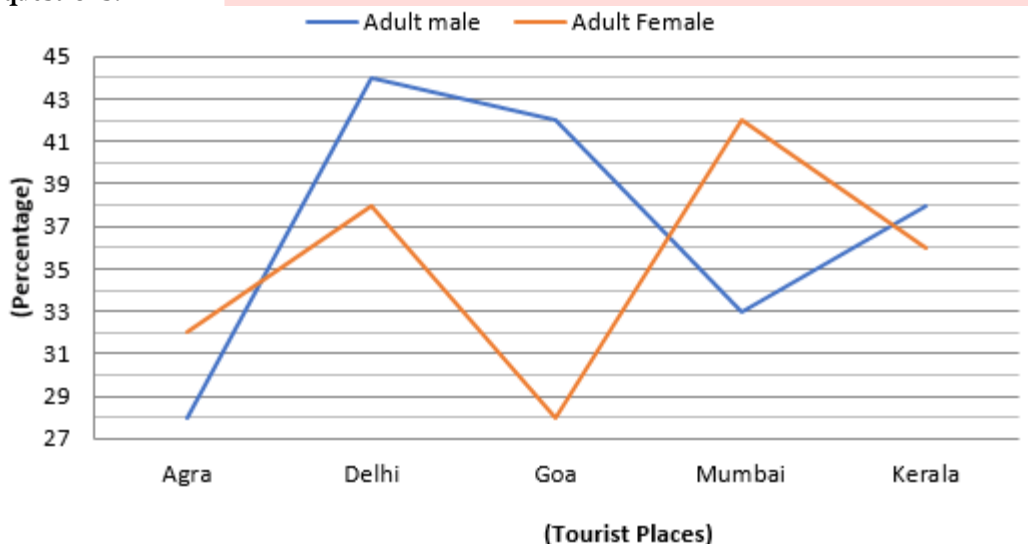


The given line graph shows percentage distribution of Adult male tourist and Adult female tourist out of total tourist visiting any of the five different tourist places in 2017 in India. Read data carefully and answer the following questions:



Note: Total number of tourist at each place = Adult male tourists + Adult female tourists + Child Tourists.

1. If total Adult females tourists who visited Goa is 840 and total child tourists who visited Agra is 680 then, find difference between total child tourists who visited Goa and total Adult female tourists who visited Agra ?

- A. 346
- B. 354
- C. 356
- D. 358
- E. 360

Answer: C

Solution:

Total number of child tourist who visited Goa in 2017

$$= \frac{840}{28} \times [100 - (42 + 28)]$$

$$= 900$$

Total number of Adult female tourist visit Agra

$$= \frac{680}{40} \times 32$$

$$= 544$$

$$\text{Required difference} = 900 - 544 = 356$$

2. Total number of tourists visiting Mumbai is $66\frac{2}{3}\%$ more than total number of tourists visiting Delhi. Find ratio between total Adult male tourists visiting Delhi to Total Adult female tourists visiting Mumbai ?

- A. 21 : 37
- B. 22 : 35
- C. 35 : 22
- D. 22 : 37
- E. 11 : 25

Answer: B

Solution:

Let total number of tourist visiting Delhi is 3x and Mumbai is 5x

$$\text{Required ratio} = \frac{3x \times \frac{44}{100}}{5x \times \frac{42}{100}}$$

$$= 22 : 35$$

3. If ratio between total number of tourists visiting Delhi and Kerala is 11 : 15, and difference between total Adult male tourists visiting Delhi and total adult male tourists visiting Kerala is 430, then find total number of tourists visiting Kerala?

- A. 6000

- B. 7600
- C. 7800
- D. 7500
- E. 9000

Answer: D

Solution:

Let total number of tourist visiting Delhi is $11x$ and Kerala is $15x$

$$15x \times \frac{38}{100} - 11x \times \frac{44}{100} = 430$$

$$\frac{570x - 484x}{100} = 430$$

$$86x = 43000$$

$$x = \frac{43000}{86}$$

$$x = 500$$

$$\begin{aligned} \text{Total number of tourist visiting Kerala} &= 500 \times 15 \\ &= 7500 \end{aligned}$$

4. If ratio between total number of tourists visiting Agra to total number of tourists visiting Goa is 7 : 11 then find total Adult female tourists visiting Goa are what percent more or less than total Adult female tourists visiting Agra ?

