BOOST UP PDFS | Quantitative Aptitude | SI & CI Problems (Easy Level Part-1)

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1.A borrows Rs. 800 at the rate of 12% per annum simple interest and B borrows Rs. 910 at the rate of 10% per annum, simple interest. In how many years will their amounts of debt be equal?

a. 18

b. 20

c. 22

d. 24

e. 28

2.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. 650

b. Rs. 690

c. Rs. 698

e. Rs. 700

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

a.Rs. 4462.50

b. Rs. 8032.50

c.Rs. 8900

d.Rs. 8925

e.None of these

4.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.3.5 years

b.4 years

c. 4.5 years

d. 5 years

e. None of these

5.Reena 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. 6

c. 18

d. Cannot be determined

e. None of these

6. A person deposited Rs. 400 for 2 years, Rs. 550 for 4 years and Rs. 1200 for 6 years. He received the total simple interest of Rs. 1020. The rate of interest per annum is (rate of interest in each case is same)

a.10%

b. 5%

c. 15%

d. 20%

e. 25%

7.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. 2000

b.Rs. 10,000

c.Rs. 15,000

d.Rs. 20,000

e. None of these

8. A certain sum of money becomes three times of itself in 20 years at simple interest. In how many years does it become double of itself at the same rate of simple interest?

a. 8 years

b. 10 years

c 12 years

d. 14 years

e. 16 years

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

a. Rs. 112.50

b.Rs. 125

c.Rs. 150

d.Rs. 167.50

e. None of these

10.The simple interest on a certain sum for 8 months at 4% per annum is Rs. 129 less than the simple interest on the same sum for 15 months at 5% per annum. The sum is:

a. Rs. 2580

b. Rs. 2400

c. Rs. 2529

d. Rs. 3600

e. Rs. 4800

11.A certain amount earns simple interest of Rs. 1750 after 7 years. Had the interest been 2% more, how much more interest would it have earned ?

a. ₹ 35

b. ₹ 350

c. ₹ 245

d. Can't be determined

e. None of these

12.Mohan lent some amount of money at 9% simple interest and an equal amount of money at 10% simple interest each for two years. If his total interest was Rs. 760, what amount was lent in each case?

a. Rs. 1700

b. Rs. 1800

c. Rs. 1900

d. Rs. 2000

e. Rs. 2400

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13.A Money double itself in 8 years in how many years it will be 5 times?

a. 40 years

b. 32 years

c. 24 years

d. 30 years

e. 20 years

14.A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at the rate of simple interest. What is the rate of interest?

a.3%

b.4%

c.5%

d.6%

e.None of these

15. What sum of money will amount to Rs. 520 in 5 years and Rs. 568 in 7 years at simple interest?

a. Rs 300

b. Rs 350

c. Rs 400

d. Rs 450

e. Rs 650

16.What will be the ratio of simple interest earned by certain amount at the same rate of interest for 6 years and that for 9 years?

a.1 : 3

b.1 : 4

c.2 : 3

d.Data inadequate

e.None of these

17.Cost of a Mobile Rs.8000. Sudha bought Mobile in EMI. She paid a Down payment of Rs. 2000 and paid rest in 6 equal installments of Rs.1020 for next 6 months. Then what is the SI rate charged?

a. 6.5%

b. 6.95%

c. 10.5%

d. 12.5%

e. None

18.C.I. and S.I. for a certain sum at certain rate of interest for 2 years are Rs. 220 and Rs. 200. Find the principal amount.

a. Rs. 2200

b. Rs. 200

c. Rs. 500

d. Rs. 2000

e. Rs. 2400

19.A person takes a loan of Rs. 200 at 5% p.a compound interest. He returns Rs. 100 at the end of one year. How much amount he would require to pay at the end of 2nd year in order to clear his dues.

a. Rs.125.50

b. Rs.110

c. Rs.115.50

d. Rs.115

e. Rs.120

20.A certain amount earns simple interest of Rs. 1750 after 7 years. Had the interest been 2% more, how much more interest would it have earned?

