

# BHARAT SCHOOL OF BANKING

## SIMPLE INTEREST AND COMPOUND INTEREST

1. A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years.

The sum is:

- A) Rs. 720
- B) Rs. 698
- C) Rs. 678
- D) Rs. 696
- E) none of these

2. A sum fetched a total simple interest of Rs. 4016.25 at the rate of 9 % p.a. in 5 years. What is the sum?

- A) Rs. 8045
- B) Rs. 8925
- C) Rs. 8900
- D) Rs. 8032.45
- E) none of these

3. A sum of money amounts to Rs. 9800 after 5 years and Rs. 12005 after 8 years at the same rate of simple interest. The rate of interest per annum is:

- A) 12 %
- B) 13 %
- C) 8 %
- D) 12.5 %

4. A person borrows Rs. 5000 for 2 years at 4% p.a. simple interest. He immediately lends it to another person at 6.25% p.a. for 2 years. Find his gain in the transaction per year.

- A) Rs. 112.50
- B) Rs. 175
- C) Rs. 150
- D) Rs. 125.50

5. A man took loan from a bank at the rate of 12% p.a. simple interest. After 3 years he had to pay Rs. 5400 interest only for the period. The principal amount borrowed by him was:

- A) Rs. 12000
- B) Rs. 15000
- C) Rs. 12500
- D) Rs. 22000

6. How much time will it take for an amount of Rs. 450 to yield Rs. 81 as interest at 4.5% per annum of simple interest?

- A) 3 year
- B) 4 year
- C) 5 year

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D)6 year

7. Bhavika took a loan of Rs. 1200 with simple interest for as many years as the rate of interest. If she paid Rs. 432 as interest at the end of the loan period, what was the rate of interest?

- A)3.6
- B) 5
- C) 6
- D)25

8. A lent Rs. 5000 to B for 2 years and Rs. 3000 to C for 4 years on simple interest at the same rate of interest and received Rs. 2200 in all from both of them as interest. The rate of interest per annum is:

- A) 5 %
- B) 7%
- C)10 %
- D) 12%

9. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1st January and 1st July of a year.

At the end of the year, the amount he would have gained by way of interest is:

- A)123
- B) 122
- C)121
- D)120

10. The compound interest on Rs. 30,000 at 7% per annum is Rs. 4347. The period (in years) is:

- A)2.5
- B) 2
- C) 3
- D) 4
- E) none of these

Explanation

1. S.I. for 1 year = Rs. (854 - 815) = Rs. 39.

S.I. for 3 years = Rs. (39 x 3) = Rs. 117.

Principal = Rs. (815 - 117) = Rs. 698.

$$2. \text{Sum} = (100 \times \text{S.I.}) / r \times t$$
$$= (100 \times 4016.25) / 9 \times 5 = \text{Rs. } 8925$$

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3.S.I. for 3 years = Rs. (12005 - 9800) = Rs. 2205.

S.I. for 5 years = Rs. 3675

Principal = Rs. (9800 - 3675) = Rs. 6125

Hence Rate =  $\{(100 \times 3675) / 6125 \times 5\} \% = 12 \%$

4. Gain in 2 years = Rs.  $\{[(5000 \times 6.25 \times 2) / 100] - [(5000 \times 4 \times 2) / 100]\}$   
= Rs. (625 - 400) = Rs. 225.

So gain in 1 year = Rs. 225 / 2 = Rs. 112.50

5. Principal = Rs.  $\{(100 \times 5400) / (12 \times 3)\} = \text{Rs. } 15000.$

6. Time =  $(100 \times 81) / (450 \times 4.5)$  years = 4 years

7. Let rate = r% and time = r years

Then  $(1200 \times r \times r) / 100 = 432$

$12 r^2 = 432$

r = 6 %

8. Let the rate be r% p.a.

Then,  $(5000 \times r \times 2) / 100 + (3000 \times r \times 4) / 100 = 2200.$

$100R + 120R = 2200$

R = 2200 / 220 = 10.

Rate = 10%.

9. Amount = Rs.  $[1600 \times (1 + 5/200)^2 + 1600 \times (1 + 5/200)]$   
= Rs. 3321

So CI = Amount - Principal

= Rs. 3321 - Rs. 3200 = Rs. 121

10. Amount = Rs. (30000 + 4347) = Rs. 34347,

Let the time be n years then

$30000(1 + 7/100)^n = 34347$

$(107/100)^n = 34347/30000$

So n = 2 year.