

**Simple Interest (LOD 02)**

1. A sum was put at simple interest at a certain rate for 2 years. Had it been put at 3% higher rate, it would have fetched Rs 300 more. The sum is

- a) Rs 5000                      b) Rs 6000  
c) Rs 7000                      d) None Of these

2. The simple interest on a sum of money at 10% per annum for 6 year is half the sum. Then, the sum is ?

- a) Rs 5000                      b) Not possible  
c) Rs 4000                      d) Rs 6000

3. The simple interest at x% for x years will be Rs x on a sum of ....

- a) Rs x                          b) Rs 100x  
c) Rs (100/x)                  d) Rs (100/ x2)

4. A certain sum lent out at simple interest amounts to Rs 575 in 3 yr and to Rs 625 in 5 yr. Then the rate of interest is ?

- a) 3%                          b) 4%  
c) 5%                          d) 7%

5. The simple interest on a sum of money is  $\frac{1}{9}$  of the principle and the number of years is equal to the rate percent annum. The rate percent annum is ?

- a) 3                              b)  $\frac{1}{3}$   
c)  $3\frac{1}{3}$                           d)  $\frac{3}{10}$

6. A moneylender finds that due to a fall in the rate of interest from 13% to  $12\frac{1}{2}\%$  his yearly income diminishes by Rs. 104. His capital is ?

- a) Rs. 21400                      b) Rs. 20800  
c) Rs. 22300                      d) Rs. 24000

7. A man invested  $\frac{1}{3}$  of his capital at 7%,  $\frac{1}{4}$  at 8% and remainder at 10%. If his annual income is Rs. 561, the capital is ?

- a) Rs. 5400                      b) Rs. 6000  
c) Rs. 6600                      d) Rs. 7200

8. A certain sum of money at simple interest amounts to Rs. 1260 in 2 years and to Rs. 1350 in 5 years. The rate per cent per annum is ?

- a) 2.5%                          b) 3.75%  
c) 5%                              d) 7.5%

9. A lent Rs. 600 to B for 2 years and Rs. 150 to C for 4 years and received altogether from both Rs. 90 as simple interest. The rate of interest is ?

- a) 4%                              b) 5%  
c) 10%                              d) 12%

10. Rs. 800 amounts to Rs. 920 in 3 years at simple interest. If the interest rate is increased by 3% It would amount to how much ?

- a) Rs. 1056                      b) Rs. 1112  
c) Rs. 1182                      d) Rs. 992

11. The simple interest on a sum of money at 8% per annum for 6 years is half the sum. The sum is ?

- a) Rs. 4800                      b) Rs. 6000  
c) Rs. 8000                      d) Data inadequate

12. If the interest on Rs. 1200 be more than the interest on Rs. 1000 by Rs. 50 in 3 years, the rate per cent is ?

- a)  $10\frac{1}{3}\%$                           b)  $6\frac{2}{3}\%$   
c)  $8\frac{1}{3}\%$                           d)  $9\frac{2}{3}\%$

13. In how many years will a sum of money double itself at 12% per annum?

- a) 6 years 9 months              b) 8 years 4 months  
c) 7 years 6 months              d) 8 years 6 months

14. A sum was put at simple interest at a certain rate for 2 years. Had it been put at 1% higher rate, it would have fetched Rs. 24 more, The sum is ?

- a) Rs. 600                          b) Rs. 800  
c) Rs. 1200                          d) Rs. 480

15. A sum money becomes  $\frac{8}{5}$  of itself in 5 years at a certain rate of interest. The rate percent per annum is ?

- a) 5%                              b) 8%  
c) 10%                              d) 12%

**More stuff on telegram group:** <https://t.me/targetcampus>

Test series at <https://www.targetcampus.com>

For Tricks and Approximation Techniques refer sessions of Dr. Kiran Derle

**16.** The difference between the interest received from two different bank on Rs. 500 for 2 year is Rs. 2.50. The difference between their rates is ?

- a) 1%                      b) 0.5%  
c) 2.5%                    d) 0.25%

**17.** A certain sum of money at simple interest amounts to Rs. 1012 in  $2\frac{1}{2}$  years and to Rs. 1067.20 in 4 years. The rate of interest per annum is ?

- a) 2.5%                    b) 3%  
c) 4%                      d) 5%

**18.** Two equal amounts of money are deposited in two banks, each at 15% per annum for  $3\frac{1}{2}$  years and 5 years. If the difference between their interests is Rs. 144, each sum is ?

