

## Simple Interest Questions for SBI PO Pre, IBPS PO Pre, SBI Clerk Mains and IBPS Clerk Mains Exams.

## Simple Interest Quiz 9

Direction: Read the following questions carefully and choose the right answer.

1. From a bank, Ram and Shyam together took a certain amount under simple interest and they lent the total amount to Mohan at 2\% more simple interest. At the end of 4 years, the total money earned by Ram after paying the interest to the bank was Rs. 400 more than that of Shyam. From the bank, the total amount taken by Ram was how much more than that of Shyam?
A. Rs. 10000
B. Rs. 20000
C. Rs. 5000
D. Rs. 25000
E. Can't be determined
2. Aman and Raghav are two friends. Aman started a business with an investment of Rs 7200, while Raghav puts $60 \%$ of his salary at $40 \%$ p.a simple interest for 6 months; Raghav takes the amount received after 6 months and joins Aman in the business. If Aman receives a profit of Rs. 2000 out of a total profit of Rs. 2900 at the end of 1 year, what was the original salary of Raghav?
A. Rs. 18000
B. Rs. 9400
C. Rs. 9000
D. Rs. 15000
E. None of these
3. Deepika deposited Rs. 1000 in a fund in 2019 which provides simple interest. The interest rate on the fund increases by $3 \%$ every year. If the interest rate at the time of amount deposit was $10 \%$, find the interest earned by her after 9 years.
A. Rs. 1880
B. Rs. 1890
C. Rs. 2980
D. Rs. 1790
E. Rs. 1980
4. Rayan invested a total of Rs. 49000 in two different schemes A and B. The scheme A which offers interest at a rate of $5 \%$ per annum and scheme $B$ offers interest at a rate of $12 \%$. If the total interest earned by Rayan after 1 year is Rs. 4900 then find the sum invested in scheme $B$.
A. Rs. 34000
B. Rs. 19000
C. Rs. 35000
D. Rs. 14000
E. Rs. 30000
5. The salary of a man is Rs. 60000, from which he deposits $\mathrm{x} \%$ amount at $13 \%$ simple interest. If the accumulated amount for the sum deposited after 3 years was Rs. 29190, then find the value of ' $x$ '.
A. 40
B. 35
C. 45
D. 50
E. None of these
6. Arnab deposited Rs. 14500 in SBI mutual fund which offers simple interest at the rate of 9\%. The simple interest obtained from SBI is deposited in Birla Sun Life mutual fund at the rate of $\mathbf{1 2 \%}$ simple interest. If the time period for depositing in SBI and Birla were $\mathbf{2}$ years and 5 years respectively, then find the total simple interest earned by Arnab.
A. Rs. 5248
B. Rs. 3856
C. Rs. 4176
D. Rs. 4462
E. None of these
7. The rate of interest for the first $\mathbf{2}$ years is $\mathbf{3 \%}$ per annum, for the next $\mathbf{3}$ years is $\mathbf{8 \%}$ per annum, and for the period beyond 5 years is $10 \%$ per annum. If the man withdraws total amount of Rs. 5320 after 6 years, find the sum he deposited?
A. Rs. 3800
B. Rs. 4320
C. Rs. 2380
D. Rs. 3380
E. None of these
8. Andy lends a sum of money at $R \%$ simple interest for $R$ years such that sum received by him is $9 / 16$ times more of what he lends. Find the value of $R$.
A. 5.5
B. 6.5
C. 7
D. 7.5
$E$. None of these
9. Sanjay borrowed certain amount of money at simple interest at the rate of $5 \%$ p.a. for the first three years, $10 \%$ p.a. for the next five years and $12 \%$ p.a. for the period beyond 8 years. If the total interest paid by him at the end of 12 years is Rs. 6780, how much money did he borrow?
A. Rs. 6000
B. Rs. 5000
C. Rs. 4500
D. Rs. 5500
E. Rs. 3840
10. A certain sum 10 M Invested at simple Interest becomes 130 M in $\mathbf{3 0}$ years. If the same amount invested with same rate of Interest but at Compound Interest, it will become $\qquad$ after two years?
A. 14.4 M
B. 19.6 M
C. 23.2 M
D. 16.9 M
E. None of these

## CORRECT OPTIONS:

| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | C | E | C | B | C | A | D | A | B |

## Explanations:

1. Let Ram took Rs. a and Shyam took Rs. b

Let the rate of interest was r\% per annum
They lent Rs. $(a+b)$ to Mohan at the rate of $(r+2) \%$ per annum

For Ram,
The total interest received on Rs. $a=a \times 4 \times \frac{r+2}{100}$

The total interest paid by Ram to the bank $=a \times r \times \frac{4}{100}$

The total interest earned by Ram after paying the interest to the bank

$$
\begin{equation*}
=a \times 4 \times \frac{r+2}{100}-a \times r \times \frac{4}{100}=\frac{8 a}{100} . \tag{i}
\end{equation*}
$$