a. Rs. 35
b. Rs. 245
c. Rs. 350
d. Cannot be determined
e. None of these

21.Find the difference between simple and compound interest on Rs. 6000 for 1 year at 20% per but interest is calculated on half yearly basis.

a. Rs.120
b. Rs.60
c Rs.180
d.. Rs.72
e. Rs.108

22.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. 5%
b.8%
c.12%
d.15%

23.A sum of money becomes 9 times in 20 years. Find the 10 times of rate of interest.

a. 350%
b. 45%
c. 400%
d. 250%
e. None of these

24.A sum becomes 6 fold at 5% per annum. At what rate, the sum becomes 12 fold?

a. 10%
b. 12%
c. 9%
d. 11%
e. None of these

25.What amount would Rs.2560 fetch if it is lent at 8% SI for 15 years?

a. Rs.3072
b. Rs.4632
c. Rs.5072
d. Rs.5632
e. None

26.A sum of rupees 3903 is divided between P and Q such that the share of P at the end of 8 years is equal to the share of Q after 10 years. Find the share of P if rate of interest is 4% compounded annually.

a.2012
b.2029
c.2028
d.2081
e.None of these

27. Find compound interest on Rs. 7000 at 21% per annum for 2 years 4 months, compounded annually.

a. Rs. 3824.9
b. Rs. 3966.1
c. Rs. 4094.4

d. Rs. 11109

e. None of these

28. Find the compound interest on Rs. 7500 in 2 years at 6% per annum, the interest being compounded half-yearly.

a. Rs. 941.31

b. Rs. 834.44

c. Rs.746.21

d. Rs. 764

e. None of these

29.Find the compound interest on Rs. 10,000 at 20% per annum for 6 months. compounded quarterly.

a. Rs.4353

b. Rs. 1329

c. Rs. 1025

d. Rs. 2649

e. None of these

30. A man borrows 2000 rupees at 10% compound interest. At the end every year he pays rupees 1000 back. How much amount should he pay at the end of the third Year to clear all his debt?

a. 252

b. 352

c. 452

d. 552

e. None of these

31.A sum of rupees 3200 is compounded annually at the rate of 10 paisa per rupee per annum. Find the compound interest payable after 2 years.

a.200

b.842

c. 672

d. 832

e. None of these

32. Riya saves an amount of 500 every year and then lent that amount at an interest of 10 percent compounded annually. Find the amount after 3 years.

a.1820.5

b. 1840.5

c.1920.5

d. 1940.5

e. None of these

33.A sum of money is lent for 2 years at 10% p.a. compound interest. It yields Rs 8.81 more when compounded semi-annually than compounded annually. What is the sum lent?

a.1000

b. 1200

c.1400

d. 1600

e. None of these

34.If the simple interest on a sum of money at 5% per annum for 2 years is Rs. 1400, find the compound interest on the same sum for the same period at the same rate.

a. Rs. 1023

b. Rs. 1435

c. Rs. 3232

d. Rs. 1255

e. None of these

35.If Rs. 1000 amounts to Rs. 1166.40 in two years compounded annually, Find the rate of interest per annum.

a. 2% p.a

b. 4% p.a

c. 6% p.a

d. 8% p.a

e. None of these

36.A sum of money doubles itself at compound interest in 5 years. In how many years will it become eight times?

a.20 years

b. 25 years

c. 30 years

d. 15 years

e. None of these

37.The principal that yields a compound interest of Rs. 420 during the second year at 5% per annum is

a.Rs. 7000

b.Rs. 5000

c.Rs. 8000

d.Rs. 6000

e.none of these

38.In a factory the production of cement rose 4840 tonnes from 4000 tonnes in two years. Find the rate of growth per annum.

a. 10

b. 12

c. 8

d. 9

e. None of these

39.Amit borrowed Rs. 20,000 from his friend at 15% per annum simple interest he lent it to Tarun at the same but rate compounded annually. Find his gain after 2 years.