- a) Rs. 460                      b) Rs. 500  
c) Rs. 640                    d) Rs. 720

**19.** If the rate of interest rises from  $6\frac{1}{2}$  to 8% a man's annual income increases by Rs. 4050. Find the capital.

- a) Rs . 270000                      b) Rs . 370000  
c) Rs . 300000                    d) None of these

**20.** The simple interest on a sum of money will be Rs. 600 after 10 years. If the principal is trebled after 5 years the total interest at the end of 10 years will be ?

- a) Rs. 600                      b) Rs. 900  
c) Rs. 1200                    d) Data inadequate

**21.** A sum of Rs. 2540 is lent out into two parts. One at 12% and another one at  $12\frac{1}{2}$  %. If the total annual income is Rs. 311.60, the money lent at 12% is ?

- a) Rs. 1180                      b) Rs. 1360  
c) Rs. 1240                    d) Rs. 1340

**22.** A man lends Rs. 10000 in four parts. If he gets 8% on Rs. 2000,  $7\frac{1}{2}$ % on Rs . 4000 and  $8\frac{1}{2}$ % on Rs. 1400, What per cent must he get for the remainder if the average interest is 8.13% ?

- a) 7%                          b) 9%  
c)  $9\frac{1}{4}$ %                      d)  $10\frac{1}{2}$  %

**23.** If the simple interest for 5 yr be equal to 40% of the principle, it will be equal to the principle after ?

- a) 12 yr 3 months                      b) 12 yr 6 months  
c) 12 yr 4 months                    d) 12 yr 9 months

**24.** What sum of money lent out at simple interest will amount to ₹ 3400 in 3 yr at 1% per month ?

- a) ₹ 2400                      b) ₹ 1800  
c) ₹ 1600                    d) ₹ 2500

**25.** Simple interest on ₹ 1680 for 4 yr at  $7\frac{1}{2}$  per annum is equal to the simple interest on ₹ 1200 at 7% per annum for a certain period of time. Time period of time is ?

- a) 7 yr                          b) 6 yr  
c)  $5\frac{1}{3}$  yr                      d)  $7\frac{1}{4}$  yr

**26.** If a certain sum of money becomes double at simple interest in 12 yr. What would be the rate of interest per annum ?

- a)  $8\frac{1}{3}$ %                      b) 10%  
c) 12%                          d) 14%

**27.** A sum of ₹ 4000 is lent out in two parts, one at 8% simple interest and other at 10% simple interest. If the annual interest is ₹ 352, the sum lent at 8% is

- a) ₹ 1600                      b) ₹ 2400  
c) ₹ 1800                    d) ₹ 2800

**28.** A man invests ₹ 3000 at the rate of 5% per annum. How much more should he invest at the rate of 8%, so that he can earn a total of 6% per annum ?

- a) ₹ 1200                      b) ₹ 1300  
c) ₹ 1500                    d) ₹ 2000

**29.** When a bank reduce the rate of interest from  $6\frac{1}{2}$ % per annum to  $5\frac{1}{2}$ % per annum, depositor withdrew Rs. 600 and thereby his interest reduced by ₹ 73. Find the initial deposit. ?

- a) ₹ 4000                      b) ₹ 6000  
c) ₹ 7000                    d) ₹ 9000

**More stuff on telegram group:** <https://t.me/targetcampus>

Test series at <https://www.targetcampus.com>

For Tricks and Approximation Techniques refer sessions of Dr. Kiran Derle

**Simple Interest (LOD 02- Answers)****1. Correct Option: A**

Let the sum be P.

And the original rate be  $y\%$  per annum.Then new rate  $= (y+3)\%$  per annumAccording to question,  $[(P \times (y+3) \times 2)/100] = [(P \times y \times 2)/100] + 300$ 

$$\therefore [(Py + 3P)/100] = [Py/100] + 150$$

$$\therefore Py + 3P - Py = 15000$$

$$\therefore 3P = 15000$$

$$\therefore P = 5000$$

Thus, the sum is Rs 5000

**2. Correct Option: B**

Let the sum be Rs 'y'