For Shyam,
The total interest received on Rs. $b=b \times 4 \times \frac{r+2}{100}$
The total interest paid by Shyam to the bank $=b \times r \times \frac{4}{100}$

The total interest earned by Ram after paying the interest to the bank $=b \times 4 \times \frac{r+2}{100}-b \times r \times \frac{4}{100}=\frac{8 b}{100}-----$

From the question,
$\frac{8 a}{100}-\frac{8 b}{100}=400$
$a-b=50 \times 100=$ Rs. 5000
Hence, option C is correct.
2. Ratio of profit $=2000: 900=20: 9$

Let amount invested by Raghav be K

Ratio of investment $=12 \times 7200: 6 \times \mathrm{K}=14400: \mathrm{K}=20: 9$
$K=\operatorname{Rs} 6480$
Let original Salary of Raghav $=R$
$60 \%(R)$ at $40 \%$ p.a for 6 months
$\frac{60}{100} \times R \times \frac{40}{200} \times 1=6480-0.6 R$
$R=$ Rs. 9000

Hence, option C is correct.
3. Amount deposited = Rs. 1000

Interest earned by him after 9 years
$=\frac{\{1000 \times(10+13+16+19+\ldots . \text { upto } 9 \text { terms })\}}{100}$
$\rightarrow$ Here we can use the formula of Arithmetic Progression,
$\frac{n}{2}\{2 a+(n-1) d\}$
$\rightarrow 10 \times\left[\frac{9}{2}\{2 \times 10+(9-1) \times 3\}\right]$
$\rightarrow 45 \times 44=1980$
$\rightarrow$ Interest earned = Rs. 1980

Hence, option E is correct.
4. Let the total investment in scheme $B$ be Rs.x, then
$(49000-X) \times \frac{5}{100}+X \times \frac{12}{100}=4900$
$X=\frac{5}{7} \times 49000=$ Rs. 35000

Hence, option C is correct.
5. According to the question,
$(x \%$ of 60000$)+\frac{(x \% \text { of } 60000) \times 13 \times 3}{100}=29190$
$600 x+234 x=29190$
$834 x=29190 ; x=35$

So, the value of ' $x$ ' $=35$

Hence, option B is correct.
6. Simple interest earned from SBI mutual fund
$=\frac{14500 \times 9 \times 2}{100}=$ Rs. 2610

Simple interest earned from Birla Sun Life mutual fund
$=\frac{2610 \times 12 \times 5}{100}=$ Rs. 1566

Total simple interest earned $=2610+1566=$ Rs. 4176
Hence, option C is correct.
7. Let principal be Rs $P$.
S.I. $=$ S.I for $1 \& 2$ year + S.I. for $3,4 \& 5$ year + S.I. for 6 th year
S.I. $=\frac{P \times R_{1} \times T_{1}}{100}+\frac{P \times R_{2} \times T_{2}}{100}+\frac{P \times R_{3} \times T_{3}}{100}$
$\Rightarrow P+P\left(\frac{2 \times 3+3 \times 8+1 \times 10}{100}\right)=5320$
$\Rightarrow P=R s .3800$

## Alternate:

S.I. for six years $=40 \%$
$140 \%$ of $P=5320$
$P=3800$

Hence, option A is correct.
8. Let the sum be Rs $x$

$$
\text { S.I }=\left(\frac{9}{16}\right) x
$$

Let rate be $\mathrm{R} \%$ and time $=\mathrm{R}$ years
$S . I=\left(\frac{P R T}{100}\right)$
$\frac{(x \times R \times R)}{100}=\left(\frac{9}{16}\right) x \Rightarrow R^{2}=\frac{900}{16} \Rightarrow R=\frac{30}{4}$
$R=7.5$

Hence, option D is correct.
9. $5 \%$ for first three years,
$3 \times 5 \%=15 \%$
$10 \%$ for next five years,
$5 \times 10 \%=50 \%$
Time $=12$ years,
$12 \%$ for the next 4 years,
$4 \times 12 \%=48 \%$

Total rate interest $=(15+50+48) \%=113 \%$
$113 \%$ corresponds to 6780
$1 \%$ corresponds to $6780 / 113=60$
$100 \%$ will correspond to 6000 .

Principal = Rs. 6000

Hence, option A is correct.
10. As Amount becomes 130 M , so Interest is $130 \mathrm{M}-10 \mathrm{M}=120 \mathrm{M}$

Interest earned is 120M in 30 years.
$I=\frac{P R N}{100}$
$120 \mathrm{M}=\frac{(10 \mathrm{M} \times \mathrm{R} \times 30)}{100}$
$\mathrm{R}=40 \%$

Now, the same amount is Invested at Compound Interest.
Amount $=$ Principal $\times\left(1+\frac{\text { Rate of Interest }}{100}\right)^{\text {Time Period }}$
$=10 \mathrm{M} \times(1+0.4)^{2}$
$=10 \mathrm{M} \times 1.96$
$=19.6 \mathrm{M}$

Hence, option B is correct.

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