- A. 32.5%
- B. 35.5%
- C. 38.5%
- D. 39.5%
- E. 37.5%

Answer: E

Solution:

Let total number of tourist visiting Agra is

$7x$ and total number of tourist visiting Goa is $11x$

Total Adult female tourist visit Goa

$$= 11x \times \frac{28}{100}$$

$$= \frac{77x}{25}$$

Total number of female tourist visit Agra

$$= 7x \times \frac{32}{100}$$

$$= \frac{56x}{25}$$

$$\text{Required \%} = \frac{\frac{77x}{25} - \frac{56x}{25}}{\frac{56x}{25}} \times 100$$

$$= \frac{21x}{56x} \times 100$$

$$= 37.5\%$$

5. Total number of tourists visiting Kerala is 20% less than total number of tourists visiting Agra. Number of child tourists visiting Agra are what percent of total number of child tourists visiting Kerala ?

- A. $152 \frac{11}{13} \%$
- B. $149 \frac{11}{13} \%$
- C. $155 \frac{11}{13} \%$
- D. $192 \frac{4}{13} \%$

E. $157\frac{11}{13}\%$

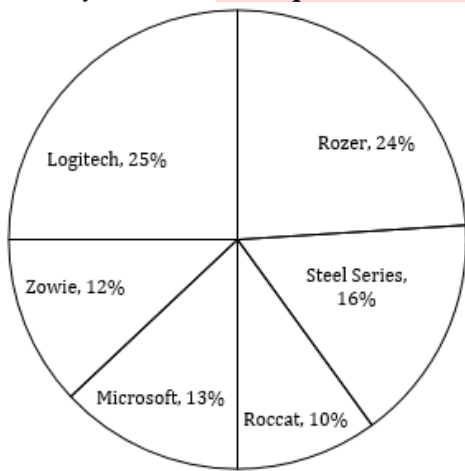
Answer: D

Solution:

Let total tourist visit Kerala is $4x$ and total tourist visit Agra $5x$

$$\begin{aligned} \text{Required \%} &= \frac{5x \times [100 - (32 + 28)]}{4x \times [100 - (38 + 36)]} \times 100 \\ &= \frac{5x \times 40}{4x \times 26} \times 100 \\ &= 192\frac{4}{13}\% \end{aligned}$$

Given below pie chart show percentage distribution of total mouse manufactured by six companies in 2016. Read chart carefully and answer the question:



Note:

I. Ratio between total mouse manufactured by these six companies in 2016 to total mouse manufactured in 2017 is 4 : 7

II. Percentage distribution for both the years remain same for all six companies.

6. If difference between mouse manufactured by Logitech & Roccat together in 2016 and mouse manufactured by Rozer & Zowie together in 2017 is 4480 then find total number of mouse manufactured by Microsoft & Steel Series in 2017?

A. 8120

B. 8020

C. 8220

D. 8320

E. 8420

Answer: A

Solution:

Let total number of mouse manufactured by all six company in 2016 is $4x$ and in 2017 is $7x$

ATQ -

$$7x \times \frac{(24 + 12)}{100} - 4x \times \frac{(25 + 10)}{100} = 4480$$

$$\frac{63x}{25} - \frac{28x}{20} = 4480$$

$$112x = 4480 \times 100$$

$$x = \frac{4480 \times 100}{112}$$

$$x = 4000$$

Total number of mouse manufactured by Microsoft & Steel Series in 2017

$$\begin{aligned} &= (4000 \times 7) \times \frac{(13 + 16)}{100} \\ &= 8120 \end{aligned}$$

7. Find ratio between total number of mouse manufactured by Rozer, Steel Series and Zowie together in 2016 to total number of mouse manufactured by Logitech & Microsoft in 2017?

- A. 127 : 133
- B. 133 : 103
- C. 103 : 133
- D. 133 : 104
- E. 104 : 133

Answer: E

Solution:

ATQ

Let total number of mouse manufactured by all six company in 2016 is $4x$ and in 2017 is $7x$

$$\begin{aligned} \text{Required ratio} &= \frac{4x \times \left(\frac{24}{100} + \frac{16}{100} + \frac{12}{100} \right)}{7x \times \left(\frac{25}{100} + \frac{13}{100} \right)} \\ &= \frac{4x \times 52}{7x \times 38} \\ &= 104 : 133 \end{aligned}$$

8. If ratio between wireless mouse to wired mouse manufactured by Roccat is 2 : 3 for both the years and difference between wireless mouse manufactured by Roccat in both the years is 480. Find total number of wire mouse manufactured by Roccat in both year?

