10. Compound Interest

I. Choose the correct option.

1. The simple interest on ₹ 1000 at 5% p.a. for 3 years is

    a. ₹ 50   b. ₹ 200   c. ₹ 100   d. ₹ 150

2. The compound interest on ₹ 2000 at 10% per annum for 2 years is

    a. ₹ 420   b. ₹ 400   c. ₹ 410   d. ₹ 2420

3. The time period and rate for a sum taken at 8% for $1\frac{1}{2}$ years compounded half yearly are

    a. $n = 6, R = 4\%$ b. $n = 3, R = 4\%$ c. $n = 3, R = 8\%$ d. $n = 3, R = 2\%$

4. The difference between the compound interest and simple interest on ₹ 500 at 10% per annum for 1 year is

    a. ₹ 20   b. ₹ 10   c. ₹ 0   d. ₹ 50

II. Do as directed.

1. Find the amount and compound interest in the following cases.

	Principal (in ₹)	Rate % (p.a.)	Time (in years)
a.	1000	5%	3
b.	360	20%	2
c.	3000	10%	3

    a. _____

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    b. _____

    _____

    c. _____

    _____

2. Find the compound interest on ₹ 20,000 at 15% p.a. for $1\frac{1}{2}$ years.

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III. Solve the following.

1. In how many years will ₹ 4000 amount to ₹ 5324 at 10% p.a. compounded annually.

2. What sum of money will amount to ₹ 9261 at 5% p.a. compound interest after 3 years?

3. At what rate of compound interest will ₹ 20000 become ₹ 24200 after 2 years?

4. Find the principal which will amount to ₹ 4500 in 2 years at the rate of 4% p.a. compounded annually.

5. Soniya bought a plot of land for ₹ 5,50,000. If its value appreciates by 5% every year, what will be the value of the land after 3 years?

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IV. Solve the following.

1. The present population of a town is 32,400. For the past two years, the population has been decreasing at the rate of 10% per annum due to people migrating to other cities. What was the population 2 years ago?

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2. In the year 2017, the number of malaria patients admitted in the hospital of a state was 4375. Every year this number decreases by 8%. Find the number of patients in 2019.

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3. The compound interest on a sum of money for 3 years at 10% p.a. is ₹ 264.80. Find the simple interest for the same sum for the same time at the same rate.

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4. George deposited a sum of ₹ 10,000 with a company for 6 months. The company credits the interest quarterly in his account at 20% p.a. How much interest did he get?

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5. Latika borrows a sum of ₹ 12,500 at 12% p. a for 3 years at simple interest and Radha borrows the same amount for the same period at 10% p.a., compounded annually. Who pays more interest and by how much?

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Teacher's Signature: Date: