23. I give a certain person ₹ 8000 at simple interest for 3 years at $7\frac{1}{2}\%$. How much more should I have gained had I given it at compound interest?
(1) ₹ 128.48 (2) ₹ 136.45
(3) ₹ 138.38 (4) ₹ 138.48
(5) ₹ 137.37

24. A merchant commences with a certain capital and gains annually at the rate of 25 p.c. If at the end of 3 years he has ₹ 10,000, what was his original capital?
(1) ₹ 5120 (2) ₹ 5230
(3) ₹ 5340 (4) ₹ 5550
(5) None of these

25. At what rate percent compound interest does a sum of money become $\frac{9}{4}$ times itself in 2 years?
(1) 20% (2) 30%
(3) 40% (4) 50%
(5) None of these

26. The simple interest on a certain sum of money for 4 years at 4 per cent per annum exceeds the compound interest on the same sum for 3 years at 5 per cent per annum by ₹ 57. Find the sum
(1) ₹ 24,000 (2) ₹ 26,000
(3) ₹ 28,000 (4) ₹ 30,000
(5) None of these

27. A sum of money at compound interest amounts in two years to ₹ 2809, and in three years to ₹ 2977.54. Find the rate of interest and the original sum.
(1) Rate 4%, Original sum ₹ 1500
(2) Rate 5%, Original sum ₹ 2000
(3) Rate 6% Original sum ₹ 2500
(4) Rate 8%, Original sum ₹ 3000
(5) None of these

28. A sum of ₹ 13,360 was borrowed at $8\frac{3}{4}\%$ per annum compound interest and paid back in two years in two equal annual installments. What was the amount of each installment?
(1) ₹ 5,769 (2) ₹ 7,569
(3) ₹ 7,009 (4) ₹ 7,500
(5) None of these

29. Compound interest of a sum of money for 2 years at 4% per annum is ₹ 2,448. Simple interest of the same sum of money at the same rate of interest for 2 years will be—
(1) ₹ 2,500 (2) ₹ 2,400
(3) ₹ 2,360 (4) ₹ 2,250
(5) None of these

30. The difference between compound interest and simple interest of a sum for 2 years at 8% is ₹ 768. The sum is—
(1) ₹ 1,00,000 (2) ₹ 1,10,000
(3) ₹ 1,20,000 (4) ₹ 1,70,000
(5) None of these

31. Find the present value of ₹ 4913 due 3 years hence at $6\frac{1}{4}\%$ per annum at compound interest.
(1) ₹ 4096 (2) ₹ 4296
(3) ₹ 4568 (4) ₹ 4896
(5) None of these

32. What will be the difference between simple and compound interest at 10% per annum on the sum of ₹ 1000 after four years?
(1) ₹ 40.40 (2) ₹ 64.10
(3) ₹ 31 (4) ₹ 32.10
(5) None of these

33. What would be the compound interest accrued on an amount of ₹ 8,400 at the rate of 12.5 p.c.p.a. at the end of 3 years? (rounded off to two digits after decimal)
(1) ₹ 4205.62 (2) ₹ 2584.16
(3) ₹ 3560.16 (4) ₹ 3820.14
(5) None of these

34. In what time will ₹ 1200 amount to ₹ 1323 at 5 p.c.p.a compound interest?
(1) 2 years (2) 3 years
(3) 4 years (4) 1.5 year
(5) None of these

35. In what time will ₹ 390625 amount to ₹ 456976 at 4% compound interest?
(1) 2 years (2) 4 years
(3) 3 years (4) 5 years
(5) None of these

36. At what rate per cent compound interest does a sum of money becomes nine-fold in 2 years?
(1) 200% (2) 210%
(3) 220% (3) 230%
(5) None of these

37. The Compound Interest on a certain sum is ₹ 104 for 2 years and Simple Interest is ₹100. What is the rate percent?
(1) 4% (2) 6%
(3) 8% (4) 10%
(5) None of these

38. What sum of money at compound interest will amount to ₹ 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?
(1) ₹ 1500 (2) ₹ 1600
(3) ₹ 1800 (4) ₹ 2000
(5) None of these

39. A sum of money is lent out at compound interest rate of 20% per annum for 2 years. It would fetch ₹ 482 more if interest is compounded half-yearly. Find the sum.
(1) ₹ 20,000 (2) ₹ 22,000
(3) ₹ 24,000
(4) Can't be determined
(5) None of these