- A. 2540
- B. 2640
- C. 2620
- D. 2720
- E. 2820

Answer: B

Solution:

ATQ

Let total number of mouse manufactured by all six company in 2016 is $4x$ and in 2017 is $7x$

$$\begin{aligned} 7x \times \frac{10}{100} \times \frac{2}{5} - 4x \times \frac{10}{100} \times \frac{2}{5} &= 480 \\ \frac{14x}{50} - \frac{8x}{50} &= 480 \\ x &= \frac{480 \times 50}{6} \\ X &= 4000 \end{aligned}$$

X= 4000

Total number of wire mouse manufactured by Roccat in both years

$$\begin{aligned} &= (4 \times 4000) \times \frac{10}{100} \times \frac{3}{5} + (7 \times 4000) \times \frac{10}{100} \times \frac{3}{5} \\ &= 960 + 1680 \\ &= 2640 \end{aligned}$$

9. Total number of mouse manufactured by Zowie & Roccat in 2017 is what percent more or less than total number of mouse manufactured by Rozer & Steel Series in 2016?

- A. $4\frac{3}{4}\%$
- B. $3\frac{3}{4}\%$
- C. $3\frac{2}{3}\%$
- D. $5\frac{2}{4}\%$

E. $6\frac{3}{4}\%$

Answer: B

Solution:

ATQ

Let total number of mouse manufactured by all six company in 2016 is $4x$ and in 2017 is $7x$

$$\begin{aligned} \text{Required \%} &= \frac{4x \times (24+16)}{100} - \frac{7x \times (12+10)}{7x \times \frac{(12+10)}{100}} \times 100 \\ &= \frac{160x - 154x}{160x} \times 100 \\ &= 3\frac{3}{4}\% \end{aligned}$$

10. If total mouse manufactured by Rozer and Steel Series in 2017 is 11200. Find average number of mouse manufactured by Logitech, Roccat and Microsoft in 2016?

A. 2520

B. 2540

C. 2560

D. 2580

E. 3060

Answer: C

Solution:

ATQ

Let total number of mouse manufactured by all the six companies in 2017 is $7x$

ATQ -

$$\frac{7x \times (24 + 16)}{100} = 11200$$

$$\frac{14x}{5} = 11200$$

$$x = 4000$$

Required average

$$= \frac{(4000 \times 4) \times \left(\frac{25 + 10 + 13}{100}\right)}{3}$$

$$= \frac{7680}{3}$$

$$= 2560$$

Study the following information carefully to answer the given questions

Candidates who appeared and passed in the Test from 4 different college in eight different years

Year	W		X		Y		Z	
	Appeared	Passed	Appeared	Passed	Appeared	Passed	Appeared	Passed
2009	110	78	235	167	325	284	360	220
2010	320	120	410	258	456	400	417	310
2011	256	200	212	120	350	312	300	144
2012	327	296	324	273	402	217	390	298
2013	430	212	510	392	500	250	475	325
2014	208	115	200	100	225	125	235	176
2015	450	325	420	353	479	379	410	321
2016	230	174	265	201	270	160	320	216

11. Number of candidate who passed in the exam from college Y in the year 2010 is approximately what percent of no of candidate who appeared from college W in 2015 ?

- A.89%
- B.75%
- C.92%
- D.67%
- E.None of these

Answer: A

Solution:

$$Y - 2010 = 400 \times 100 / 450 = 88.89 = 89\%$$

12. What was the respective ratio between the no of candidates who appeared from college Z and the number of candidate who passed in the exam from X in the year 2011 ?

- A.2:3
- B.5:2
- C.4:3
- D.5:3
- E.None of these

Answer: B

Solution:

$$Z \text{ 2011} = 300$$

$$X \text{ 2011} = 120$$

$$Z:X = 300:120 = 30:12 = 5:2$$

13. In which year was the difference between the no of candidate who appeared and passed in the exam from college Y third lowest ?