a. 324

b. 604

c. 450

d. 572

e. None of these

40.If the rate of interest is 10% per annum and is compounded half yearly, the principal of Rs. 400 in 3/2 year will amount to

a. Rs. 436.05

b. Rs. 463.05

c. Rs. 563.05

d. Rs. 363.05

e. Rs. 263.05

41.C.I. Rs. 5000 for 3 years at 8% for 1st year and 10% for 2nd year and 12% for 3rd year will be-

a.1325.6

b. 1652.8

c. 1734.9

d. 1263.8

42.At what percent pr annum will Rs. 3000 amounts to Rs. 3993 in 3 years, if the interest in compounded annually?

a. 9%

b. 10%

c. 11%

d. 13%

e. 15%

43.Loan of 10,000 was lent to a person at for 3 years @ 10% for 1st year, 15% for rest 2 years. Find the amount?

a. 14537.5

b. 14547.5

c. 14647.5

d. 14537.8

e. None of these

44.The difference between compound interest and simple interest at the same rate for Rs. 5000 for 2 years is Rs. 72. The rate of interest per annum is:

a. 6%

b. 8%

c. 10%

d. 12%

e. 16%

45. A sum of money becomes Rs. 4500 after two years and Rs. 6750 after 4 years on compound interest. The sum is:

a. Rs. 4000

b.Rs. 2500

c. Rs. 3000

d. Rs. 3050

e. Rs. 3500

46.The population of a city increases at the rate of 5%. p.a. If the present population of the city is 185220, then what was its population 3 years ago?

a. 181500

b. 183433

c. 160000

d. 127783

e. 165450

47.The effective annual rate of interest, corresponding to a nominal rate of 6% per annum payable half yearly, is:

a. 6.06%

b. 6.07%

c. 6.08%

d. 6.09%

e. 7.09%

48.The compound interest on a sum of money at 5% per annum for 3 years is Rs. 2522. What would be the simple interest on this sum at the same rate and for the same period?

a. Rs. 2500

b. Rs. 2400

c. Rs. 2450

d. Rs. 2350

e. Rs. 2640

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49.The compound interest on a certain sum of money at a certain rate per annum for two years is Rs. 4,100 and the simple interest on the same amount of money at the same rate for 3 years is Rs. 6000. Then the sum of money is :

a. Rs. 40,000

b. Rs. 36,000

c. Rs. 42,000

d. Rs. 50,000

e. none of these

50.What sum of money at compound interest will amount to Rs. 2249.52 in 3 years, if the rate of interest is 3% for the first year, 4% for the second year and 5% for the third year ?

a. Rs. 20140

b. Rs. 1980

c. Rs. 2000

d. Rs. 2180

e. None of these

Answer Key with Detailed Solution

1. C

Let the period of time be T years.

$\therefore 800 + \frac{800\times12\times T}{100} = 910 + \frac{910\times10\times T}{100}$

$\Rightarrow 800 + 96T = 910T + 91T$

$\Rightarrow 96T - 91T = 910 - 800$

$\Rightarrow 5T = 100$

$\Rightarrow T = \frac{110}{5} = 22$ years

2. C

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.

3. D

$\text{Principal} = \text{Rs.} \left(\frac{100 \times 4016.25}{9 \times 5}\right)$

$= \text{Rs.} \left(\frac{401625}{45}\right)$

$= \text{Rs. } 8925.$

4. B

$\text{Time} = \left(\frac{100 \times 81}{450 \times 4.5}\right) \text{years} = 4 \text{ years.}$

5. B

Let rate = R% and time = R years.

Then, $\left(\frac{1200 \times R \times R}{100}\right) = 432$

$\Rightarrow 12R^2 = 432$

$\Rightarrow R^2 = 36$

$\Rightarrow R = 6.$

6. A

Let the rate of interest be R percent per annum.

$\therefore \frac{400\times2\times R}{100} + \frac{500\times4\times R}{100} + \frac{1200\times6\times R}{100} = 1020$

$\Rightarrow 8R + 22R + 72R = 1020$

$\Rightarrow 102\ R = 1020$

$\Rightarrow R = \frac{1020}{102} = 10\%$

7. C

Principal = Rs. $\left(\frac{100 \times 5400}{12 \times 3}\right)$ = Rs. 15000.