Since Simple Interest = Rs ( y / 2 )

and,  $T = 6$  yr,  $R = 10\%$  per annumSo Simple Interest,  $SI = (P \times R \times T)/100$ where,  $R = \text{Rate}$  $T = \text{Time}$  $SI = \text{Simple Interest}$ now, According to problem,  $(y/2) = (y \times 10 \times 6)/100$ 

$$\Rightarrow (1/2) = (6/10)$$

 $\Rightarrow$  which is not true, so it is not a possible case.**3. Correct Option: C**As Sum  $= [(100 \times SI)/(Time \times Rate)]$ here, let  $R = x\%$ ,  $T = x$  yr, and,  $SI = Rs x$ 

$$\therefore \text{Sum} = [(100 \times x)/(x \times x)]$$

$$= (100/x)$$

**4. Correct Option: B**Let the sum be Rs 'y' and , rate of interest =  $R\%$ Simple Interest for 2 yr  $= Rs(625 - 575) = Rs 50$ 

$$\therefore \text{Sum of money, } y = Rs(575 - 75) = Rs 500$$

$$\therefore R = [(100 \times SI)/(\text{Sum} \times \text{Time})]$$

$$= [(100 \times 50)/(500 \times 2)] = 5\%$$

**5. Correct Option: C**

Let principle = Rs. P

Then  $S.I = P/9$ Let Rate =  $R\%$  per annum and time =  $R$  yearsThen, as we know  $SI = (P \times R \times T) / 100$ .

$$\Rightarrow P/9 = (P \times R \times R) / 100$$

$$\Rightarrow R^2 = 100/9$$

$$\therefore R = 10/3 = 3\frac{1}{3} \% \text{ per annum}$$

**6. Correct Option: B**

Let capital = Rs . P

Then,  $SI_1 - SI_2 = 104$ .

$$\Rightarrow (P \times 13 \times 1)/100 - (P \times 25/2 \times 1)/100 = 104$$

$$\Rightarrow 13P/100 - P/8 = 104$$

$$\Rightarrow 26P - 25P = (104 \times 200)$$

$$\Rightarrow P = 20800$$

$$\therefore \text{Capital} = Rs. 20800$$

**7. Correct Option: C**

Let the capital be Rs. P, then

$$(P/3) \times (7/100) + (x/4) \times (8/100) + [P - (P/3 + P/4)] \times 10/100 = 561$$

$$\Rightarrow 7P/300 + P/50 + P/24 = 561$$

**More stuff on telegram group:** <https://t.me/targetcampus>Test series at <https://www.targetcampus.com>

For Tricks and Approximation Techniques refer sessions of Dr. Kiran Derle

$$\Rightarrow 42P + 36P + 75P = 1009800$$

$$P = 1009800/153 = 6600$$

**8. Correct Option: A**

$$\text{S.I for 3 years} = \text{Rs. } (1350 - 1260) = \text{Rs. } 90$$

$$\text{S.I for 2 years} = \text{Rs. } (90/3) \times 2 = \text{Rs. } 60$$

$$\therefore \text{Sum} = \text{Rs. } (1260 - 60) = \text{Rs. } 1200$$

$$\therefore \text{Rate} = (100 \times \text{SI}) / (P \times T) = (100 \times 60) / (1200 \times 2) = 2.5\%$$

**9. Correct Option: B**

Let rate = R% per annum.

$$\text{Then, } [(600 \times R \times 2) / 100] + [(150 \times R \times 4) / 100] = 90$$

$$\Rightarrow 18R = 90$$

$$\therefore R = 5\%$$

**10. Correct Option: D**

$$\text{Principal} = \text{Rs. } 800$$

$$\text{S.I.} = \text{Rs. } (920 - 800) = \text{Rs. } 120$$

$$\text{and Time} = 3 \text{ years}$$

$$\therefore \text{Original rate} = (100 \times \text{SI}) / (P \times T) = (100 \times 120) / (800 \times 3) = 5\%$$

$$\text{New rate} = 8\%$$

$$\text{Now, S.I.} = \text{Rs. } (800 \times 8 \times 3) / 100 = \text{Rs. } 192$$

$$\therefore \text{Amount} = \text{Rs. } (800 + 192)$$

$$= \text{Rs. } 992$$

**11. Correct Option: D**

$$\text{Let, Sum} = P$$

$$\text{Then S.I} = P/2$$

$$\text{Rate} = 8\%$$

$$\text{and Time} = 6 \text{ years}$$

$$\text{But } P/2 = (P \times 8 \times 6) / 100 \text{ (Not possible)}$$

Thus, data is inadequate.