- A.2015
- B.2012
- C.2009
- D.2010
- E.None of these

Answer: D

Solution:

$$2009 = 325 - 284 = 41$$

$$2010 = 456 - 400 = 56$$

$$2011 = 350 - 312 = 38$$

$$2012 = 402 - 217 = 185$$

$$2013 = 500 - 250 = 250$$

$$2014 = 225 - 125 = 100$$

$$2015 = 479 - 379 = 100$$

$$2016 = 270 - 160 = 110$$

14. What was the total number of students failed in the exam from College Z in the year 2012 to 2016 ?

- A.494
- B.503
- C.480
- D.472
- E.None of these

Answer: A

Solution:

$$390 - 298 = 92$$

$$475 - 325 = 150$$

$$235 - 176 = 59$$

$$410 - 321 = 89$$

$$320 - 216 = 104$$

$$\text{Total} = 92 + 150 + 59 + 89 + 104 = 494$$

15. In which year % of passed students from college W is lesser than the previous year ?

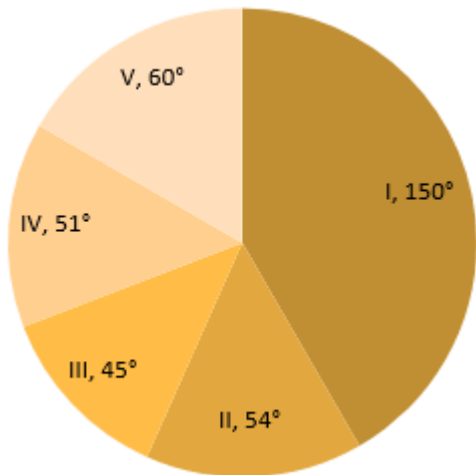
- A.2012
- B.2014
- C.2013
- D.2016
- E.2011

Answer: C

Solution:

2009	110	78	70.9
2010	320	120	37.5
2011	256	200	78.1
2012	327	296	90.52
2013	430	212	49.3
2014	208	115	55.3
2015	450	325	72.2
2016	230	174	75.7

Given pie chart shows the degree wise distribution of population of city A according to their employments.



- I. Private sector
- II. Public sector
- III. Corporate sector
- IV. self-employed
- V. Unemployed

16. Male and female employees of corporate sector are in the ratio of 4 : 5 and female employees of public sector is 20% more than the males employees of corporate sector. What is the ratio of male and female employees of public sector.

- A. 4 : 5
- B. 1 : 2
- C. 3 : 2
- D. 2 : 3
- E. 5 : 4

Answer: E
Solution:

Let total employees in corporate sector = $45x$

So male employees = $\frac{4}{9} \times 45x = 20x$

So female employees in public sector

$$= \frac{20x}{100} \times 120 = 24x$$

Total employees in public sector = $\frac{45x}{45} \times 54 = 54x$

$$\text{Required ratio} = \frac{54x - 24x}{24x} = \frac{5}{4} = 5 : 4$$

17. If female employees in private sector is 40% and male employees in private sector is 28800 then find the unemployed population of city.

- A. 12000
- B. 19200
- C. 13500
- D. 12500
- E. 11500

Answer: B
Solution:

Total employees in Private sector

$$= \frac{28800}{100 - 40} \times 100 = 48000$$

$$\text{Unemployed population} = \frac{48000}{150} \times 60 = 19200$$

18. 20% of public sector employees got transfer in another city. Now, remaining public-sector employee population is what percent less than the unemployed population of the city A.

- A. 20%
- B. 16%
- C. 28%
- D. 32%
- E. 22%

Answer: C

Solution:

$$\begin{aligned} \text{Let total population of city} &= 360x \\ \text{Employees in public sector} &= 54x \\ \text{Employees in public sector after transfer} \\ &= \frac{54x \times 80}{100} = 43.2x \\ \text{Required\%} &= \frac{(60x - 43.2x)}{60x} \times 100 = 28\% \end{aligned}$$

19. If total population of city A is 36000, then employees in corporate sector and self employed together is how much less than the private sector employees

- A. 5600
- B. 4500
- C. 4700
- D. 5400
- E. 4200

Answer: D

Solution:

$$\begin{aligned} \text{Total population of city} &= 36000 \\ \text{Private sector employee} &= \frac{36000 \times 150}{360} = 15000 \\ \text{Employees in self and corporate sector} \\ &= \frac{36000 \times (51 + 45)}{360} = 9600 \\ \text{Difference} &= 15000 - 9600 = 5400 \end{aligned}$$

20. Male and female employees in self employed and public sector are in the ratio 1 : 4 and 2 : 3 respectively. If total male and female population of city are in the ratio of 4 : 5 then, find female population in self employed and public sector together is what percent of total male population of city.

