

QUANTITATIVE APTITUDE

Simple Interest





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Quantitative Aptitude – Simple Interest

1. 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

Answer: B

Explanation:

Balance to be paid in installments = 8000-2000 = 6000

$$\frac{6000+6000*r*3}{12*100} = \frac{1020*6+1020r}{12*100(1+2+3+4+5)}$$

$$r = 6.95\%$$

2. Ajay lent Rs.8800 to be divided between his two sons aged 11 years and 13 years such that both of them would get an equal amount when lent at the rate of 10% SI when they attain 18 years of age. What is the share of elder in Rs.8800?

- A. 4125
- B. 4325
- C. 4475
- D. 4675
- E. None

Answer: D

Explanation:

$$\frac{x+x*7*10}{100} = \frac{(8800-x) + (8800-x)*5*10}{100}$$

$$x = 4125$$

$$\text{Elder} = 8800-4125 = 4675$$

3. SBI lent Rs. 10,000 to Deepak @7% SI for 10 years. Meanwhile, the government implemented a scheme due to which interest rate reduced by 2%. By this Deepak paid Rs.16,000 in total. Then after how many years after Deepak took the loan, the government introduced the scheme?

- A. 3 Years
- B. 4 Years
- C. 5 years



- D. 6 years
- E. Cannot be determined

Answer: C

Explanation:

$$\frac{6000}{100} = \frac{10000(7*x+5*(10-x))}{100}$$

$$x = 5$$

4. 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

Answer: D

Explanation:

$$SI = \frac{2560*8*15}{100} = 3072$$

$$\text{Amount} = 2560+3072 = 5632$$

5. Veena has to pay Rs. 2460 to Sita, 5 Months later at 6% SI per annum, and Gita has to pay Sita same amount at 7.5% SI per annum after certain months. If both took the same amount of loan from Sita then Gita paid loan after how many months?

- A. 3 Months
- B. 4 Months
- C. 6 Months
- D. 12 Months
- E. Cannot be determined

Answer: D

Explanation:

$$2460 = \frac{p+p*6*5}{12*100}$$

$$p = 2400$$

Now Gita

$$2460 = \frac{2400+2400*7.5*x}{12*100}$$





$$x = 4$$

6. Amit lent a part of Rs. 15900 to Raju at 6% SI. Rest to Anil at 5% SI. After 4 years he got an amount of Rs 19376 in total. Then what is the amount paid by Anil in total?

- A. 1.Rs. 9176
- B. 2.Rs. 9847
- C. 3.Rs. 10200
- D. 4.Rs. 11200
- E. 5.None

Answer: C

Explanation:

$$\frac{x*6*4}{100} + \frac{(15900-x)*5*4}{100}$$

$$x = 7400$$

7. Anil = $8500 + 8500 * 4 * 5 / 100 = 10200$ A man invests Rs. 124000 for 9 years at 5% SI. Income tax at the rate of 19% is deducted from interest earned at the end of every year. Find the amount at the end of the 9th year?

- A. Rs. 169198
- B. RS. 169918
- C. Rs. 196918
- D. Rs. 199698
- E. None

Answer: A

Explanation:

$$\text{For one year} = \frac{124000 * 5}{100}$$

$$= 6200$$

$$\text{Income tax} = \frac{6200 * 19}{100} = 1178$$

$$\text{For 9 years} = 45198$$

$$\text{Amount} = 124000 + 45198 = 169198$$

8. Nitin invested an amount of Rs. 24000 at the 4% SI per annum, and another amount at 10% SI per annum. The total interest earned at the end of one year will be same as interest earned when the total amount invested at 6% SI per annum. Find the total amount invested?

- A. Rs.12000



- B. Rs.24000
- C. Rs.30000
- D. Rs.36000
- E. None

Answer: D

Explanation:

$$\frac{24000 \times 4}{100} = 960$$

$$\frac{x \times 10}{100} = 0.1x$$

$$960 + 0.1x = (24000 + x) \times 6 / 100$$

$$x = 12000$$

$$\text{Total} = 24,000 + 12,000 = 36,000$$

9. A sum of money becomes Rs.1815 at 7% SI after 3 years. Same sum of money becomes Rs. 2235 at same interest after 7 years.

- A. Rs.1200
- B. Rs.1500
- C. Rs.1800
- D. Rs.2000
- E. None

Answer: B

Explanation:

$$2235 - 1815 = p / 100 (7 \times 7 - 7 \times 3)$$

$$p = 1500$$

10. Pratap lent Rs.21600 to be divided between his two sons who aged 9 years and 11 years such that both of them would get an equal amount at certain age when lent at rate of 10% SI per annum. If their investments are in the ratio of 51:57 respectively. Then at what age both received same amount?