8. B

Triple = 3 × 100 = 300%

Interest Rate = $\frac{\text{Total Percentage} - 100\%}{\text{Number of years}}$

$= \frac{300-100}{20} = \frac{200}{20} = 10\%$

Then, double = 2 × 100 = 200%

Number of years = $\frac{\text{Total Percentage} - 100\%}{\text{Interest Rate}}$

$= \frac{200-100}{10} = \frac{100}{10} = 10$ years

9. A

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

= Rs. (625 - 400)

= Rs. 225.

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

10. D

Let the sum be Rs. P.

$\frac{P\times5\times15}{100\times12} - \frac{P\times4\times8}{100\times12} = 129$

$\Rightarrow \frac{P}{100\times100}(75-32) = 129$

$\Rightarrow P = \frac{129\times1200}{43}$ = Rs. 3600

11. D

When we solve this question, we find that we have two variables P (Principal) and R (Initial assumed rate of interest) in the R.H.S. of the SI equation. Therefore, the correct answer can't be determined.

12. D

Let the sum lent in each case be Rs. P
Then,
$\frac{P\times9\times2}{100}+\frac{P\times10\times2}{100}=760$
$\frac{P\times2}{100}(9+10)=760\Rightarrow\frac{2\times19P}{100}=760$
$\Rightarrow P=\frac{760\times100}{2\times19}=$ Rs. 2000

13. B

$2P=P+\frac{P\times8\times R}{100}$
$R=12.5\%$
$5P=P+\frac{P\times12.5\times T}{100}\Rightarrow T=32$ years

14. D

S.I. = Rs. (15500 - 12500) = Rs. 3000.

$\text{Rate}=\left(\frac{100\times3000}{12500\times4}\right)\%=6\%$

15. C

(Principal + interest) in 5 years → 520
(Principal + interest) in 7 years → 568
∴ Interest in 2 years = 48
∴ I = 48/2 = Rs. 24 in one year
∴ P = 520 – 24 × 5 = Rs. 400

16. C

Let the principal be P and rate of interest be R%.

$\therefore$ Required ratio $=\frac{\left(\frac{P\times R\times6}{100}\right)}{\left(\frac{P\times R\times9}{100}\right)}=\frac{6PR}{9PR}=\frac{6}{9}=2:3.$

17. B

Balance to be paid in installments = 8000-2000 = 6000
(6000+6000*r*3/12*100) =
1020*6+1020r/12*100(1+2+3+4+5)
r = 6.95%

18. C

Sol. CI – SI = 220 – 200 = Rs.20
∴ Rs 20 is interest on interest of the first year ie. $\frac{200}{2}=Rs.100$
Rate = $\frac{20\times100}{100}=20\%$
So, actual principal = $\frac{100\times100}{20\times1}=500$ Rs.

19. C

Sol. Amount to be paid in 1st year = $200+\frac{200\times5\times1}{100}=210$
Amount left = $210-100=110$
Required answer = $110+\frac{110\times5\times1}{100}=115.50$

20. D

We need to know the S.I., principal and time to find the rate.

Since the principal is not given, so data is inadequate.

21. B

Sol. ∵ Interest is compounded half-yearly so,
Rate = $\frac{20}{2}=10\%, Time=2\ year$
∴ Diff = $6000\times\left(\frac{100}{100\times100}\right)=Rs.60$

22. C

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

S.I. for 5 years = Rs. $\left(\frac{2205}{3}\times5\right)$ = Rs. 3675

$\therefore$ Principal = Rs. (9800 - 3675) = Rs. 6125.

Hence, rate = $\left(\frac{100\times3675}{6125\times5}\right)\%=12\%$

23. C

Rate = $\frac{100(n-1)}{}$

T

$= \frac{100(9-1)}{20} = \frac{800}{20} = 40\%$

10 times of 40% = 400%

24. D

$R_2 = \frac{m-1}{n-1} \times R_1$

$= \frac{12-1}{} \times 5 = \frac{11}{} \times 5 = 11\%$

25. D

SI = 2560*8*15/100

3072

Amount = 2560+3072 = 5632

26. C

P*(1 + 4/100)^8 = (3903 – P)*(1 + 4/100)^10= 2028

27. B

Time = 2 years 4 months = $2\frac{4}{12}$ years $= 2\frac{1}{3}$ years.

