PRACTICE TEST PAPER - 2026

Chapter: Simple Interest   **Class:** 7

Test Code: 2026/Simple Interest/VII/02

Max Marks: 15

Q.1 Let the principal be P and the rate of interest be $R\%$ per annum.

Amount after 2 years:

$$A_1 = P + \frac{P \times R \times 2}{100} = 2520$$

Amount after 5 years:

$$A_2 = P + \frac{P \times R \times 5}{100} = 2700$$

Subtract the first equation from the second:

$$\frac{P \times R \times 3}{100} = 180 \implies \frac{3PR}{100} = 180 \implies PR = 6000$$

Substitute $PR = 6000$ in the first equation:

$$P + \frac{2 \times 6000}{100} = 2520 \implies P + 120 = 2520 \implies P = 2400$$

Now, solve for R:

$$2400 \times R = 6000 \implies R = \frac{6000}{2400} = 2.5\%$$

Thus, the rate percent per annum is $\boxed{2.5\%}$.

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Q.2 Let the principal be P.

Simple Interest for 15 months at 7.5%:

$$SI_1 = \frac{P \times 7.5 \times \frac{15}{12}}{100} = \frac{P \times 7.5 \times 1.25}{100} = \frac{9.375P}{100}$$

Simple Interest for 8 months at 12.5%:

$$SI_2 = \frac{P \times 12.5 \times \frac{8}{12}}{100} = \frac{P \times 12.5 \times 0.6667}{100} = \frac{8.333P}{100}$$

Given:

$$SI_1 - SI_2 = 32.50 \implies \frac{9.375P}{100} - \frac{8.333P}{100} = 32.50 \implies \frac{1.042P}{100} = 32.50 \implies P = \frac{32.50 \times 100}{1.042}$$

Thus, the sum is $\boxed{\text{Rs. } 3,120}$.

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Q.3 Let the principal be P. The amount after 12.5 years is $2P$.

Simple Interest $(SI) =$ Amount - Principal $= 2P - P = P$.

The formula for Simple Interest is:

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

Substitute the values:

$$P = \frac{P \times R \times 12.5}{100}$$

Solve for R:

$$1 = \frac{R \times 12.5}{100} \implies R = \frac{100}{12.5} = 8\%$$

Thus, the rate percent per annum is $\boxed{8\%}$.

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Q.4 Let the rate of interest charged by the friend be $R\%$. The bank charges $R + 2\%$.

Total interest paid:

$$\frac{2500 \times (R + 2) \times 2}{100} + \frac{1500 \times R \times 2}{100} = 410$$

Simplify:

$$\frac{5000(R+2)}{100} + \frac{3000R}{100} = 410 \implies 50(R+2) + 30R = 410 \implies 50R + 100 + 30R = 410 \implies 80R$$

Thus, the rate of interest charged by the bank is $R + 2 = 5.875\%$. The closest option is $\boxed{6\%}$.

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Q.5 Given:

$$SI = 0.125P, \quad R = 5\%$$

The formula for Simple Interest is:

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

Substitute the values:

$$0.125P = \frac{P \times 5 \times T}{100}$$

Solve for T:

$$0.125 = \frac{5T}{100} \implies 0.125 = \frac{T}{20} \implies T = 2.5 \text{ years}$$

Thus, the time period is $\boxed{2.5 \text{ years}}$.

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Q.6 Let the parts be x and $1550 - x$.

Total interest:
$$\frac{x \times 5 \times 3}{100} + \frac{(1550 - x) \times 8 \times 3}{100} = 300$$

Simplify:
$$\frac{15x}{100} + \frac{24(1550 - x)}{100} = 300 \implies 15x + 37200 - 24x = 30000 \implies -9x = -7200 \implies x = 800$$

Thus, the ratio is:
$$\frac{800}{1550 - 800} = \frac{800}{750} = \frac{16}{15}$$

The ratio is $\boxed{16 : 15}$.

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Q.7 Let the time be T years.

Simple Interest on Rs.1,200:
$$SI_1 = \frac{1200 \times 6 \times T}{100} = 72T$$

Simple Interest on Rs.1,800:
$$SI_2 = \frac{1800 \times 4 \times 2}{100} = 144$$

Set $SI_1 = SI_2$:
$$72T = 144 \implies T = 2 \text{ years}$$

Thus, the time required is $\boxed{2 \text{ years}}$.