40. The ratio of difference between compound interest and simple interest for 3 years. to the difference between compound interest and simple interest for 2 years. 19 : 6. What is the rate percent per annum?
(1) 10% (2) $16\frac{2}{3}\%$
(3) 12% (4) 15%
(5) None of these

41. A man with a sum of ₹2602/- wants to deposit this sum into the bank in the account of his two sons so that both will get equal money after 5 years. and 7 years. respectively at the rate of 4% compounded annually. Find the part of amount deposited into the account of first son.
(1) ₹1352 (2) ₹1200
(3) ₹1500 (4) ₹ 1301
(5) None of these

42. A man deposited ₹ 3,90,300 into the account of his two sons such that they will get equal money at their 18th birthday. Their ages today are 15 years. and 13 years. Rate of interest is 4% per annum. Find the money deposited in their account.
(1) ₹130100, ₹260200
(2) ₹202000, ₹188300
(3) ₹152000, ₹238300
(4) ₹202800, ₹187500
(5) None of these

43. A certain sum is lent for 3 years at $16\frac{2}{3}$ p.a. compound interest. If the C.I. for the 3rd year is ₹ 24.50/- then what will be the simple interest of 5 years.?
(1) ₹ 90 (2) ₹ 60
(3) ₹ 45 (4) ₹ 120
(5) None of these

44. At what rate per annum ₹ 32000 will give an interest of 5044/- in a time period of 9 months when the interest is compounded quarterly?
(1) 20% (2) 25%
(3) 30% (4) 10%
(5) None of these

45. A person earns a profit of 25% on a certain sum. If the has an amount of ₹ 10,000 after 3 years then what was his initial sum?
(1) ₹ 5120 (2) ₹ 6150
(3) ₹ 5500 (4) ₹ 5220
(5) None these

46. The simple interest on a sum at 4% p.a. for 4 years. is 57/- more when the same sum is lent at 5% p.a. at C.I. for 3 years. Find the sum.
(1) ₹ 22000 (2) ₹ 24000
(3) ₹ 25000 (4) ₹ 20000
(5) None of these

47. What will be the difference between Compound interest on sum of ₹ 5000 for $1\frac{1}{2}$ years when the interest are compounded annually and half yearly respectively?
(1) 2.04 (2) 2.05
(3) 3.00 (4) 2.50
(5) Data inadequate

1.3; **Paramount concept -1**

Two yr. interest at the rate of 9% = 18.81

18.81% of 45000 = ₹ 8464.50

Paramount concept -2

1.3; 9% of 45000

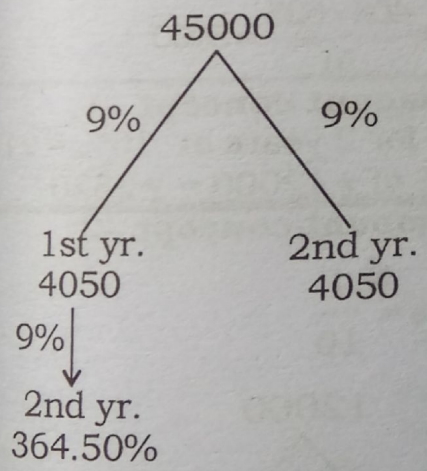
$\frac{9}{100} \times 45000 = 4050$ (interest of 1st year)