Let principal = P, Rate = R% per annum, Time = n years.

When interest is compounded annually. then,

Amount $= P\left(1 + \frac{R}{100}\right)^n$

So, amount = Rs$\left[7000 \times \left(1 + \frac{21}{}\right)^2\right] \times \left(1 + \frac{1/3 \times 21}{}\right)$

100 100

$\Rightarrow$ Rs.$\left(7000 \times \frac{121}{100} \times \frac{121}{100} \times \frac{107}{100}\right)$

$\Rightarrow$ 10966.1.

So, C.I. = Rs. (10966.1 – 7000) $\Rightarrow$ Rs. 3966.1.

28. A

When interest is compounded Half-yearly. then,

So, Amount = Rs. $\left[7500 \times \left(1 + \frac{3}{100}\right)^4\right]$

$\Rightarrow$ Rs.$\left(7500 \times \frac{103}{100} \times \frac{103}{100} \times \frac{103}{100} \times \frac{103}{100}\right)$

$\Rightarrow$ Rs. 8441.31

$\Rightarrow$ C.I = Rs. (8441.31 - 7500) = Rs. 941.31.

29. C

P = 10000, T = 6 months, R = 20/4 = 5% (rate of interest apply quaterly)

By the net% effect we would calculate the effective compound rate of interest for 6 months = 10.25% (Refer to sub-details)

CI = 10.25% of 10000

$CI = \frac{10.25 \times 10000}{100} = 1025.$

30. B

After one year amount = 2000*110/100 = 2200

He pays 1000 back, so remaining = 2200 – 1000 = 1200

After second year = 1200*110/100 = 1320

He pays 1000 back, so remaining = 1320 – 1000 = 320

After third year = 320*110/100 = 352

31. C

Rate of interest is 10 paisa per rupee per annum. So for 100 rupees it is 1000 paise i.e. 10 percent

Now, CI = 3200(1+10/100)^ 2 – 3200 = 672

32. A

Total amount = 500*(1+10/100)^ 3 + 500*(1+10/100)^ 2 + 500*(1+10/100) = 1820.5

33. D

8.81 = p*(1+5/100)^4 – p*(1+10/100)^2 = 1600

34. B

1400 = (2 × 5)%

So, 10% ≡ ₹ 1400

10.25% ≡ ₹ x

By the cross multiplication, we get

$x = \frac{1400 \times 10.25}{10} = ₹ 1435.$

35. D

Principal = Rs. 500; Amount = Rs. 583.20; Time = 2 years.

Let the rate be R% per annum. then,

$\left[1000\left(1 + \frac{R}{100}\right)^2\right] = 1166.40.$

Or

$\left(1 + \frac{R}{100}\right)^2 = \left(\frac{108}{100}\right)^2$

$\Rightarrow 1 + \frac{R}{100} = \frac{108}{100}$ or R = 8.

36. D

$P\left(1 + \frac{R}{100}\right)^5 = 2P \Rightarrow \left(1 + \frac{R}{100}\right)^5 = \frac{2P}{P} = 2 \quad ...(i)$

Let $P\left(1 + \frac{R}{100}\right)^n = 8P$

$\Rightarrow \left(1 + \frac{R}{100}\right)^n = 8 = 2^3 = \left\{\left(1 + \frac{R}{100}\right)^5\right\}^3$ [using (i)]

$\Rightarrow \left(1 + \frac{R}{100}\right)^n = \left(1 + \frac{R}{100}\right)^{15} \Rightarrow n = 15.$

37. C

Let the principal be 100

After one year amount = 100*105/100 = 105

Amount after 2nd year = 105*105/100 = 110.25

CI for two years = 110.25 – 100 = 10.25

And CI yields in second year = 10.25 – 5 = 5.25

And 5.25 = 420

1 = 420/5.25 = 80

100 = 80 *100 = Rs. 8000

38. A

$4840 = 4000\left(1 + \frac{R}{100}\right)^2$

$\frac{121}{100} = \left(1 + \frac{R}{100}\right)^2$

$\left(\frac{11}{10}\right)^2 = \left(1 + \frac{R}{100}\right)^2$

$\Rightarrow \left(1 + \frac{10}{100}\right) = \left(1 + \frac{R}{100}\right) \Rightarrow R = 10.$

39. C

So, gain $= \frac{15}{100} \times \frac{20{,}000 \times 15 \times 1}{100} \Rightarrow 15 \times 15 \times 2 \Rightarrow$ Rs. 450.

