COMPOUND INTEREST

Direction: Read the following questions carefully and choose the right answer.

1. A man lent Rs. 4500 at 30% compound interest per annum for 3 years. What is the difference between the interest earned by the man in the 2nd year only and the interest earned by the man in the 3rd year only?

    A. Rs. 545.5   B. Rs. 502   C. Rs. 526.5   D. Rs. 532   E. Rs. 529

2. A man saves Rs.20,000 at the beginning of each year and puts the money in a bank that pays 10% interest per year, interest being compounded annually. What would be the total savings of the man at the end of 6 years?

    A. Rs. 196840   B. Rs. 169840   C. Rs. 189480   D. Rs. 199480   E. Rs. 168840

3. A bank lent Rs. X to a farmer at 50/3% p.a for 1 year73 days. How much Compound interest the farmer had to pay if the Simple interest for the first year is Rs. 3000?
    The values of Compound Interest and Sum lent are given in the options; choose the option which correctly states the above question.

    A. Rs. 6300, Rs. 36000   B. Rs. 3700, Rs. 18000   C. Rs. 5800, Rs. 18000 D. Rs. 5400, Rs. 18000
    E. Rs. 3700, Rs. 12000

4. Shyam deposited Rs. 80000 in a bank which pays 10% compound interest for 2 years. Then after 2 years, he started a business with amount (sum + interest) along with Ram, with capital of Rs. 60,000. Shyam invested for 6 months and left. Ram invested for the whole year. What will be the ratio of their profits at the end of the year?

    A. 150 : 221   B. 121 : 150   C. 121 : 130   D. 130 : 121   E. 155 : 101

5. A man takes a loan of Rs 216000 from a bank, to be returned in three years at a rate of 16.67% p.a. compound interest. The man returns Rs 84000 and Rs 58000 after first and second year. How much money will he have to return after third year to settle the loan?

    A. Rs. 161000   B. Rs. 138000   C. Rs. 152000   D. Rs. 175000

    E. None of these

6. Aman gives Rs. 500000 to Bhuvan at 12% p.a. compound interest for two years. Bhuvan gives 80% of the money received from Aman to Chetan at 20% p.a. interest, compounded half yearly for two years. Two years later he receives his due amount from Chetan and gives Aman his due amount. What is the amount left with Bhuvan?

    A. Rs. 52980   B. Rs. 58440   C. Rs. 67880   D. Rs. 62780   E. Rs. 54670

7. Rs. X is required to earn a monthly interest of Rs. 400 at 10% per annum at simple interest. Rs. Y is required to earn same interest as X when compounded semi-annually at 10% pa. Find the difference between X and Y.

A. 1170.74   B. 1331.26   C. 928.34   D. 979.66   E. None of these

8. Sumit borrows Rs. 15000 at 10% compound interest. At the end of each year he pay back Rs.3000. How much amount should he pay at the end of the third year to clear his debt?

A. Rs. 14030   B. Rs. 14005   C. Rs. 12050   D. Rs 13035   E. Rs. 12035

9. A invested some money at r% which grows to 676/441 times when invested for two years in a scheme where interest is compounded annually, how long will the same sum of money take to triple itself if invested at 'r/100'% rate of interest in a scheme where the interest is computed using the simple interest method.

A. 120 years   B. 840 years   C. 105 years   D. 720 years   E. None of these

10. Sunil lent some amount to Poonam for 3 years at the rate of 20% per annum simple interest and the equal amount to Sabnam for 2 years at the rate of 25% per annum compound interest compounded annually. At the end of time duration, the amount received from Poonam was Rs. 5625 more than that from Sabnam. How much money did he lend to each?