- A. 15 Years
- B. 16 years
- C. 18 years
- D. 21 years
- E. Cannot be determined

Answer: C

Explanation:





$$X + y = 21600$$

$$X / y = 51/57$$

$$x = 10200 \quad y = 11400$$

$$\frac{10200 + 10200 * 10 * (x-9)}{100} = \frac{11400 + 11400 * 10 * (x-11)}{100}$$

$$x = 18$$

11. Vikram invests some money in three different schemes for 4 years, 8 years and 12 years at 10%, 15% and 20% Simple Interest respectively. At the completion of each scheme, he gets the same interest. The ratio of his investments is

- A. 6 : 2 : 1
- B. 5 : 2 : 1
- C. 5 : 2 : 3
- D. 5 : 2 : 7
- E. None of the Above

Answer: A

Explanation:

Principal = x_1 , x_2 and x_3

$$X_1 * 4 * 10 = x_2 * 8 * 15 = x_3 * 12 * 20$$

$$X_1 = 3x_2 = 6x_3$$

$$X_1 : x_2 = 3 : 1; \quad x_2 : x_3 = 2 : 1$$

$$X_1 : x_2 : x_3 = 6 : 2 : 1$$

12. Mr. Ravi finds that due to a fall in the rate of interest from 9% to 6%, his yearly income diminishes by Rs.267. His capital is?

- A. Rs.3800
- B. Rs.8400
- C. Rs.8600
- D. Rs.8900
- E. None of the Above

Answer: D

Explanation:

$$\text{Difference in Rate of Interest} = 9\% - 6\% = 3\%$$





Capital = x

3% of x = 267

x = 8900

13. Out of Rs. 50,000 that a man has, he lends Rs. 8,000 at 11/2 % per annum simple interest and Rs. 24,000 at 6% per annum simple interest. He lends the remaining money at a certain rate of interest so that he gets total annual interest of Rs. 3,680. The rate of interest per annum, at which the remaining money is lent, is?

- A. 5%
- B. 7%
- C. 10%
- D. 12%
- E. None of the Above

Answer: C

Explanation:

Total Amount = 50000

Amount divided into three parts – x, y, z

x = 8000, T = 1 yr

$$SI(x) = \frac{(8000 * 11/2)}{100} = 440$$

y = 24000 R = 6%

$$SI(y) = \frac{(24000 * 6)}{100} = 1440$$

Total Interest = 3680, Interest on the remaining amount = 3680 – 440 – 1440 = 1800

z = 50000 – 24000 – 8000 = 18000

$$R = \frac{(1800 * 100)}{18000} = 10\%$$

14. Vikram lends Rs 30,000 of two of his friends. He gives Rs 15,000 to the first at 6% p.a. simple interest. He wants to make a profit of 10% on the whole. The simple interest rate at which he should lend the remaining sum of money to the second friend is

- A. 8%
- B. 16%
- C. 12%
- D. 14%
- E. None of the Above





Answer: D

Explanation:

S.I. on Rs 15000

$$= \frac{(15000 \times 6 \times 1)}{100} = \text{Rs. } 900$$

Profit to made on Rs 30000

$$= \frac{30000 \times 10}{100} = \text{Rs } 3000$$

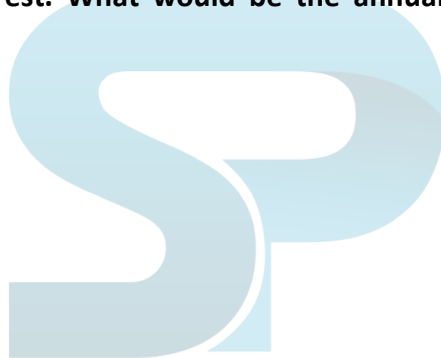
S.I. on Rs.15000 = 3000-900 = Rs.2100

$$\text{Rate} = \frac{(\text{S.I.} \times 100)}{(\text{P} \times \text{T})} = \frac{(2100 \times 100)}{15000}$$

=14% per annum

15. Suresh lends 40% of his money at 15% per annum, 50% of the rest at 10% per annum and the rest at 18% per annum rate of interest. What would be the annual rate of interest, if the interest is calculated on the whole sum?