**12. Correct Option: C**

Let rate = R% per annum. Then,

$$(1200 \times R \times 3) / 100 - (1000 \times R \times 3) / 100 = 50$$

$$\Rightarrow 6R = 50$$

$$\Rightarrow R = 8 \frac{1}{3}$$

$$\therefore \text{Rate} = 8 \frac{1}{3}\% \text{ per annum}$$

**13. Correct Option: B**

Let principal = P.

$$\text{Then, S.I} = P,$$

$$\text{Rate (R)} = 12\%$$

$$\text{Time} = (100 \times \text{SI}) / (R \times P) = (100 \times P) / (P \times 12) \text{ years}$$

$$= 25/3 \text{ years}$$

$$= 8 \text{ years } 4 \text{ months}$$

**14. Correct Option: C**

Let sum = P and original rate = R% per annum

$$\text{Then, } [(P \times (R + 1) \times 2) / 100] - [(P \times R \times 2) / 100] = 24$$

$$\Rightarrow P = 1200$$

**15. Correct Option: D**

$$\text{Let sum} = \text{Rs. } P.$$

$$\text{Then amount} = \text{Rs. } (8P/5)$$

$$\therefore \text{S.I} = \text{Rs. } (8P/5 - P) = \text{Rs. } (3P/5)$$

**More stuff on telegram group:** <https://t.me/targetcampus>

Test series at <https://www.targetcampus.com>

For Tricks and Approximation Techniques refer sessions of Dr. Kiran Derle

$$\therefore \text{Required rate} = (100 \times \text{SI}) / (P \times T)$$

$$= [(100 \times 3P/5) / (P \times 5)]\% = 12\%$$

**16. Correct Option: D**

Let the rates be  $R_1\%$  and  $R_2\%$ .

$$\text{Then, } (500 \times R_1 \times 2) / 100 - (500 \times R_2 \times 2) / 100 = 2.5$$

$$\Rightarrow 10(R_1 - R_2) = 2.5$$

$$\therefore \text{Req difference} = R_1 - R_2 = 0.25\%$$

**17. Correct Option: C**

$$\therefore \text{S.I. for } 3\frac{1}{2} \text{ years} = \text{Rs. } (1067.20 - 1012) = \text{Rs. } 55.20$$

$$\Rightarrow \text{S.I. for } 5\frac{1}{2} \text{ years} = \text{Rs. } 55.20 \times (2/3) \times (5/2) = 92$$

$$\therefore \text{Sum} = \text{Rs. } (1012 - 92) = \text{Rs. } 920$$

$$\text{Hence, Rate} = (100 \times \text{SI}) / (P \times T) = (100 \times 92) / (920 \times 5\frac{1}{2}) = 4\%$$

**18. Correct Option: C**

Let each sum be Rs.  $P$ .

$$\text{Then, } [(P \times 15 \times 5) / 100] - [(P \times 15 \times 7) / 100] \times 2 = 144$$

$$\Rightarrow 3P/4 - 21P/40 = 144$$

$$\Rightarrow 9P/40 = 144$$

$$\therefore P = (144 \times 40) / 9 = \text{Rs. } 640$$

**19. Correct Option: A**

Due to the rise in the rate of interest, annual income increases by Rs.  $(8 - 61/2) = \text{Rs. } 11/2$ , when the capital is Rs. 100

$$\text{Thus, the required capital} = (100 \times 2 \times 4050) / 3 = \text{Rs. } 270000$$

**20. Correct Option: C**

Let the sum be Rs.  $P$ ,  $\text{SI} = \text{Rs. } 600$ ,  $\text{Time} = 10 \text{ years}$

$$\therefore \text{Rate} (600 \times 100) / (P \times 10)\%$$

$$\text{S.I for first 5 years} = \text{Rs. } (P \times 5 \times 6000) / (1000 \times P) = \text{Rs. } 300$$

$$\text{S.I for last 5 years} = \text{Rs. } (3P \times 5 \times 6000) / (100 \times P) = \text{Rs. } 900$$

$$\text{Hence, total interest at the end of 10 years} = 300 + 900 = \text{Rs. } 120$$