9% of 45000 (interest of 2nd year) = 4050

But in case of C.I., interest is changed on interest which means

$\frac{9}{100} \times 4050 = 364.40$

So, C.I. = 4050
4050
364.50
8464.50



C.I. = 4050 + 4050 + 364.50
= 8464.50

1.3; Required Compound Interest

$= P\left[\left(1+\frac{r}{100}\right)^t - 1\right]$

$= 45000\left[\left(1+\frac{9}{100}\right)^2 - 1\right]$

$= 45000\left(\frac{109\times109-100\times100}{100\times100}\right)$

$= \frac{45000\times1881}{10000} = ₹\ 8464.50$

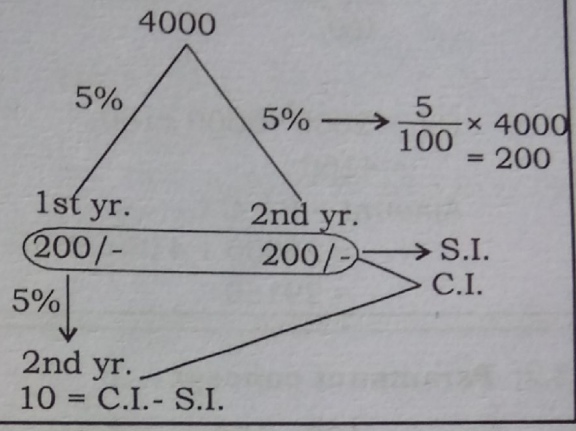
2.1; **Paramount concept -1**

Difference between C.I. & S.I. for 2 years

at 5% rate = (10.25%-10) = 0.25%

0.25% of ₹ 4000 = ₹ 10

2.1; **Paramount concept -2**



Explanation

Interest on 4000/- at the rate of 5% (1st year) = 200/-

Interest on 4000 at the rate of 5% (2nd year)= 200/-

But we know that C.I. is interest on interest.

Hence interest on 1st year i.e. 200 will also be subject to interest at the rate of 5%

5% of 200 = 10/-

C.I. = 200 + 200 + 10 = 410/-

$S.I. = \frac{P\times R\times T}{100} = \frac{4000\times5\times2}{100} = 400$

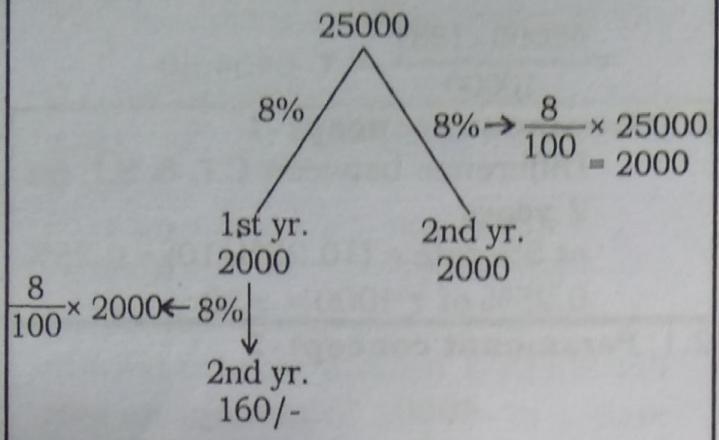
Diff = C.I. - S.I. = 410- 400
= 10

2.1; **Paramount concept:-3**

$\text{Difference} = 4000 \times \left(\frac{5}{100}\right)^2$

$= \frac{4000\times25}{100\times100} = 10/-$

3.2; **Paramount concept - 1**



C.I. = 2000 +2000 +160
= 4160
Amount = P + C.I.
= 25000 + 4160
= 29160

3.2; **Paramount concept :- 2**

$$25000 \times \frac{108}{100} \times \frac{108}{100} = ₹\,29160$$

3.2; Amount $= P\left(1+\frac{r}{100}\right)^t$

$$= ₹\,25000\left(1+\frac{8}{100}\right)^2$$

$$= ₹\,25000 \times \frac{27\times27}{25\times25} = 40 \times 729$$

$$= ₹\,29160$$

4.2; **Paramount concept -1**

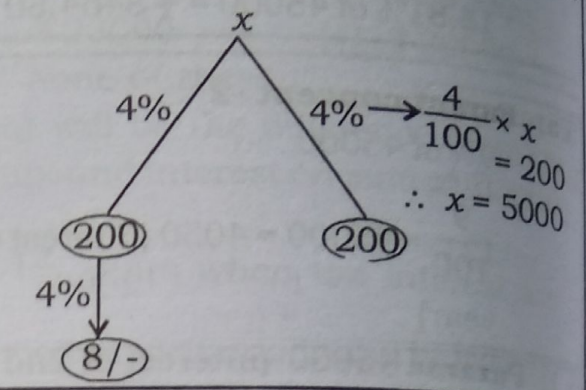
C.I. for 2 years at the rate of 4%
= 8.16%
8.16% = ₹ 408

$$\therefore \text{ Principal} = \frac{408}{8.16}\times100$$

$$= ₹\,5000\ /-$$

4.2; **Paramount concept -2**

408/- is the C.I. of 2 yrs. which can be clearly understood as 200 + 200 equal for both the 2 years and then 4% of 200 (interest on interest) i.e. 8/-