- A. 18.5%
- B. 14.4%
- C. 16.5%
- D. 19.5%
- E. None of the Above



Answer: B

Explanation:

$$x - \left(\frac{40}{100}\right) \times x = \frac{60x}{100}$$

$$\frac{40}{100} \text{ At } 15\% \text{ p.a} = \frac{40}{100} * \frac{15}{100} = \frac{60X}{1000}$$

$$50/100 * 60x/100 = 30x/100 \text{ at } 10\% \text{ p.a} = 30x/100 * 10/100 = 30x/1000$$

$$\text{Balance amount} = x - 40x/100 - 30x/100 = 30x/100 \text{ at } 18\% \text{ p.a} = 18/100 * 30x/100 = 54x/1000$$

$$R = \left[\frac{144x}{1000}\right] / x * 100 = 14.4\%$$

16. Ajay borrows Rs 1000 at the rate of 12% per annum simple interest and Babu borrows Rs 1050 at the rate of 10% per annum simple interest. In how many years will their amounts of debts be equal?

- A. 18/5
- B. 10/3



- C. $22/3$
- D. $10/5$
- E. None of the Above

Answer: B

Explanation:

Let Time = x years Then,

$$\frac{1000+(1000*12*x)}{100}$$
$$= \frac{1050+(1050*10*x)}{100}$$

$$\Rightarrow 1000 + 120x = 1050 + 105x$$

$$\Rightarrow 15x = 50$$

$$\Rightarrow x = 10/3 \text{ years}$$

17. A sum of Rs. 8800 is to be divided among three brothers Anil, Deepak and Ramesh in such a way that simple interest on each part at 5% per annum after 1, 2 and 3 year respectively remains equal. The share of Anil is more than that of Ramesh by?

- A. Rs. 3200
- B. Rs. 2500
- C. Rs. 3000
- D. Rs. 2700
- E. None of the Above

Answer: A

Explanation:

$$\frac{x*5*1}{100} = \frac{y*5*2}{100} = \frac{z*5*3}{100}$$

$$X: y: z = 6:3:2$$

The share of Anil is more than that of Ramesh by = $4/11 * 8800 = 3200$

18. Mayank invested a certain sum of money in a simple interest bond that value grew to Rs. 300 at the end of 3 year and to Rs. 400 at the end of another 5 year. Then what was the rate of interest in which he invested his sum?

- A. 12%
- B. 12.5%
- C. 6.67%
- D. 8.33%



E. None of the Above

Answer: D

Explanation:

$$\frac{P \cdot R \cdot 3}{100} + P = 300 \text{ — (i)}$$

$$\frac{P \cdot R \cdot 8}{100} + P = 400 \text{ — (ii)}$$

From (i) and (ii)

$$\frac{P \cdot R \cdot 5}{100} = 100$$

$$P \cdot R = 2000 \text{ — (iii)}$$

Sub (iii) in (i)

$$\frac{6000}{100} + P = 300$$

$$P = 240$$

$$240 \cdot R = 2000 \Rightarrow R = 8.33\%$$

19. Vivek took a loan from the bank at 8% per annum, and was supposed to pay a sum of Rs.2500 at the end of 4 years. If the same sum is cleared off in four equal annual installments at the same rate, then the amount of annual installment will be?

- A. Rs.558
- B. Rs.978
- C. Rs.766
- D. Rs.856
- E. None of the Above

Answer: D

Explanation:

$$x + \frac{x \cdot 8 \cdot 1}{100} = 27x/25$$

$$x + \frac{x \cdot 8 \cdot 2}{100} = 29x/25$$

$$x + \frac{x \cdot 8 \cdot 3}{100} = 31x/25 \quad (x + 27x/25 + 29x/25 + 31x/25) = 2500$$

$$\frac{112}{25}$$

$$= 2500 \Rightarrow x = 558$$



20. Sachin invested some amount at the rate of 12% simple interest and a certain amount at the rate of 10% simple interest. He received yearly interest of Rs.140. But if he had interchanged the amounts invested, he would have received Rs.4 more as interest. How much did he invest at 12% simple interest?

- A. Rs. 750.65
- B. Rs. 545.45
- C. Rs. 850.65
- D. Rs. 465.45
- E. None of the Above

Answer: B

Explanation:

Amount invested at 12% = Rs. x

Amount invested at 10% = Rs. y

$$140 = \frac{x \cdot 12 \cdot 1}{100} + \frac{y \cdot 10 \cdot 1}{100}$$

$$12x + 10y = 14000 \text{ - (i)}$$

$$144 = \frac{x \cdot 10 \cdot 1}{100} + \frac{y \cdot 12 \cdot 1}{100}$$

$$10x + 12y = 14400 \text{ - (ii)}$$

$$x = 545.45$$



21. On a certain sum, the simple interest at the end of $5\frac{1}{3}$ years becomes $\frac{4}{9}$ of the sum. What is the rate percent?