**21. Correct Option: A**

Let money lent at  $12\%$  Rs.  $P$

$$\text{Then, money lent at } 12\frac{1}{2}\% = \text{Rs. } (2540 - P)$$

$$\therefore (P \times 12 \times 1) / 100 + \{(2540 - P) \times 25/2 \times 1\} / 100 = 311.60$$

$$\Rightarrow 3P/25 + 2540 - P/8 = 311.60$$

$$\Rightarrow 24P + 25(2540 - P) = 200 \times 311.60$$

$$\therefore P = 63500 - 62320 = 1180$$

**22. Correct Option: B**

$$\therefore [(2000 \times 8 \times 1) / 100] + [(4000 \times 15/2 \times 1) / 100] + [(1400 \times 17/2 \times 1) / 100] + [(2600 \times R \times 1) / 100] = (10000 \times 8.13 \times 1) / 100$$

$$\Rightarrow 160 + 300 + 119 + 26R = 813$$

$$\Rightarrow 26R = 234$$

$$\Rightarrow R = 9\%$$

**23. Correct Option: B**

If interest is  $40\%$  of the principal then  $\text{time} = 5 \text{ years}$ .

So, when interest would be equal to  $100\%$  of the principal time would be

$$= (100/40) \times 5 \text{ years} = 12.5 \text{ years}$$

$$= 12 \text{ yr } 6 \text{ months}$$

**More stuff on telegram group:** <https://t.me/targetcampus>

Test series at <https://www.targetcampus.com>

For Tricks and Approximation Techniques refer sessions of Dr. Kiran Derle

**24. Correct Option: D**

$A = ₹ 3400$   $T = 3$  yr,  $R = 1\%$  per month  $= 12\%$  per annum Let the principle be ₹  $P$ .

$$SI = (PTR/100) = (P \times 3 \times 12)/100 = ₹ 36P/100$$

$$A = (P + SI) = P + 36P/100 = ₹ 136P/100$$

$$\Rightarrow 136P/100 = 3400$$

$$\Rightarrow P = (3400 \times 100)/136 = 2500$$

$$\therefore \text{Sum} = ₹ 2500$$

**25. Correct Option: B**

Let the required period of time be  $T$  yr.

$$\text{Then, } (1680 \times 4 \times 15)/100 = (1200 \times T \times 7)/100$$

$$T = (1680 \times 2 \times 12)/(1200 \times 7)$$

$$= 6 \text{ yr}$$

Hence, the required time period is 6 yr.

**26. Correct Option: A**

Let the amount be  $P$ , then amount after 12 yr  $= 2P$

$$SI = 2P - P = P$$

$$SI = (P \times R \times T)/100$$

$$P = (P \times R \times 12)/100$$

$$\Rightarrow R = 100/12 = 8\frac{1}{3}\%$$

**27. Correct Option: B**

Let the money interest at 8% interest be ₹  $P$ .

Then, the money interest at 10% interest  $= ₹(4000 - P)$

According to the question,

$$(P \times 8 \times 1)/100 + [(4000 - P) \times 10 \times 1]/100 = 352$$

$$\Rightarrow 8P + 40000 - 10P = 35200$$

$$\Rightarrow 40000 - 35200 = 2P$$

$$\therefore P = 4800/2 = ₹ 2400$$

**28. Correct Option: C**

Let the extra money invested  $= ₹ P$

According to the question .

$$(3000 \times 5 \times 1)/100 + (P \times 8 \times 1)/100 = [(3000 + P) \times 6 \times 1]/100$$

$$\Rightarrow 15000 + 8P = 18000 + 6P$$

$$\Rightarrow 2P = 18000 - 15000$$

$$\therefore P = 3000/2 = ₹ 1500$$

**29. Correct Option: A**

Initially ,

let  $P = ₹ A$ ,  $R = 13\frac{1}{2}\%$  per annum and  $T = 1$  yr

$$SI = PRT/100 = (A \times 1 \times 13\frac{1}{2})/100 = ₹ 13A/200$$

Now, new deposit  $= ₹ (A - 600)$ ,  $R = 11\frac{1}{2}\%$  per annum and  $T = 1$  yr

$$SI = PTR/100 = [(A - 600) \times 1 \times 11\frac{1}{2}]/100 = ₹ 11(A - 600)/200$$

By the given condition ,

$$13A/200 - 11(A - 600)/200 = 73$$

$$\Rightarrow 13A - 11(A - 600) = 200 \times 73$$

$$\Rightarrow 2A = 200 \times 73 - 600 \times 11$$

$$\Rightarrow 2A = 14600 - 6600$$

$$\Rightarrow 2A = 8000 \Rightarrow A = 4000$$

Hence, the initial investment is ₹ 4000.