40. B

Given, $r = \frac{10}{2} = 5\%$, T = 3 years, P = Rs. 400

$\therefore A = P\left(1 + \frac{r}{100}\right)^T$

$= 400\left(1 + \frac{5}{100}\right)^3 = 400\left(\frac{21}{20}\right)^3 =$ Rs. 463.05

41. B

Rate of interest for 1st, 2nd and 3rd year = 8%, 10% and 12%

Now, P = 5000, T = 3 years

By the net% effect we would calculate the effective compound rate of interest for 3 years = 33.056% (Refer to sub-details)

Therefore, CI = 33.056% of 5000

$CI = \frac{33.056 \times 5000}{100} = ₹\ 1652.8$

42. B

$\left(1 + \frac{R}{100}\right)^3 = \frac{3993}{3000} = \frac{1331}{1000}$

$\left(1 + \frac{R}{100}\right)^3 = \left(\frac{11}{10}\right)^3$

$\Rightarrow 1 + \frac{R}{100} = \frac{11}{10}$

$\Rightarrow R = \frac{100}{100} \Rightarrow R = 10\%$

43. B

Rate of interest for 1st, 2nd and 3rd year = 10%, 15% and 15%

P = 10000, T = 3 years,

By the net% effect we would calculate the effective compound rate of interest for 3 years = 45.475% (Refer to sub-details)

Principal = 100%; Amount (P + CI) = 100 + 45.475 = 145.475%

100% ≡ ₹ 10000

145.475% ≡ ₹ x

By the cross multiplication, we get

$x = \frac{10000 \times 145.475}{100} = ₹\ 14547.5$

44. D

$CI_2 - SI_2 = P\left(\frac{R}{100}\right)^2$

$72 = 5000\left(\frac{R}{100}\right)^2$

$R^2 = \frac{72\times100\times100}{5000} = 144$

R = 12%

45. C

Let the sum be P and rate of interest per annum be R.

$\frac{6750}{4500} = \frac{P\left(1+\frac{R}{100}\right)^4}{P\left(1+\frac{R}{100}\right)^2}$

$\frac{6750}{4500} = \left(1+\frac{R}{100}\right)^2$

$\Rightarrow \left(1+\frac{R}{100}\right)^2 = \frac{9}{6} = \frac{3}{2}$

So, $P \times \frac{3}{2} = 4500$

$\Rightarrow P = \frac{4500\times2}{3}$ = Rs. 3000

46. C

Let population 3 years ago be x

$x \times \frac{105}{100} \times \frac{105}{100} \times \frac{105}{100} = 185220$

So, x = 160000

47. D

Let the sum be Rs. 100

For initial six months,

Interest = $100 \times \frac{6}{100} \times \frac{6}{12} = 3$

Now, sum = 100 + 3 = Rs. 103

For another six months,

Interest = $103 \times \frac{6}{100} \times \frac{6}{12} = 3.09$

∴ Rate of interest per year = 3 + 3.09 =6.09%

48. B

Sol. Let sum = Rs. P

$\therefore 2522 + P = P\left(1+\frac{5}{100}\right)^3$

$= \frac{9261P}{8000}$

$\Rightarrow$ P = 16,000

$\therefore$ S.I. $= \frac{16000\times5\times3}{100}$

= Rs. 2400

49. A

SI of 2 years = Rs. 4000

Difference between SI and CI at the end of 2 years = 4100 − 4000 = Rs. 100

Rate of interest $= \frac{100}{2000} \times 100 = 5\%$

$\frac{P\times5\times3}{100} = 6000$

P = Rs. 40000

50. C

$$\text{Required amount} = 2249.52 \times \frac{100}{103} \times \frac{100}{104} \times \frac{100}{105} = \text{Rs. } 2000$$