A. Rs. 2,00,000   B. Rs. 1,00,000   C. Rs. 2,50,000   D. Rs. 1,50,000   E. None of these

11. A man deposited certain amount of money on compound interest for 3 years at the rate of 10% per annum. The difference between the amount accumulated after 3 years and the amount accumulated after 2 years is Rs. 968. If the same principal amount is deposited at simple interest at the rate of x% per annum for 5 years, then find the value of 'x', if the simple interest obtained by man is Rs. 3200.

A. 7.5   B. 7   C. 8   D. 8.5   E. 5

12. Two friends Pratik and Sameer have some amount of money in the ratio 14 : 9. Pratik puts his money at compound interest of 12.5% p.a for three years, while Sameer lends his money at simple interest for three years at the rate 20% p.a. If the interest earned by Pratik is Rs. 7595, what is the total amount earned by Sameer after three years?

A. Rs. 19442   B. Rs. 18432   C. Rs. 17986   D. Rs. 18562   E. None of these

13. Aman takes Rs 62,500 from a bank at simple interest at the rate of 8% per annum. After 1 year he returns 25% of the amount and after another year he returns 33.33% of the amount. What is the total amount to be returned after 3rd year to clear the loan?

A. Rs. 39236   B. Rs. 38352   C. Rs. 42960   D. Rs. 39366   E. None of these

14. The compound interest earned after three years and that earned after two years on a certain sum of money, differ by Rs 5880. What is the principal sum of money if the rate of interest is 16.67% p.a?

   A. Rs. 27432   B. Rs. 25920   C. Rs. 26780   D. Rs. 29870   E. None of these

15. Compound interest on a certain sum at the rate of 12% per annum after 2 years is Rs.142464. Find the simple interest on that sum at the rate of 15% per annum for 7 years.

   A. Rs. 588000   B. Rs. 568000   C. Rs. 586000   D. Rs. 566000   E. None of these

16. Find the difference between compound interest and simple interest on a sum of Rs.48000 at the rate of 15% per annum for three years.

   A. Rs. 3200   B. Rs. 3204   C. Rs. 3402   D. Rs. 3202   E. None of these

17. A man deposited Rs. 40,000 in a bank at 10% per annum, compounded annually for two years. He wanted to keep the amount deposited at the end of the two years, but there was a new law in place that for any amount in the account that date onwards, any annual interest greater than Rs.2,500 would be taxed. Also, the rate of interest was reduced to 8% per annum. What amount should he remove from his account to ensure that he just avoids paying the tax? Assume that his account had zero balance before he deposited Rs. 40,000.

   A. Rs. 31,250   B. Rs. 24,000   C. Rs. 21,684   D. Rs. 18,050   E. Rs. 17,150

18. Kishan borrowed a certain sum from the bank. The bank charges a simple interest of 10 % per annum. Kishan later realized that he no longer needs the entire money. So he lent 60 percent of the borrowed sum to Vikas at the rate of 20% per annum compounded annually. At the end of 3 years, Vikas paid him a sum of Rs. 1555200. How much amount(in Rs.) will Kishan pay to the bank if he repays the entire loan at the end of 4 years?

   A. 2400000   B. 2700000   C. 2100000   D. 2500000   E. 2000000

19. Three friends, Anil, Bipin, and Chandu invested some money at the rate of interest 10% per annum, 12.5% per annum, and 20% per annum simple interest respectively. If the total interest accrued at the end of 2 years was Rs. 4200 and the amount invested by Anil was 150% of the amount invested by Bipin and the amount invested by Chandu is 25% more than the amount invested by Bipin. Find the difference between the amount invested by Anil and Chandu?

   A. Rs. 1000   B. Rs. 1500   C. Rs. 1800   D. Rs. 1250   E. None of these

20. Riya borrows Rs. 8000 from a bank at (12)1/2 % p.a. compound interest. At the end of every year, she pays Rs. 3000 as part of repayment of loan and interest. How much she still owes to the bank after paying three such instalments ?