- A. 45.75%
- B. 45.24%
- C. 43.15%
- D. 46.50%
- E. 44.50%

Answer: A

Solution:

$$\begin{aligned} \text{Let total population of city} &= 360x \\ \text{Total male} &\Rightarrow \frac{4}{9} \times 360x = 160x \\ \text{Females who are self-employed} &= \frac{4}{5} \times 51x = 40.8x \\ \text{Female in public employees} &= \frac{3}{5} \times 54x = 32.4x \\ \text{Required \%} &= \frac{(40.8x + 32.4x) \times 100}{160x} = 45.75\% \end{aligned}$$

Directions: In each of the following questions, a question is followed by two or three statements. Read all the statements and find that which statements are required to answer the question and answer accordingly.

21. How much time will Train P take to cross Train Q (from the moment they meet) running in opposite directions (towards each other) ?

statement I: The respective ratio of speeds of Train P and Train Q is 3 : 4. The sum of the lengths of Train P and Train Q is 700 metre.

statement II: Train P can cross a signal pole in 12 seconds. It can cross 600 metre long station in 25 seconds.

- A) Only I
- B) Both I and II
- C) Only II
- D) Either I or II
- E) Neither I nor II

Option E

Solution:

From statement I:

Relative speed = $3x + 4x = 7x$ units

Sum of Length of trains = 700 m

Required time = $700/7x =$ no result

From statement II:

speed of train P = $x/12 = (x + 600)/25$

$\Rightarrow 25x = 12x + 7200$

$\Rightarrow 13x = 7200$

$\Rightarrow x = 7200/13$

22. What is the area the isosceles triangle A ?

statement I: The length of the side opposite the single largest angle in the triangle is 8cm.

statement II: The perimeter of triangle X is 20cm.

A) Only II

B) Only I

C) Neither I nor II

D) Both I and II

E) Either I or II

Option D

Solution:

In a triangle, the side opposite the largest angle will be the longest. Correspondingly, the side opposite the smallest angle will be the shortest.

23. What is the ratio between the two numbers a and b ?

statement I: 50% of a is 25% of 80.

statement II: 20% of b is 10% of 100.

A) Both I and II

B) Only I

C) Only II

D) Either I or II

E) Neither I nor II

Option A

Solution:

Both I and II required together.

24. What is the age of R, in a group of P,Q, R,S and T whose average age is 45 years?

statement I: Average of the age of S and T is 47 years?

statement II: Average of the age of P and Q is 53 years?

A) Only II

B) Only I

C) Both I and II

D) Neither I nor II

E) Either I or II

Option C

Solution:

From statement I and II:

$P + Q + R + S + T = 5 * 45 = 225$ years ———(1)

$P + Q = 106$ years ———(2)

$S + T = 94$ years ———(3)

From (1), (2) and (3), we get

We get the age of R .

25. How many people are there in the aeroplane ?

statement I: There are 45 females in the aeroplane.

statement II: 30% of passengers are males and 10% are children.

A) Either I or II

B) Only II

C) Only I

D) Neither I nor II

E) Both I and II

Option E

Solution:

From statements I and II:

Number of female passengers = 45

There are 60% of the female in the aeroplane.

Total no. of passengers = $45 \times (100/60) = 75$

26. The ratio between the present ages of the Rohit and Rina is 1 : 3. Find the present age of the Rina.

statement I: Difference between the present ages of the Pooja and Rohit is 22 years.

statement II: The present age of Pooja is 4 years less than thrice the present age of Rohit.

statement III: Difference between the present ages of the Rina and Rohit is 26 years.

A) Only III

B) Either I and II together or III alone.

C) All are together

D) Only I and II

E) None of the statements

Option B

Solution:

From statement III: Age of Rina = $26/2 \times 3 = 39$ years

From statement I and II:

Rina = 3Rohit, Pooja – Rohit = 22 and 3Rohit – Pooja = 4

On solving, we get Rina = 39 years

27. What are the marks obtained by Sushil in Physics?

statement I: Marks obtained in Biology is as much more than that in Chemistry as the marks obtained in Chemistry is more than that in Physics.

statement II: The average marks obtained by Sushil in Physics, Biology and Chemistry are 65.

statement III: Marks obtained by Sushil in Biology is 6 more than that obtained in Physics.