- A. 5.5%
- B. 9.1%
- C. 7.6%
- D. 8.3%
- E. 10%

Answer: D

Explanation:

$$R = \frac{100 \cdot (4x/9)}{(x \cdot 16/3)}$$

$$R = \frac{100 \cdot 4 \cdot 3}{9 \cdot 16} = \frac{100}{12} = 8.3\%$$



22. P is going to pay Rs.700 to Q, 7 months later at 6% annual simple interest, Q is going to pay Rs.550 to P, 12 months later at 8% annual simple interest, if they decide to settle the debts, who will pay what amount to whom?

- A. A, Rs.149
- B. B, Rs.167
- C. A, Rs.155
- D. B, Rs.197
- E. None of these

Answer: B

Explanation:

For P:

$$P + \left(\frac{p \cdot 6 \cdot 7}{12 \cdot 100} \right) = 700$$

$$1200p + 42P = 700 \cdot 1200$$

$$P = 676.33$$

For Q:

$$P + \left(\frac{p \cdot 6 \cdot 12}{12 \cdot 100} \right) = 550$$

$$1200P + 96P = 550 \cdot 1200$$

$$P = 509.26$$

$$Q = 676 - 509 = 167$$



23. A father left a will of Rs.5 lakh between his two daughters aged 10 and 15 such that they may get equal amounts when each of them reach the age of 21 years. The original amount of Rs.5 lakhs has been instructed to be invested at 10% p.a. simple interest. How much did the elder daughter get at the time of the will?

- A. Rs.2,04,797
- B. Rs.3,05,890
- C. Rs.1,90,00
- D. Rs.4,00,700
- E. Rs.2,46,870

Answer: A

Explanation:



Let Rs. x be the amount that the elder daughter got at the time of the will. Therefore, the younger daughter got $(5,00,000 - x)$.

The elder daughter's money earns interest for $(21 - 15) = 6$ years @ 10% p.a simple interest

The younger daughter's money earns interest for $(21 - 10) = 11$ years @ 10% p.a simple interest.

As the sum of money that each of the daughters get when they are 21 is the same,

$$x + \left(\frac{6 \cdot 10 \cdot x}{100}\right) = (5,00,000 - x) + \left(11 \cdot 10 \cdot \frac{[5,00,000 - x]}{100}\right)$$

$$100x + 60x = (5,00,000 - x) + (55,000,000 - 110x)$$

$$160x = 55,500,000 - 111x$$

$$271x = 55,500,000$$

$$X = 2,04,797$$

24. Two equal sums of money were invested at an annual rate of 10%, One sum at simple interest and other at compound interest, If the difference between the interest after 2 years was Rs.100, What were the sum invested?

- A. 25,000
- B. 100000
- C. 20,000
- D. 10,000
- E. 50,000



Answer: D

Explanation:

Assume $X = 100$

SI = 120

CI = 121

100 mean difference 1

200 mean difference 2

Hence 10000 mean differences 100

25. A man invests Rs.8000 for 5 years at 5% p.a. Simple Interest interest reckoned yearly. Income tax at the rate of 20% on the interest earned is deducted at the end of each year. Find the amount at the end of the fifth year.



- A. Rs.10,500
- B. Rs.10,500
- C. Rs.9,600
- D. Rs.10,000
- E. None of these

Answer: C

Explanation:

5% is the rate of interest. 20% deducted mean rate of Interest 4%

$$SI = \frac{8000 \times 4 \times 5}{100} = 1600$$

The amount at the end of 5 years = 8000 + 1600 = 9600

26. Ajay bought Rs.11,000 from a bank to buy a car at 12% simple Interest. If he paid \$ 6,600 as interest while clearing the loan, find the time for which the loan was given.

- A. 7
- B. 3
- C. 4
- D. 5
- E. 6

Answer: D

Explanation: $T = \frac{6600}{11000 \times 0.12}$

T = 5



27. Tarun invested an amount of Rs. 10000 at the simple interest rate of 8% per annum and another amount at the simple interest rate of 20% per annum. The total interest earned at the end of one year on the total amount invested became 12% per annum. Find the total amount invested.