A. Rs. 1218.75 B. Rs. 1465.50 C. Rs. 1300 D. Rs. 1150 E. Rs. 1450

21. A father gives Rs. 90000 to his son. The son purchases a TV, Phone and a bike for Rs. 15000, Rs. 13000 and Rs. 35000 respectively and puts the remaining money in a scheme that pays C.I. at 15% per annum. Find the total percentage change in amount received by him initially, if after two years, he sells off all the items at 80% of the purchase price and also withdraws his money from the scheme.

A. 6.25% decrease B. 8.54% increase C. 4.32% decrease D. 5.48% increase E. None of these

22. Amritansh invested Rs. 45000 in a scheme offering 10% compound interest for 3 years. Arun invested Rs. 'x' less than Amritansh in another scheme offering 12% simple interest for 3 years. Find the value of 'x' if the interest earned by Amritansh is Rs. 315 more than the interest earned by Arun.

A. 3500 B. 4500 C. 7500 D. 6000 E. 4000

23. The compound interest accrued on an amount in two years is Rs. 26096 less than the amount. The difference between the compound interest and the simple interest accrued on the same amount but at half the rate of interest in two years is Rs. _____ and the amount is Rs. 35000.

A. 114 B. 132 C. 126 D. 144 E. None of these

24. Prabhas had Rs.190000 with him for the Diwali shopping. He purchases a laptop, an iPhone and a bike for Rs. 45000, Rs. 60000 and Rs. 50000 respectively and puts the remaining money in a bank deposit that pays CI at 12% per annum. After two years, he sells off all the items at 90% of the original price and also withdraws his entire money from the bank by closing the account. Find the total percentage change in the asset.

A. – 4.5% B. +3.47% C. – 4.32% D. – 3.47% E. No Change

25. Akshay invested Rs. 35000 in scheme A and Rs. 24000 in scheme B. Scheme A is offering interest at the rate of R% compounded annually and scheme B is offering simple interest at rate of (R+4)% per annum. After 2 years, the interest earned by Akshay from scheme A is Rs. 64 more than interest earned from scheme B. Find the value of R.

A.12 B. 10 C. 8 D. 7 E. 5

26. Dhiru Bhai deposited a certain amount of money at C.I. for 3 years at the rate of 10% per annum. The difference between the amount accumulated after 3 years and the amount accumulated after 2 years is Rs. 968. If the same amount is deposited at S.I. at the rate of x% per annum for 5 years and the simple interest obtained by Dhiru Bhai is Rs. 3200, then find the value of 'x'.

A. 7.5 B. 7 C. 8 D. 8.5 E. 5

27. P and Q's father gave them Rs. 18, 00, 000 in the ratio of 5 : 1, respectively. Q deposited his share at 5% simple interest for 5 years and then he deposited the accumulated amount at 10% CI for 2 years. P deposited his share at 6% CI for 2 years. They invested their respective accumulated amounts in a business which earned a profit of Rs. 5, 70, 000 in the 1st year. What was the difference between P and Q's share of 1st year's profit?

    A. 328000   B. 328500   C. 300000   D. 328440   E. 324880

28. Arun invested Rs. 'x' in a scheme offering 18% simple interest for three years whereas Varun invested Rs. '2x – 3000' in another scheme offering 10% compound interest for three years. Find the value of 'x' if the interest earned by Arun is Rs. 261 more than the interest earned by Varun.

    A. 9000   B. 8000   C. 7000   D. 6000   E. 5000

29. A person invested some money under compound interest compounded annually and at the end of 2 years he received a total sum of Rs. 580800. If the rate of interest were 2% more then he would have received Rs. 21312 more in the same time period. What was the total money invested by the person?

    A. Rs. 500000   B. Rs. 520000   C. Rs. 480000   D. Rs. 468000   E. None of these

30. If the difference between the simple interest and compound interest for 2 years is Rs. 160 and the simple interest for second year is Rs.1000, then find the principal.