4.2; Let the sum of money be P.
Now, according to the question,

$$408 = P\left[\left(1+\frac{4}{100}\right)^2 - 1\right]$$

or, $$408 = P\left[\frac{676}{625} - 1\right]$$

or, $$408 = P\left(\frac{51}{625}\right)$$

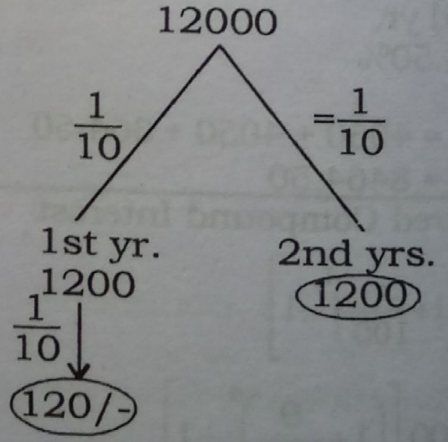
$$\therefore \quad P = \frac{408\times625}{51} = 5000$$

5.5; **Paramount concept -1**

C.I. for 2 years at 10% = 21%
21% of ₹ 12000 = ₹ 2520

5.5; **Paramount concept -2**

$$10\% = \frac{1}{10}$$



C.I. = 1200 + 1200 + 120 = 2520

5.5; Required C.I. $= 12000\left[\left(1+\frac{10}{100}\right)^2-1\right]$

$= 12000\,[(1.1)^2-1]$

$= 12000\,[1.21-1]$

$= 12000 \times 0.21$

$= ₹\,2520$

5.5; Paramount concept -3

$12000 \times \frac{11}{10} \times \frac{11}{10}$

$121 \times 120 = 14520$

$= 14520 - 12000$

$= ₹\,2520$

6.1; Paramount concept -1

Time is 5 years

If P = 10

$A = P + \frac{10}{100} \times P$

$= 10 + 1 = 11$

P	A
10	11
10	11
10	11
10	11
10	11
Total= 100000	161051
if is ↓	↓ then amount is
(as original P=1000) 1000	1610.51 (100000 is divided by 100 to get 1000. Hence 161051 is also divided by 100)

C.I. = 1610.51 - 1000 = 610.51

6.1; $A = 1000\left(1+\frac{10}{100}\right)^5$

$= 1000\left(\frac{11}{10}\right)^5 = \frac{1000 \times 161051}{100000}$

$= ₹\,1610.51$

$\therefore$ Interest = 1610.51 – 1000

$= ₹\,610.51$

7.3; Paramount concept -1

Diff. between C.I. and S.I. at 8% = 0.64%

0.64% = ₹ 128

$\therefore$ Principal $= \frac{128}{0.64} \times 100 = ₹\,20{,}000$

7.3; **1st Method (Direct formula)**

Difference between C.I. & S.I.

$= \left(\frac{r}{100}\right)^2 \times P$

$125 = \frac{8}{100} \times \frac{8}{100} \times P$

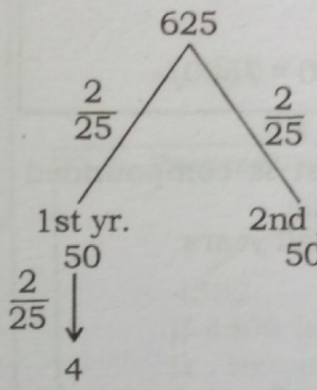
P = 20,000

But this method is appicable for 2 years only.

