Simple Interest Questions for CDS, CLAT and SSC Exams.

Simple Interest Quiz 3

Directions: Kindly study the following Questions carefully and choose the right answer:

1. The rate at which a sum becomes four times of itself in 15 years at S.I, will be:

A. 12% B. 15% C. 20% D. 25%

2. A sum of Rs.1550 was lent partly at 5% and partly at 8% p.a. simple interest. The total interest received after 3 years was Rs. 300. The ratio of the money lent at 5% to that lent at 8% is :

A. 5 : 8 B. 8 : 5 C. 16 : 15 D. 31 : 6

3. A certain sum of money amounts to 5/4 of itself in 5 years. The percent p.a. is.

A. 6% B. 5% C. 4% D. 8%

4. Out of certain sum, 1/3rd is interested at 3%, 1/6th at 6% and rest at 8%. If the simple interest for 2 years from all these investments amounts to Rs. 600. Find the original sum.

A. 4000 B. 15000 C. 5000 D. 4975

5. Namrata deposited Rs. 8,000 which amounted 9200 after 3 years at S.I. had the interest been 2% more, she would get how much?

A. 9480 B. 9580 C. 9660 D. 9680

6. If x is the the simple interest on y and y is the simple interest on z, the rate % and the time being the same in both cases. What is the relation between x, y and z.

A. $y^2 = xz$ B. $y^2 = x^2z$ C. $yz = x^2$ D. $z^2 = xy$

7. A man 500 for 2 years and 300 for 3 years at the same rate simple interest and required only Rs. 190 as interest. What was the rate% p.a.?

A. 11% B. 15% C. 10% D. 9%

8. A man borrowed Rs. 2500 from two money lenders for one loan, he paid 5% p.a. and for other, he paid 7% p.a. The total interest paid for 2 years was Rs. 265. How much did he borrow at each rate?

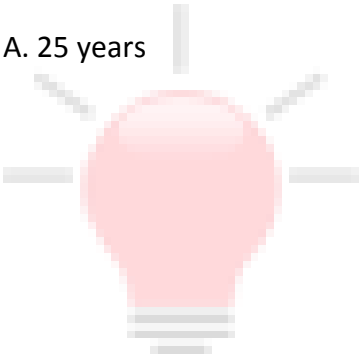
A. 2155, 345 B. 2125, 375 C. 2000, 500 D. 2100, 400

9. Pooja borrowed some money at the rate of 6% per annum for the first 3 year, at the rate of 9% per annum for the next 5 year and at the rate of 13% per annum for the period beyond 8 years. If she pays a total interest of Rs. 8160 at the end of 11 year, how much money did she borrow?

A. 8,000 B. 8,500 C. 9,300 D. 1,024

10. A certain sum in certain time becomes Rs. 500 at the rate of 8% per annum S.I and the same sum amounts to Rs. 200 at the rate of 2% S.I in the same duration. Find the sum and time?

A. 25 years B. 50 years C. 56 years D. 60 years



Correct Answers:

1	2	3	4	5	6	7	8	9	10
C	C	B	C	D	A	C	B	A	B

Explanations:

1. Let principal be x, Amount = 4x then, S.I = 4x – x = 3x

$\therefore$ Rate = $\left(\frac{100 \times S.I}{x \times 6}\right) = \left(\frac{100 \times 3x}{x \times 15}\right)$ % = 20%.

Hence, option C is correct.

2. Let the sum lent at 5% be Rs. x and that let at 8% be Rs. (1550 – x). Then,

$\left(\frac{x \times 5 \times 3}{100}\right) + \left[\frac{(1500 - x) \times 8 \times 3}{100}\right] = 300.$

$\Rightarrow 15x - 24x + (1550 \times 24) \Rightarrow 30000$

$\Rightarrow 9x = 7200 \Rightarrow x = 800$

ratio = $\frac{800}{750} = 16 : 15$

Hence, option C is correct.

3.

Let the principal be x, Amount in 5 yrs = $\frac{5}{4}x$

Therefore, SI = (Amount – Principal) = $\frac{5}{4}x - x = \frac{1}{4}.x$

$SI = \frac{P \times R \times T}{100}$

$\frac{x}{4} = \frac{x \times R \times 5}{100} \Rightarrow R = 5\%.$

Hence, option B is correct.

4.

Rest Part = $1 - \frac{1}{3} - \frac{1}{6} = 1 - \frac{2+1}{6} = 1 - \frac{1}{2} = \frac{1}{2}$.

Let the sum be x.

$600 = \frac{(x/3) \times (3 \times 2)}{100} + \frac{(x/6) \times 6 \times 2}{100} + \frac{(x/2) \times 8 \times 2}{100}$

$600 = \frac{2x + 2x + 8x}{100} = \frac{12x}{100} = 600$; x = 5000.

Hence, option C is correct.

5. S.I. = 1200
Time = 3 years
Rate = R
P = 8000

$1200 = \frac{8000 \times R \times 3}{100}$; $R = \frac{120}{8 \times 3} = 5\%$

New Rate = 5 + 2 = 7%.

S.I. = $\frac{8000 \times 7 \times 3}{100} = 21 \times 80 = 1680$.

Amount that she would got = 8000 + 1680 = 9680.

Hence, option D is correct.

6. Let rate be R%
And time be t.

$x = \frac{y \times RT}{100}$; $y = \frac{z \times RT}{100}$.

$\frac{x}{y} = \frac{y(RT/100)}{z(RT/100)} \Rightarrow xz = y^2$.

Hence, option A is correct.

7. Let the rate be R%

$\text{S.I.} = \frac{500 \times R \times 2}{100} + \frac{300 \times R \times 3}{100} = 19R.$

$\therefore$ 190 = 19R

$\Rightarrow$ R = 10%.

Hence, option C is correct.

8. Total interest = 265

Rate of interest at total amount $\rightarrow$ R

$265 = \frac{2500 \times R \times 2}{100}$; R = 5.3%

By the Rule of Allegation , $\frac{\text{Sum of borrowed at 5\% p.a.}}{\text{Sum of borrowed at 7\% p.a.}} = \frac{7 - 5.3}{5.3 - 5} = \frac{17}{3}$.

= 17 : 3.

So, the amount is divided into the ratio of 17 : 3.

Now, the amount at 5% = $\frac{17}{20} \times 2500$ = Rs. 2125.

The amount at 7% = $\frac{3}{20} \times 2500$ = Rs. 375.

Hence, option B is correct.

9. Let the Principal be x, then

$\text{SI} = \frac{P \times R \times T}{100}$

According to question,

$\frac{x \times 6 \times 3}{100} + \frac{x \times 9 \times 5}{100} + \frac{x \times 13 \times (11 - 8)}{100} = 8160$

$\Rightarrow \frac{18x + 45x + 39x}{100} = 8160$

$\Rightarrow$ 102x = 816000

$\Rightarrow x = \frac{816000}{102}$ = Rs. 8000

Hence, option A is correct.

10. Let the sum be P; the time be T ; A = 500

Amount = P + S.I

$P + \frac{P \times 8 \times T}{100} = 500$ ...(i)

$P + \frac{P \times 2 \times T}{100} = 200$ ...(ii)

eq. (i) – eq. (ii)

$\frac{6PT}{100} = 300$; PT = 5,000 ...(iii)

$P + \frac{5000 \times 8}{100} = 500$

P = 100; From (iii)

$T = \frac{5000}{100} = 50$ years

Hence, option B is correct.