    A. Rs. 6250   B. Rs. 7250   C. Rs. 8000   D. Rs. 10000   E. Rs. 16000

31. A person had Rs 1 lakh out of which he puts Rs. 28000 at 25% p.a. compound interest and the remaining amount at 16.67% p.a. compound interest. What is the difference between the interests obtained from the two investments after two years?

    A. Rs. 10250   B. Rs. 12000   C. Rs. 9750   D. Rs. 11500   E. None of these

32. A person has Rs. 40000, 40% of which he puts at 12.5% p.a. compound interest and rest he puts at simple interest at 10% p.a. What is the total interest obtained after two years?

    A. Rs. 9050   B. Rs. 8500   C. Rs. 10020   D. Rs. 8750   E. None of these

33. A sum of money put at compound interest at r% p.a. gives amount of Rs. 6561 after 4 years and Rs. 5832 after three years. If Rs. 18000 is put at r% SI for two years, what will be the amount at the end of two years?

    A. Rs. 22222.22   B. Rs. 22500   C. Rs. 19200   D. Rs. 21400   E. None of these

34. A person has Rs. 40000 out of which he puts Rs. 12000 at 10% SI for 3 years and Rs 16000 at 12.5% CI for 2 years and keeps the rest with himself. What is the total

amount with him after three years?

A. Rs. 52240   B. Rs. 35850   C. Rs. 42650   D. Rs. 47850   E. Rs. 45260

35. A person has Rs. 90000 with him, 1/3 of it he puts at 20% SI for 2 years and 2/3 of the remaining at 12.5% CI for 2 years rest of the money he spends on shopping. The difference between the interest obtained from SI and CI is what percent of the money spent on shopping?

A. 8.25%   B. 5.25%   C. 7.85%   D. 4.75%   E. None of these

36. A man deposited Rs. 25000 for 3.5 years on scheme 1 which gives simple interest at the rate of 12% per annum. If the simple interest earned from scheme 1 is deposited on scheme 2 at compound interest for 2 years to get a total amount of Rs. 11797.8 and the rate of compound interest given by scheme 2 is x% per annum, then find the value of x?

A. 5   B. 6   C. 7   D. 8   E. 9

37. Rohan invested Rs. 'x' in a scheme which offers simple interest at the rate of 12% per annum for the first 3 years and compound interest at the rate of 10% for the next 2 years. After 5 years, he earned a total interest of Rs. (x − 1772). If the same amount is invested in another scheme which offers compound interest at the rate of 15% per annum, then find the interest earned by him in 2 years.

A. Rs. 1612.50   B. Rs 1662.50   C. Rs. 1710   D. Rs. 1762.50   E. None of these

38. Karan invested Rs. 8000 in scheme A offering 20% compound interest for one year and a half year compounded half yearly. He then invested the whole amount he has received in scheme B offering 15% simple interest for five years. Find the total amount received by him after six and a half years.

A. Rs. 18436   B. Rs. 18634   C. Rs. 18832   D. Rs. 19030   E. None of these

39. A certain amount becomes 4 times in 15 years at the rate of R% per annum simple interest. If Rs. 30000 is invested at the rate of R% per annum compound interest compounded annually, then what will be total compound interest earned in 3 years?

A. Rs. 18450   B. Rs. 21840   C. Rs. 18650   D. Rs. 16450   E. None of these

40. A person lends some money at 8% per annum simple interest for three years. At the end of third year, he receives Rs. 250 as interest. How much more money (approximately) he would have received if the rate of interest were 12% per annum compounded annually?

