Simple and Compound Interest Questions for SSC Exams Pdf

1. The interest on a certain deposit at 4.5% p.a. is Rs. 202.50 in one year. How much will the additional interest in one year be on the same deposit at 5% p.a.?

a. Rs. 20.25

b. Rs. 22.50

c. Rs. 25

d. Rs. 42.75

Ans: B

S.I. = ₹ 202.50, R = 4.5%, T = 1 year.

$$\text{Principal} = ₹\left(\frac{100 \times 202.50}{4.5 \times 1}\right) = ₹\ 4500.$$

Now, P = ₹ 4500, R = 5%, T = 1 year.

$$\text{S.I.} = ₹\left(\frac{4500 \times 5 \times 1}{100}\right) = ₹\ 225.$$

$\therefore$ Difference in interest = ₹ (225 − 202.50) = ₹ 22.50.

2. A man buys a TV priced at Rs. 16000. He pays Rs. 4000 at once and the rest after 15 months on which he is charged a simple interest at the rate of 12% per year. The total amount he pays for the TV is

a. Rs. 18200

b. Rs. 17800

c. Rs. 17200

d. Rs. 16800

Ans: B

Price paid = ₹ 4000

Rest price = ₹ 12000

Rate = 12%

$\therefore = \frac{12000 \times 12 \times 5}{100 \times 12} =$ ₹ 1800

$\therefore$ Amount paid after 15 months

= 12000 + 1800 = 13800

$\therefore$ Total amount paid for TV = 4000 + 13800 = 17800

3. An automobile financier claims to be lending money at simple interest, but he includes the interest every six months for calculating the principal. If he is charging an interest of 10%, the effective rate of interest becomes

a. 10%

b. 10.25%

c. 10.5%

d. None of these

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Ans: B

Let the sum be ₹ 100. Then,

S.I. for first 6 months = ₹ $\left(\frac{100 \times 10 \times 1}{100 \times 2}\right)$ = ₹ 5.

S.I. for last 6 months = ₹ $\left(\frac{105 \times 10 \times 1}{100 \times 2}\right)$ = ₹ 5.25.

So, amount at the end of 1 year = ₹ (100 + 5 + 5.25)

= ₹ 110.25.

$\therefore$ Effective rate = (110.25 – 100) = 10.25%.

4. Rs. 6200 amount to Rs. 9176 in 4 years at simple interest. If the interest rate is increased by 3% it would amount to how much?

a. Rs. 8432

b. Rs. 9820

c. Rs. 9920

d. Rs. 10920 -→C

Ans: C

P = ₹ 6200, S.I. = ₹ (9176 – 6200) = ₹ 2976, T = 4 years;

$$\therefore \quad \text{Rate} = \left(\frac{100 \times 2976}{6200 \times 4}\right)\% = 12\%.$$

New rate = (12 + 3)% = 15%.

$$\text{New S.I.} = ₹\left(\frac{6200 \times 15 \times 4}{100}\right) = 3720.$$

Now amount = ₹ (6200 + 3720) = ₹ 9920.

5. The price of a T.V. set worth Rs. 20,000 is to be paid in 20 instalments of Rs. 1000 each. If the rate of interest be 6% per annum, and the first instalment be paid at the time of purchase, then the value of the last instalment covering the interest as well will be

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a. Rs. 1050

b. Rs. 2050

c. Rs. 3000

d. Rs. 19000

Ans: D

Money paid in cash = Rs. 1000.
Balance payment = (20000 – 1000) = 19000.

6. A sum of money becomes Rs. 20925 in 2 years and Rs. 24412.50 in 5 years. Find the rate of interest and the sum of money.

a. 6.25%, Rs, 18600

b. 6.75%, Rs. 17775

c. 7%, Rs. 18000

d. 8%, Rs. 17560

Ans: A

S.I. for 3 years = ₹ (24412.50 − 20925) = ₹ 3487.50.

S.I. for 2 years = ₹ $\left(\frac{3487.50}{3} \times 2\right)$ = ₹ 2325.

∴ Principal = ₹ (20925 − 2325) = ₹ 18600.

Hence, rate = $\left(\frac{100 - 2325}{18600 \times 2}\right)\% = 6.25\%$.

7. A sum of Rs. 10 is lent to be returned in 11 monthly installments of Rs. 1 each, interest being simple. The rate of interest is

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(a) $9\frac{1}{11}\%$ (b) 10%

(c) 11% (d) $21\frac{9}{11}\%$

Ans: D

₹ 10 + S.I. on ₹ 10 for 11 months

= ₹ 11 + S.I. on ₹ 1 for (1 + 2 + 3 + 4 + ...+ 10) months

⇒ ₹ 10 + S.I. on ₹ 1 for 110 months

= ₹ 11 + S.I. on ₹ 1 for 55 months

⇒ S.I. on ₹ 1 for 55 months = ₹ 1.

∴ Rate = $\left(\frac{100 \times 12}{1 \times 55}\right)\% = 21\frac{9}{11}\%$.

8. A person borrows Rs. 5000 for 2 years at 4% p.a. simple interest. He immediately lends it to another person at $$6{1}/{4}$$% p.a. for 2 years. Find his gain in the transaction per year.

a. 112.50

b. 125

c. 150

d. 167.50

Ans: A

$$\text{Gain in 2 yrs} = \left[\left(5000 \times \frac{25}{4} \times \frac{2}{100}\right) - \left(\frac{5000 \times 4 \times 2}{100}\right)\right]$$

$$= ₹\ (625 - 400) = ₹\ 225.$$

$$\therefore \text{Gain in 1 year} = ₹\left(\frac{225}{2}\right) = ₹\ 112.50.$$

9. How long will it take a sum of money invested at 5% p.a. S.I. to increase its value by 40%?

a. 5 years

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b. 6 years

c. 7 years

d. 8 years

Ans: D

Let the sum be x.

Then, S.I. = 40% of $x = \frac{2x}{5}$; Rate = 5%.

$$\therefore \quad \text{Time} = \left(100 \times \frac{2x}{5} \times \frac{1}{x \times 5}\right) = 8 \text{ years.}$$

10. A person takes a loan of Rs. 200 at 5% simple interest. He returns Rs. 100 at the end of 1 year. In order to clear his dues at the end of 2 years, he would pay

a. Rs. 105

b. Rs. 110

c. Rs. 115

d. Rs. 115.50

Ans: C

$$\text{Amount to be paid} = ₹\left(100 + \frac{200 \times 5 \times 1}{100} + \frac{100 \times 5 \times 1}{100}\right)$$
$$= ₹\ 115.$$

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