2nd Method:-

$R = \frac{8}{100} = \frac{2}{25}$

$\frac{2}{(25)^2} \rightarrow$ P (always the square of denominator is assumed as the P)



is S.I. and Diff. between S.I. & C.I. is Rs. 4 but diff. given is 128

Now if 4 → 128 (4 × 32)

then 625 → 20,000 (625 × 32)

7.3; $\frac{8}{100} \times \frac{8}{100} \times x = 128$

$\Rightarrow \frac{2}{25} \times \frac{2}{25} \times x = 128$

$= \frac{128 \times 625}{4} = ₹\,20000$

8.3; **Paramount concept -1**

If interest is compounded half- yearly rate will be 2%

C.I. for 2 years = 4.04%

$$\text{Principal} = \frac{7803}{104.04} \times 100$$

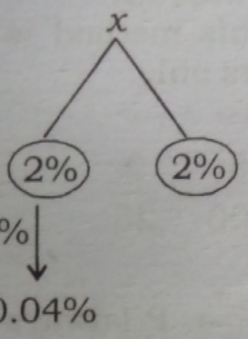
$$= ₹7500/-$$

8.3; **Paramount concept -2**

When interest is compounded half yearly then rate is halved and time is doubled.

Hence new rate = 2%

new times = 2 years



Total C.I. = 4.04%

P =

$$P = \frac{7803}{104.04} \times 100 = 7500/-$$

8.3; Let the sum be ₹ P.

As, the interest is compounded half-yearly,

$\therefore$ R = 2%, T = 2 half years

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

$$\Rightarrow 7803 = P\left(1+\frac{2}{100}\right)^2$$

$$\Rightarrow 7803 = P\left(1+\frac{1}{50}\right)^2$$

$$\Rightarrow 7803 = P \times \frac{51}{50} \times \frac{51}{50}$$

$$\Rightarrow P = \frac{7803 \times 50 \times 50}{51 \times 51} = ₹7500$$

9.1; **Paramount concept -1**

Difference between C.I. and S.I. for 3 years. at 5% = 0.7625%

= 0.7625% = ₹ 122

$$\text{Principal} = \frac{122}{0.7625} \times 100 = ₹16000$$

9.1; For, 3 years

$$D = P\left(\frac{r}{100}\right)^2\left(\frac{300+r}{100}\right)$$

$$122 = P \times \left(\frac{5}{100}\right)^2 \times \frac{305}{100}$$

$$122 = P \times \frac{1}{400} \times \frac{305}{100}$$

$$P = \frac{122 \times 400 \times 100}{305} = ₹16000$$

10.1; $x \times \frac{108}{100} \times \frac{108}{100} = 5832$

$x \times 729 = 5832 \times 625$

$x \times 8 \times 625$

$= 5000$

10.1; **Paramount concept -1**

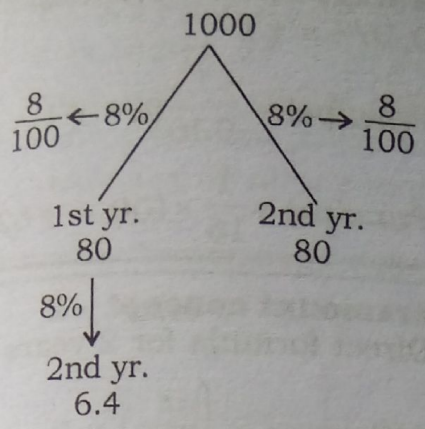
C.I. for 2 years. at 8% = 16.64%

Amount = ₹ 5832 = 116.64%

$$\text{Principal} = \frac{5832}{116.64} \times 100 = ₹5000$$

10.1; **Paramount concept -2**

Let P = 1000



If A = 1000 + $\underbrace{80+80+6.4}_{166.4}$ = 1166.4/-

then P = 1000

$\therefore$ If A = 5832 then P = $\frac{5832 \times 1000}{1166.4}$

= 5000

11.4; **Paramount concept -1**

C.I. for 2 yrs. at 5% = 10.25%

= ₹ 246

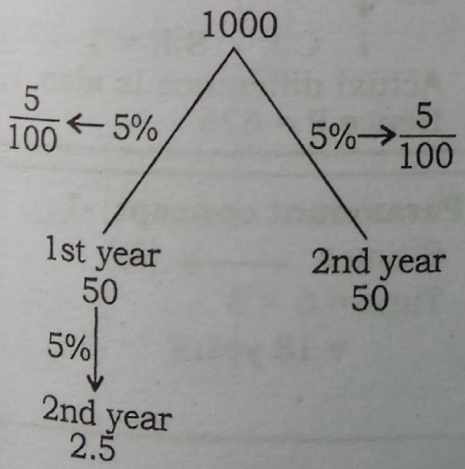
Principal = $\frac{246 \times 100}{10.25}$ = ₹2400