A. Rs. 172   B. Rs. 162   C. Rs. 152   D. Rs. 192   E. Rs. 182

41. The ratio of the amount for two years under compound interest annually and for one year under simple interest is 9 : 7. If the rate of interest is same, then the value of rate of interest is:

| A. 28.57% | B. 29.02% | C. 29.76% | D. 29.57% | E. None of these |

42. **A sum of money becomes 5 times of itself in 25 years at simple interest. If Rs. 12500 was invested at the same rate of interest for two years, compounded annually then what would have been the compound interest?**

| A. Rs. 4320 | B. Rs. 4325 | C. Rs. 4330 | D. Rs. 4350 | E. None of these |

43. **A man gave 50% of his savings of Rs. 168200 to his wife and divided the remaining sum among his sons Gautam and Gambhir whose ages are 15 years and 13 years respectively. He divided it in such a way that each of his sons who invested the individual sum at 5% compound interest rate per annum, would receive the same amount when they attain the age of 18 years. The share of Gambhir was:**

| A. Rs. 42050 | B. Rs. 40000 | C. Rs. 45000 | D. Rs. 45500 | E. None of these |

44. **Vijay Mallya returned a sum of money in 2 annual instalments of Rs 33,80,000 each at the rate of 8 (1/3)% pa at compound interest. Find the sum borrowed from the bank?**

| A. Rs. 31,20,000 | B. Rs. 75,00,000 | C. Rs. 60,00,000 | D. Rs. 66,00,000 | E. None of these |

45. **Avinash invests Rs. 1600 at 20% compound interest per annum for 2 years. The amount earned by him after 2 years was again invested at 25% per annum simple interest for 3 years. Find the simple interest earned by Avinash.**

| A. Rs. 1562 | B. Rs. 1458 | C. Rs. 2042 | D. Rs. 1844 | E. Rs. 1728 |

46. **Karan invested certain amount in three different insurance companies X, Y and Z that yielded him interest at the simple interest rate of 8%, 10% and 12% per annum respectively and the amount invested in company Z was 130% of the amount invested in company X and 210% of the amount invested in company Y respectively. If the total interest accrued in one year was Rs. 4800, what was the amount invested in company Y? (Find the approximate value)**

| A. Rs. 7984 | B. Rs. 9974 | C. Rs. 5576 | D. Rs. 4382 | E. None of these |

47. **A sum at the rate of 12% per annum after 10 years becomes Rs.79200. Find the difference between compound interest and simple interest on that sum after three years, at the rate of 20% per annum.**

| A. Rs. 3608 | B. Rs. 6408 | C. Rs. 4608 | D. Rs. 5208 | E. None of these |

48. **Difference between compound interest and simple interest on a certain sum at the rate of 8% per annum for two years is Rs.4096. Find the compound interest on that sum after three years at the rate of 12% per annum.**

| A. Rs. 209153.92 | B. Rs. 158153.92 | C. Rs. 229153.92 | D. Rs. 259153.92 | E. None of these |

49. Asha took an educational loan of Rs. 4,00,000 from a nationalized bank for her 2 years course. She returned half of the amount (including interest) at the completion of her studies and remaining after 3 years from the end of her course. If she would be charged at 7% p.a. at CI during her course and at 10% p.a. at CI after the completion of the course. Then what is her total interest amount?

    A. Rs. 1,98,765.35   B. Rs. 1,33,752.38   C. Rs. 1,67,190.47   D. Rs. 1,45,618.50   E. None of these

50. A sum at simple interest amounts to Rs.109760 at the rate of 8% per annum after 12 years. Find the compound interest on that sum at the same rate of interest after 3 years.

    A. Rs. 11543.872   B. Rs. 14543.872   C. Rs. 18654.324   D. Rs. 12345.672   E. None of these

ANSWERS

1	C	11	C	21	C	31	A	41	A
2	B	12	B	22	B	32	A	42	A
3	B	13	D	23	C	33	B	43	B
4	B	14	B	24	D	34	D	44	C
5	A	15	A	25	C	35	E	45	E
6	B	16	C	26	C	36	B	46	B
7	A	17	E	27	D	37	A	47	C
8	D	18	C	28	D	38	B	48	D
9	B	19	A	29	C	39	B	49	B
10	D	20	A	30	A	40	A	50	B