- A. Rs.12,000
- B. Rs.15000
- C. Rs.5,000
- D. Rs.10,000
- E. None of these

Answer: B

Explanation:

$$SI1 = \frac{10000 \times 8 \times 1}{100} = 800$$

$$SI2 = \frac{x \times 20 \times 1}{100} = x/5$$



$$800 + (x/5) = \frac{(10000+x) \cdot 12 \cdot 1}{100}$$

$$80000 + 20x = 1,20,000 + 12x$$

$$8x = 40,000$$

$$X = 5000$$

$$\text{Total} = 10000 + 5000 = 15000$$

28. If simple interest on a certain sum of money for 6 years at 5% per annum is same as the simple interest on Rs. 650 for 9 years at the rate of 12% per annum then the sum of money is

- A. Rs.2340
- B. Rs.3240
- C. Rs.2400
- D. Rs.3500
- E. None of these

Answer: A

Explanation:

$$\frac{X \cdot 6 \cdot 5}{100} = \frac{650 \cdot 12 \cdot 9}{100}$$

$$\frac{30x}{100} = \frac{70,200}{100}$$

$$30x = 70200$$

$$X = 2340$$



29. Kailas borrowed some money at the rate of 5% p.a. for the first three years, 8% p.a. for the next five years and 11% p.a. for the period beyond eight years. If the total interest paid by him at the end of eleven years is Rs. 8800, how much money did he borrow?

- A. Rs.7500
- B. Rs.8000
- C. Rs.9600
- D. Rs.10,000
- E. Rs.7,000

Answer: D

Explanation:

$$\left(\frac{x \cdot 5 \cdot 3}{100}\right) + \left(\frac{x \cdot 8 \cdot 5}{100}\right) + \left(\frac{x \cdot 11 \cdot 3}{100}\right) = 8800$$

$$\frac{15x}{100} + \frac{40x}{100} + \frac{33x}{100} = 8800$$



$$88x = 880000$$

$$X = 10000$$

30. If the annual rate of simple interest increases from 8% to 13%, a man's yearly income increases by Rs. 4800. His principal (in Rs.) is:

- A. Rs.90,000
- B. Rs.96,000
- C. Rs.88,000
- D. Rs.1,00,000
- E. None of these

Answer: B

Explanation:

$$\frac{X \cdot 13 \cdot 1}{100} - \frac{X \cdot 8 \cdot 1}{100} = 4800$$

$$\frac{13x}{100} - \frac{8x}{100} = 4800$$

$$\frac{5x}{100} = 4800$$

$$5x = 480000$$

$$X = 96000$$

31. Out of Rs. 60,000 that Rahall has, he lends Rs. 10,000 at 11/2 % per annum simple interest and Rs. 32,000 at 6% per annum simple interest. He lends the remaining money at a certain rate of interest so that he gets total annual interest of Rs. 4000. The rate of interest per annum, at which the remaining money is lent, is?

- A. 5%
- B. 7.5%
- C. 8%
- D. 8.5%
- E. 10%

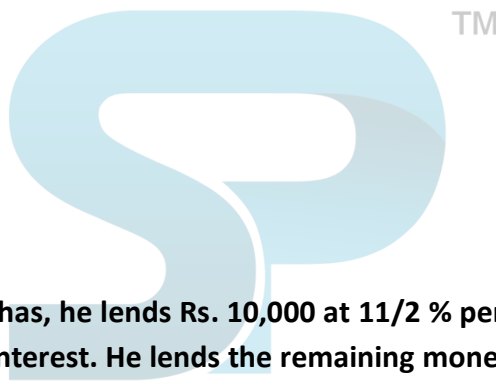
Answer: D

Explanation:

Total Amount = 60000

Amount divided into three parts – x, y, z

$$x = 10000, T = 1 \text{ yr}$$





$$SI(x) = \frac{(10000 * 11/2)}{100} = 550$$

$$y = 32000 \quad R = 6\%$$

$$SI(y) = \frac{(32000 * 6)}{100} = 1920$$

Total Interest = 4000, Interest on the remaining amount = $4000 - 550 - 1920 = 1530$

$$z = 60000 - 32000 - 10000 = 18000$$

$$R = \frac{(1530 * 100)}{18000} = 8.5\%$$

32. Vivek invests Rs 15000 as fixed deposit at a bank at the rate of 10% per annum SI. But due to some pressing needs he has to withdraw the entire money after 5 years, for which the bank allowed him a lower rate of interest. If he gets Rs 8250 less than what he would have got at the end of 10 years, the rate of interest allowed by the bank is

- A. 8%
- B. 8.5%
- C. 9%
- D. 9.5%
- E. 10%

Answer: C

Explanation:



$P=15000, T_1=10$ years, $T_2=5$ years, $R_1=10\%, R_2=?$

$$\left[\frac{(15000 * 10 * 10)}{100} - \frac{(15000 * R_2 * 5)}{100} \right] = 8250$$

$$15000 - 750R_2 = 8250$$

$$R_2 = 9\%$$

33. A father left a will of Rs.55 lakh between his two sons aged 8.5 and 16 such that they may get equal amounts when each of them reach the age of 21 years. The original amount of Rs.55 lakhs has been instructed to be invested at 10% p.a. SI. How much did the elder son get at the time of the will?