S.I. for 3 years at 6% = 18%

$\therefore$ 18% of 2400 = ₹ 432

11.4; **Paramount concept -2**

Let P = 1000



If C.I. = 50 + 50 + 2.5 = 102.5

then P = 1000

If C.I. = 246

then P = $\frac{246 \times 1000}{102.5}$ = ₹2400

S.I. = $\frac{PRT}{100} = \frac{2400 \times 6 \times 3}{100}$ = ₹432

11.4; C.I. = $P\left[\left(1+\frac{R}{100}\right)^T - 1\right]$

$246 = P\left[\left(1+\frac{5}{100}\right)^2 - 1\right]$

$\Rightarrow 246 = P\left[\left(\frac{21}{20}\right)^2 - 1\right]$

$\Rightarrow 246 = P\left(\frac{441-400}{400}\right)$

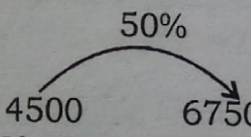
$\Rightarrow 246 = \frac{41P}{400}$

$\Rightarrow P = \frac{246 \times 400}{41}$ = ₹2400

$\therefore$ S.I. = $\frac{P \times T \times R}{100} = \frac{2400 \times 3 \times 6}{100}$

= ₹432

12.3; **Paramount concept -1**



If 4500 is increased by 50% then it becomes 6750. Hence x increased by 50% becomes 4500.

$\therefore$ x is 3000 as 50% i.e. 1500/- increase makes it 4500.

12.3; $P\left(1+\frac{r}{100}\right)^4 = 6750$ _____(i)

$P\left(1+\frac{r}{100}\right)^2 = 4500$ _____(ii)

dividing the equ (i) by(ii)

$\left(1+\frac{r}{100}\right)^2 = \frac{6750}{4500} = \frac{3}{2}$

So, $P\left(1+\frac{r}{100}\right)^2 = 4500$

$P = 3000$

13.3; **Paramount concept -1**

$\text{Amount} = \text{Principal}\left(1+\frac{R}{100}\right)^t$

$2500 = 2304\left(1+\frac{R}{100}\right)^2$

$\frac{2500}{2304} = \left(1+\frac{R}{100}\right)^2$

$\left(\frac{25}{24}\right)^2 = \left(1+\frac{R}{100}\right)^2$

$\frac{25-24}{24} = \frac{R}{100}$

$\therefore \quad \frac{R}{100} = \frac{1}{24}$

$\therefore \quad R = 4\frac{1}{6}\%$

13.3; $2304\left(1+\frac{r}{100}\right)^2 = 2500$

$\left(1+\frac{r}{100}\right)^2 = \frac{2500}{2304}$

$1+\frac{r}{100} = \frac{25}{24} \Rightarrow r = 4\frac{1}{6}\%$

14.2; **Paramount concept -1**

Difference between C.I. & S.I. for 2 years at 4% = 0.16% of sum

$\therefore \quad 0.16\% = ₹1$

$\therefore \quad \text{Principal} = \frac{1}{0.16}\% = ₹1$

$\text{Principal} = \frac{1}{16}\times 100 = ₹625$

14.2; **Paramount concept - 2**

Direct formula for 2 years

$\text{Difference} = \left(\frac{r}{100}\right)^t \times P$

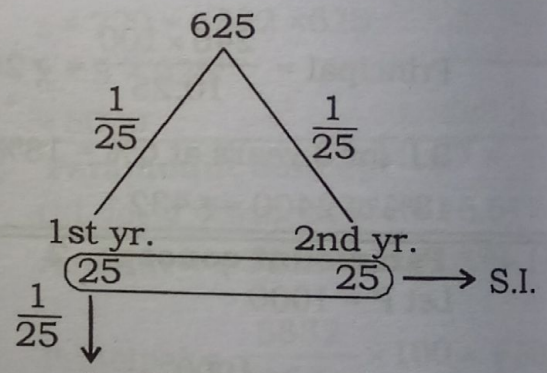
$1 = \left(\frac{4}{100}\right)^2 \times P$

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

$\therefore P = 625$

$R = 4\% = \frac{4}{100} = \frac{1}{25}$. $(25)^2$ i.e. $(\text{denominator})^t$ is assumed as p.

Time = 2 years hence power =2



C.I. - S.I. = 1

Actual difference is also 1.