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Q.8 Let the principal be P and the rate be $R\%$.

Amount after 2 years:
$$A_1 = P + \frac{P \times R \times 2}{100} = 8500$$

Amount after 5 years:
$$A_2 = P + \frac{P \times R \times 5}{100} = 10000$$

Subtract the first equation from the second:
$$\frac{3PR}{100} = 1500 \implies PR = 50000$$

Substitute $PR = 50000$ in the first equation:
$$P + \frac{2 \times 50000}{100} = 8500 \implies P + 1000 = 8500 \implies P = 7500$$

Thus, the sum is $\boxed{\text{Rs. } 7,500}$.

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Q.9 The simple interest for both cases is equal:

$$\frac{x \times a \times m}{100} = \frac{y \times a^2 \times m^2}{100}$$

Simplify:

$$xam = ya^2m^2 \implies \frac{x}{y} = \frac{a^2m^2}{am} = am$$

Thus, the ratio $x : y$ is $\boxed{1 : am}$.

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Q.10 Given:

$$P = 450, \quad SI = 81, \quad R = 4.5\%$$

The formula for Simple Interest is:

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

Substitute the values:

$$81 = \frac{450 \times 4.5 \times T}{100}$$

Solve for T:

$$81 = \frac{2025T}{100} \implies 81 = 20.25T \implies T = \frac{81}{20.25} = 4 \text{ years}$$

Thus, the time required is $\boxed{4 \text{ years}}$.

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Q.11 Let the principal be P. The amount after $\frac{1}{4}$ years is $\frac{41}{40}P$.

Simple Interest (SI) = Amount - Principal = $\frac{41}{40}P - P = \frac{P}{40}$.

The formula for Simple Interest is:

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

Substitute the values:

$$\frac{P}{40} = \frac{P \times R \times \frac{1}{4}}{100}$$

Solve for R:

$$\frac{1}{40} = \frac{R}{400} \implies R = \frac{400}{40} = 10\%$$

Thus, the rate of interest per annum is $\boxed{10\%}$.

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Q.12 Let the principal be P, the rate be $R\%$, and the time be $T = R$ years.

Given:
$$SI = \frac{16}{25}P$$

The formula for Simple Interest is:
$$SI = \frac{P \times R \times T}{100}$$

Substitute $T = R$:
$$\frac{16}{25}P = \frac{P \times R \times R}{100}$$

Solve for R:
$$\frac{16}{25} = \frac{R^2}{100} \implies R^2 = \frac{1600}{25} \implies R = \frac{40}{5} = 8\%$$

Thus, the rate percent and time are both $\boxed{8\%, 8 \text{ years}}$.

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Q.13 Interest paid by the person:
$$I_{\text{paid}} = \frac{5000 \times 4 \times 2}{100} = 400$$

Interest received by the person:
$$I_{\text{received}} = \frac{5000 \times 6.25 \times 2}{100} = 625$$

Total gain:
$$625 - 400 = 225$$

Gain per year:
$$\frac{225}{2} = 112.50$$

Thus, the gain in the transaction per year is $\boxed{\text{Rs. } 112.50}$.

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Q.14 Let the principal be P and the rate be $R\%$.

Simple Interest for 6 years:
$$SI_1 = \frac{P \times R \times 6}{100} = \frac{6PR}{100}$$

Simple Interest for 9 years:
$$SI_2 = \frac{P \times R \times 9}{100} = \frac{9PR}{100}$$

Ratio:
$$\frac{SI_1}{SI_2} = \frac{6}{9} = \frac{2}{3}$$

Thus, the ratio is $\boxed{2 : 3}$.

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Q.15 Let the principal be P and the original rate be $R\%$.

Difference in Simple Interest:

$$\frac{P \times (R+2) \times 4}{100} - \frac{P \times R \times 4}{100} = 56$$

Simplify:

$$\frac{8P}{100} = 56 \implies P = \frac{56 \times 100}{8} = 700$$

Thus, the sum is $\boxed{\text{Rs. } 700}$.