxed{\text{₹ } 3200}$

## (A) Simple Interest :- <12>

20. (d) Let the principal be ₹ x and the interest for 1 year is ₹ I.

$\therefore$ $P + 3I = 300 \longrightarrow (i)$

$P + 8I = 400 \longrightarrow (ii)$

By solving eqn (i) & eqn (ii); We get →

$P = ₹\ 240$ and $I = ₹\ 20$

$\therefore \quad 20 = \frac{240 \times R \times 1}{100} \Rightarrow R = \left(\frac{100}{12}\right) = \frac{25}{3} = \boxed{8.33}$

21. (c) Let the Sum be ₹ 100x; Interest be ₹ 6x.

$\therefore$ The amount is ₹ 106x.

According to the question:-

$\Rightarrow 6x \times \frac{11}{20} = \frac{(106x - 6800) \times 5 \times 1}{100}$

$\Rightarrow \quad 66x = 106x - 6800$

$\Rightarrow \quad 40x = 6800$

$\Rightarrow \quad x = 170$

Then $100x = \boxed{₹\ 17000}$

22. (b) $\frac{p \times 4 \times 5}{100} = 480 \Rightarrow p = \boxed{4000}$

23. (d) Let the Sum be ₹ x.

$\therefore \quad x + \frac{x \times 4 \times 8}{100} = 5280$

$\Rightarrow \quad \frac{33x}{25} = 5280$

$\Rightarrow \quad x = 4000$

Then the total Sum be → $(2 \times 4000) = \boxed{₹\ 8000}$

## (A) : Simple Interest :- <13>

24. (b) SI = 16% of P.

Now; R = T = x (Let)

$\therefore \frac{16P}{100} = \frac{P \times x \times x}{100}$

$\Rightarrow x^2 = 16$

$\Rightarrow x = 4$

$\therefore$ Rate of interest

**4%**

25. (b) Let $P_1 = 1$, $A_1 = 3$, $\therefore I_1 = 2$, $T_1 = 5$ yrs

Now; $P_2 = 1$, $A_2 = 8$, $I_2 = 7$, $T_2 = ?$

Then; We can write $\rightarrow \frac{I_1}{I_2} = \frac{T_1}{T_2}$

$\Rightarrow \frac{2}{7} = \frac{5}{T_2} \Rightarrow T_2 = \boxed{\frac{35}{2} \text{ yrs}}$

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