Hence P = 625

15.3; **Paramount concept -1**

8 times $\longrightarrow (2)^3$

$\therefore \quad \text{Time} = 6\times 3$

$= 18$ years

15.3; **Paramount conpect - 2**

$P \xrightarrow{6\text{ yrs.}} 2P \xrightarrow{6\text{ yrs.}} 4P \xrightarrow{6\text{ yrs.}} 8P$

If P becomes 2P (double) after 6 years. then of course it becomes 4 P after 6 more years i.e. after 12 years and 8P after 6 more years i.e. 18 years.

In short :- 8yrs. = $(2)^{\overset{3}{\downarrow}}\times\overset{6}{\downarrow}$

2P becomes 8P is 18 yrs.

15.3; 6 yrs. _____ 2 times
12 yrs. _____ 4 times
18 yrs. _____ 8 times
24 yrs. _____ 16 times

IInd method:-

6 _____ 2times $\Rightarrow$ 3
? _____ 8 times $\Rightarrow$ 2
$t = 6 \times 3 = 18$ years

16.4; **Paramount concept -1**

100 $\longrightarrow$ 225
Interest = 125 or 125%
50% + 50% + 50% of 50% = 125%

16.4; Suppose P = ₹100 and Amount A = ₹ 225

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

$$\text{or, } 225 = 100\left(1+\frac{r}{100}\right)^2$$

$$\text{or, } \frac{225}{100} = \left[1+\frac{r}{100}\right]^2$$

$$\text{or, } \frac{225}{100} = \left[1+\frac{r}{100}\right]^2$$

$$\text{or, } 1+\frac{r}{100} = \frac{15}{10}$$

$$\text{or, } \frac{100+r}{100} = \frac{15}{10}$$

or, 100 + r = 150
or, r = 50%

16.4; **Other method:-**

Let the sum be ₹ 1

$$1 \times \left(1+\frac{r}{100}\right)^2 = 2.25$$

$$\left(1+\frac{r}{100}\right)^2 = \frac{225}{100}$$

$$1 + \frac{r}{100} = \frac{15}{10}$$

$$\frac{r}{100} = \frac{5}{10}$$

r = 50%

17.1; **Paramount concept -1**

Interest = ₹ 5044

$$= \frac{5044}{32000} \times 100 = 15.7625\%$$

$\therefore$ rate of interest = 5%
Interest is compounded quarterly so rate of interest per year will be 20%

17.1; **Paramount concept -2**

When interest is compounded quarterly then time is made four times and rate is divided by 4.

$$A = P\left(1+\frac{r/4}{100}\right)^{t\times 3}$$

32000 + 5044

$$= 32000\left(1+\frac{r}{400}\right)^3 \text{ (36 months or 3 years.)}$$

$$37044 = 32000\left(1+\frac{r}{400}\right)^3$$

$$\frac{37044}{32000} = \left(1+\frac{r}{400}\right)^3$$

$$\left(\frac{9261}{8000}\right)^{\frac{1}{3}} = 1 + \frac{r}{400}$$

$$\frac{21}{20} = 1 + \frac{r}{400}$$

$$\frac{r}{400} = \frac{21}{20} - 1$$

$$\frac{r}{400} = \frac{1}{20}$$

$r = 20\%$

17.1; Let the rate of CI be R percent per. annum

$$\therefore \text{C.I.} = P\left[\left(1+\frac{R}{100}\right)^T - 1\right]$$

$$\Rightarrow 5044 = 32000\left[\left(1+\frac{R}{400}\right)^3 - 1\right]$$

[$\because$ Interest is compounded quarterly]

$R = \frac{r}{4}$, $T = 4t$

9 months means 3 quarters

$$\Rightarrow \frac{5044}{32000} = \left(1+\frac{R}{400}\right) - 1$$

$$\Rightarrow \left(1+\frac{r}{400}\right)^3 - 1 = \frac{1261}{8000}$$

$$\Rightarrow \left(1+\frac{r}{400}\right)^3 = 1 + \frac{1261}{8000}$$

$$\Rightarrow \left(1+\frac{r}{400}\right)^3 = \frac{9261}{8000} = \left(\frac{21}{20}\right)^3$$