- A. 25 lakh
- B. 26 lakh
- C. 28 lakh
- D. 33 lakh
- E. 36 lakh



Answer: D

Explanation:

Let x be the amount of elder son at the time of will & Younger son's amount at the time of will (550000 - x)

For elder son, T= 21-16=5

For younger son, T=21-8.5= 12.5

Amount should be equal so,

$$x + \left[\frac{(x \cdot 10 \cdot 5)}{100} \right] = (550000 - x) + \left[\frac{(550000 - x) \cdot 10 \cdot 12.5}{100} \right] \quad 3x/2 = 12375000 - 2.25x$$

$$x = 3300000$$

34. Manish borrows 8000 at simple interest from a money lender. At the end of 3 years, he again borrows 7000 and closes his account after paying 8415 as interest after 8 years from the time he made the first borrowing. Find the rate of interest.

- A. 6%
- B. 6.5%
- C. 8%
- D. 8.5%
- E. 9%

Answer: D

Explanation:

Let x be the rate of interest

$$\frac{8000 \cdot 3x}{100} + \frac{8000 + 7000 \cdot 5x}{100} = 8415$$

$$240x + 750x = 8415$$

$$X = 8.5$$

35. A portion of Rs.8500 is invested at a8% per annum, while the remainder is invested at a 3% per annum. If the annual income from the portion earning a 8% per annum is thrice that of the other portion, what is the total income from the two investments after one year?

- A. Rs.350
- B. Rs.370
- C. Rs.450
- D. Rs.480
- E. Rs.520





Answer: D

Explanation:

$$8x + 3y = z \text{ (Total Income)}$$

$$x + y = 8500 - (1)$$

$$8x = 3(3y)$$

$$8x - 9y = 0 - (2)$$

By solving (1) and (2) we get, $x = 4500$ so $y = 4000$

$$\frac{(4500 \times 8 \times 1)}{100} + \frac{(4000 \times 3 \times 1)}{100} = 360 + 120 = 480$$

36. Raghu lends Rs 50,000 of two of his friends. He gives Rs 30,000 to the first at 6% p.a. simple interest. He wants to make a profit of 10% on the whole. The simple interest rate at which he should lend the remaining sum of money to the second friend is

- A. 8%
- B. 16%
- C. 11%
- D. 17%
- E. 19%



Answer: B

Explanation:

S.I. on Rs 30000

$$= \frac{(30000 \times 6 \times 1)}{100} = \text{Rs. } 1800$$

Profit to made on Rs 50000

$$= \frac{50000 \times 10}{100} = \text{Rs } 5000$$

S.I. on Rs.20000 = $5000 - 1800 = \text{Rs. } 3200$

$$\text{Rate} = \frac{(S.I. * 100)}{(P * T)} = \frac{(3200 \times 100)}{20000}$$

=16% per annum

Shortcut:

6.....X

.....10.....



$$3 \dots \dots \dots 2$$

$$4/(x-10) = 2/3$$

$$x=16$$

37. The rate of Simple Interest in SBI & BOB are in the ratio of 5:7. Gokul wants to deposit his total savings in two banks in such a way that he receive equal half-yearly interest from both banks. He should deposit in both banks SBI & BOB in the ratio of

- A. 4:5
- B. 7:5
- C. 9:5
- D. 8:5
- E. 5:9

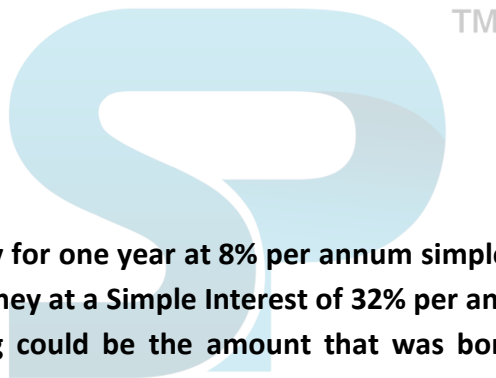
Answer: B

Explanation:

$$R1 = 5x; R2 = 7x; T1 = T2 = 1/2 \text{ yr}$$

$$\frac{[P1 * 5x * (1/2)]}{100} = \frac{[P2 * 7x * (1/2)]}{100}$$

$$P1:P2 = 7:5$$



38. Vinay borrowed some money for one year at 8% per annum simple interest and after 18 months, he again borrowed the same money at a Simple Interest of 32% per annum. In both the cases, he paid Rs.5452. Which of the following could be the amount that was borrowed by Hari in each case if interest is paid half yearly?

- A. 3900
- B. 4200
- C. 4500
- D. 4700
- E. None of the Above

Answer: D

Explanation:

16% for 6 months

x = Borrowed money

Take x = 100%

$$116\% \text{ of } x = 5452$$



$$x = 4700$$

39. Ravi borrows a sum of Rs.2000 at the beginning of a year. After four months Rs.2600 more is borrowed at a rate of interest double the previous one. At the end of one year, the sum of interest on both the loans is Rs.494. What is the first rate of interest per annum?

- A. 8.5%
- B. 9%
- C. 9.5%
- D. 12%
- E. None of the Above

Answer: C

Explanation:

$$P = 2000$$

Rate of Interest = x

$$SI = \frac{2000x}{100} = 20x$$

$$P = 2600$$

Rate of Interest = $2x$

$$SI = \frac{5200x}{100} = 52x$$

$$52x = 494$$

$$x = 9.5\%$$



40. Kumar fixes the rate of interest 5% per annum for first 3 years and for the next 4 years 6 percent per annum and for the period beyond 7 years, 7.5 percent per annum. If Mr. Kumar lent out Rs.1800 for 11 years, find the total interest earned by him?

- A. Rs.1422
- B. Rs.1242
- C. Rs.1244
- D. Rs.1342
- E. None of the Above

Answer: B

Explanation:

$$5\% \text{ for } 3 \text{ years} = 15\%$$

$$6\% \text{ for } 4 \text{ years} = 24\%$$



7.5% for 4 years = 30%

69% of 1800 = 1242

41. Bharat borrowed Rs.180, 000 on a condition that he had to pay 7.5% interest every year. He also agreed to pay the principal in equal annual installments over 21 years. After a certain number of years, however, the rate of interest has been reduced to 7%. It is also known that at the end of the agreed period, he will have paid in all Rs.2, 70,900 in interest. For how many years does he pay at the reduced interest rate?

- A. 10 years
- B. 12 years
- C. 13 years
- D. 14 years
- E. None of the Above

Answer: D

Explanation:

x = interest paid at 7.5%

(21-x) year's interest paid at 7%

$$\left(\frac{180000 \times x \times 7.5}{100}\right) + \left(\frac{180000 \times 7 \times (21-x)}{100}\right) = 270900$$

x = 7

21 – 7 = 14 years he paid at the reduced interest rate.

42. Ankita borrows Rs.7000 at simple Interest from a lender. At the end of 3 years, she again borrows Rs.3000 and settled that amount after paying Rs.4615 as interest after 8 years from the time she made the first borrowing. What is the rate of interest?

- A. 5.5%
- B. 9.5%
- C. 7.5%
- D. 6.5%
- E. None of the Above

Answer: D

Explanation:

$$\text{SI for Rs.7000 for 8 years} = \frac{(7000 \times r \times 8)}{100}$$

Again borrowed = 3000





$$SI = \frac{(3000 * r * 5)}{100}$$

$$\text{Total interest} = \left[\frac{(7000 * r * 8)}{100} \right] + \left[\frac{(3000 * r * 5)}{100} \right] = 4615$$

$$560r + 150r = 4615$$

$$710r = 4615$$

$$r = 6.5\%$$

43. Hari borrowed some money for one year at 6% per annum simple interest and after 18 months , he again borrowed the same money at a Simple Interest of 24% per annum. In both the cases, he paid Rs.4704. Which of the following could be the amount that was borrowed by Hari in each case if interest is paid half yearly?

- A. 4000
- B. 3000
- C. 4400
- D. 4200
- E. None of the Above

Answer: D

Explanation:

12% for 6 months

x = Borrowed money

Take x =100%

112% of x = 4704

x = 4200



44. Ravi lent out a part of Rs. 38800 is lent out at 6% per six months. The rest of the amount is lent out at 5% per annum after one year. The ratio of interest after 3 years from the time when first amount was lent is 5:4. Find the second part that was lent out at 5%.

- A. 28500
- B. 30080
- C. 20500
- D. 28800
- E. None of the Above

Answer: D

Explanation:



First Part = x

$$\frac{[x * (0.06)*6]}{(388800 - x)*0.05*2} = \frac{5}{4}$$

$$1.44x = 19400 - 0.5x$$

$$x = 10000$$

$$\text{Second Part} = 38800 - 10000 = 28800$$

45. Harshita lent out some money at 6% Simple Interest per annum. After one year, Rs.6800 is repaid and the rest of the amount is repaid at 5% per annum. If the second year's interest is $\frac{11}{20}$ of the first year's interest, find what amount of money was lent out.