$$\Rightarrow 1+\frac{r}{400} = \frac{21}{20} \Rightarrow \frac{r}{400} = \frac{21}{20} - 1 = \frac{1}{20}$$

$$\Rightarrow R = \frac{400}{20} = 20$$

17.1; **Paramount concept :- 3**

C.I. = 5044

P = 32000

So, A = 32000 + 5044 = 37044

$$\left(1+\frac{r}{4\times100}\right)^3 = \frac{37044}{32000}$$

$$\left(1+\frac{r}{400}\right)^3 = \frac{9261}{8000} \Rightarrow \left(\frac{21}{20}\right)^3$$

$$1 + \frac{r}{400} = \frac{21}{20}$$

$$\frac{r}{400} = \frac{1}{20}$$

$r = 20\%$

18.4; **Direct formula**

Difference between C.I. & S.I.

$$= \left(\frac{r}{100}\right)^t \times P$$

$$8 = \left(\frac{4}{100}\right)^2 \times P$$

$$8 = \frac{1}{25} \times \frac{1}{25} \times P$$

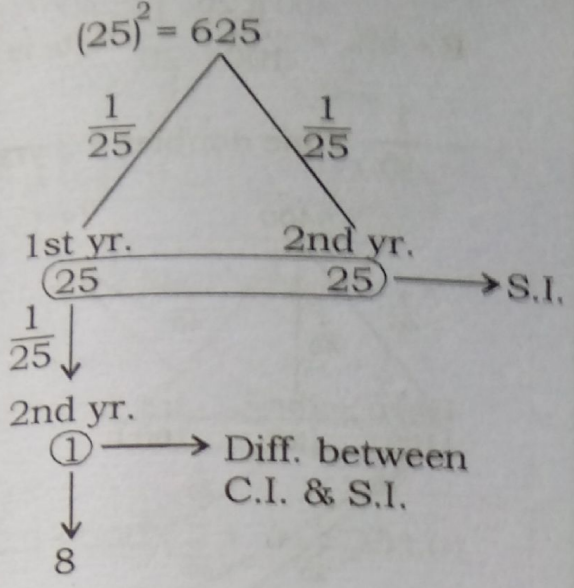
$P = 5000/-$

2nd Method:-

$$4\% = \frac{4}{100} = \frac{1}{25}$$

$(25)^t = P$ (assumed)

Note: the (denominator)^t is taken as P



But diff. given is 8/-
If $1 \rightarrow 8$
then $625 \rightarrow 625 \times 8 = 5000$

18.4; The sum

$$= 8\times\left(\frac{100}{4}\right)^2 = \frac{8\times100\times100}{4\times4} = ₹\,5000$$

18.4; **Paramount concept:-1**

Difference between C.I. & S.I. for 2 years at 4% = 8.16% - 8% = 0.16%

$\therefore$ 0.16% = ₹ 8

$$\text{Principal} = \frac{8}{0.16}\times100 = ₹\,5000$$

18.4; **Paramount concept:-2**

In case of 2 years

$$D = P\left(\frac{r}{100}\right)^2$$

$$8 = P\times\frac{4\times4}{100\times100}$$

$$P = 8\times625 = ₹5000$$

19.1; Here, we have

$$P\left(1+\frac{r}{100}\right)^3 = 8P \Rightarrow \left(1+\frac{r}{100}\right)^3 = 8 = 2^3$$

$$\Rightarrow 1+\frac{r}{100} = 2 \Rightarrow \frac{r}{100} = 2-1 = 1$$

$\Rightarrow$ r = 100%

19.1; **Paramount conpect -1**

1 → 2 → 4 → 8

1yr. 1yr. 1yr.

$\therefore$ Rate = 100%

19.1; **Paramount conpect - 2**

A = 8P

P = P

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

$$8P = P\left(1+\frac{R}{100}\right)^3$$

$$\frac{8P}{P} = \left(1+\frac{R}{100}\right)^3$$

$$(2)^{\frac{1}{3}} = 1+\frac{R}{100}$$

$$2 = 1+\frac{R}{100}$$

$$\frac{R}{100} = 1$$

R = 100%

19.1; **Other method** :-

Let the P be is ₹ 1

$$1\times\left(1+\frac{r}{100}\right)^3 = 8$$

$$1+\frac{r}{100} = 2-1$$

r = 100%