- A. 18500
- B. 10080
- C. 17000
- D. 18000
- E. None of the Above

Answer: C

Explanation:

P – amount lent by Harshita

$$I = .06 * P \text{ — (i)}$$

The interest for second year as $X = (P + I - 6800) * .05 \text{ — (ii)}$

$$x = \left(\frac{11}{20}\right) I \text{ — (iii)}$$

Put (i) in (ii) and (iii)

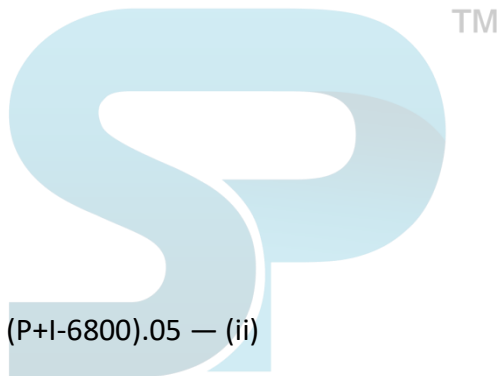
$$P = 17,000$$

46. Vikram borrows a sum of Rs.1500 at the beginning of a year. After four months Rs.2100 more is borrowed at a rate of interest double the previous one. At the end of one year, the sum of interest on both the loans is Rs.416. What is the first rate of interest per annum?

- A. 5.5%
- B. 4.5%
- C. 6.7%
- D. 7.3%
- E. None of the Above

Answer: D

Explanation:





$$P = 1500$$

Rate of Interest = x

$$SI = \frac{1500}{100} = 15x$$

$$P = 2100$$

Rate of Interest = $2x$

$$SI = \frac{4200}{100} = 42x$$

$$57x = 416$$

$$x = 7.3\%$$

47. Rahul invested a sum of money at Simple Interest at a certain rate of interest for three years. Had it been invested at a 4% higher rate, it would have fetched Rs.480 more. Find out the Principal amount that was invested by Rahall?

- A. 3000
- B. 4000
- C. 5000
- D. 4500
- E. None of the Above

Answer: B

Explanation:

x – Principal

Extra amount = 4% for 3 years = 12% of $x = 480$

$$x = (480/12) * 100 = 4000$$

48. Rakesh fixes the rate of interest 6% per annum for first 3 years and for the next 4 years, 7 percent per annum and for the period beyond 7 years, 7.5 percent per annum. If Mr. Rakesh lent out Rs.1500 for 11 years, find the total interest earned by him?

- A. Rs.1100
- B. Rs.1200
- C. Rs.1140
- D. Rs.1350
- E. None of the Above

Answer: C

Explanation:





6% for 3 years = 18%

7% for 4 years = 28%

7.5% for 4 years = 30%

76% of 1500 = 1140

49. An equal amount of sum is invested in two schemes for four years each, both offering simple interest. When invested in scheme A at 8% per annum the sum amounts to Rs.5280. In scheme B, invested at 12% per annum it amounts to Rs.5920. What is the total sum invested?

- A. 5000
- B. 9000
- C. 7000
- D. 8000
- E. None of the Above

Answer: D

Explanation:

Sum = x

$$x + \left[\frac{(x \cdot 4 \cdot 8)}{100} \right] = 5280$$

$$33x = (5280 \cdot 25) = 4000$$

$$\text{Total sum} = 2 \cdot 4000 = 8000$$



50. Simple Interest on a certain sum at a certain annual rate of interest is 16% of the sum. If the numbers representing rate per cent and time in years be equal, then the rate of interest is?

- A. 2%
- B. 4%
- C. 6%
- D. 8%
- E. None of the Above

Answer: B

Explanation:

SI = 16% of P

R = T = x

$$SI = \frac{[P \cdot N \cdot R]}{100}$$



$$\frac{4P}{25} = \frac{[P*x^2]}{100}$$

$$x = 4\%$$

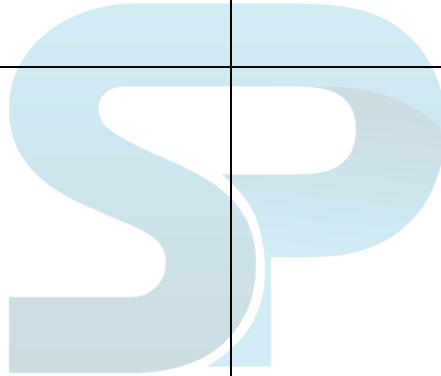




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