A) None of these

B) Only I and II

C) All statements together

D) Only II and III

E) Only I

Option C

Solution:

From statement I: Biology – Chemistry = Chemistry – Physics

From statement II: Physics + Chemistry + Biology = $3 \times 65 = 195$

From statement III: Biology = Physics + 6

From all the above equations, Physics = 62

28. What is the area of the hall?

statement I: Total cost of flooring the hall is Rs. 14,500.

statement II: Labour cost of flooring the hall is Rs. 3000.

statement III: Material cost of flooring per sq. metre is Rs. 150.

A) All statements together

B) Only II and III

C) Only I and II

D) None of these

E) Only III

Option A

Solution:

Let the area of the hall be $x \text{ m}^2$.

Then, total material cost = Rs. $150x$

Labour cost = Rs. 3000

Therefore, Total cost = $150x + 3000 = 14500$

From this we get the value of x .

Hence, all the three statements are required.

29. A, B, C, D and E are five friends. Their mean age is 18. What is the age of C?

Statement I: A's age is 18

Statement II: B's age is 2 years less than E and E's age is 6 years less than D.

Statement III: C's age is 6 years more than B's age and 4 years more than E's age.

A) Only III

B) Neither I and II nor III

C) Only I and III

- D) All statements together
 E) Either I and III or II alone

Option D

Solution:

$$A+B+C+D+E = 90$$

$$\text{From statement I : } B+C+D+E = 72$$

$$\text{From statement II: } B = E - 2 \text{ and } E = D - 6$$

$$\text{so, } D = E + 6$$

$$\text{From statement III: } D = B + 6 \text{ and } D = E + 4$$

Combining all three statements, we get the age of C.

30. What is the area of the right angled triangle ?

statement I: The perimeter of the triangle is 5 times of the base.

statement II: The one of the angles of the triangle is 60deg.

statement III: The length of hypotenuse is 4 cm.

- A) Neither I and III nor II
 B) Either I and II or III
 C) All statements together
 D) Only II and III
 E) Only I and III

Option D

Solution:

From statement II and III are sufficient to answer the question.

Directions(31-35): In each of the following questions, a question is followed by two statements . Read all the statements and find that which statements are required to answer the question and answer accordingly.

31. There are two cylindrical rollers – bigger and smaller. How many rotations will the bigger roller take to flatten a stretch of land(X)?

The respective ratio of the radii of the bigger and the smaller roller is 7:3. Both the rollers are of the same length.

II. The smaller takes 63 rotations to flatten the stretch of land(X).

- A) Either I or II
 B) Neither I nor II
 C) Only II
 D) Only I
 E) Both are required

Option E

Solution:

From both the statements,

$$\text{Radius of the larger roller} = 7x \text{ units}$$

$$\text{Radius of the smaller roller} = 3x \text{ units}$$

$$\text{Area flattened by smaller roller in 63 rotations} = 2\pi \cdot 3x \cdot 1 \cdot 63$$

$$\text{Therefore, } 6 \cdot 63\pi \cdot r \cdot 1 = 2\pi \cdot 7x \cdot 1 \cdot n$$

$$\Rightarrow n = 27$$

32. What was the total compound interest on a sum after three years?

I. The interest after one year was Rs. 100 and the sum was Rs. 1000.

II. The difference between simple interest and compound interest on a sum of Rs. 1000 at the end of two years was Rs. 10.

- A) Only II
 B) Only I
 C) Either I or II
 D) Neither I nor II
 E) Both I and II

Option C

Solution:

$$\text{From statement I: } r = (100 \cdot 100) / 1000 = 10\%$$

$$P = \text{Rs. } 1000, r = 10\%, t = 3 \text{ years}$$

Hence, CI can be described.

$$\text{From statement II: } SI = (1000 \cdot r \cdot 2) / 100 = 20r$$

$$CI = 1000[(1 + (r/100)^2) - 1] \text{ Therefore, } CI - SI = 1000[(1 + (r/100)^2) - 1] - 20r$$

$$\Rightarrow r = 10$$

Hence , CI can be determined.

33. What is the marked price of the pen ?

I. The marked price of the pen is 20% above the cost price of the pen.

II. When a discount of 25% is given on the marked price of the pen, the loss incurred is 10%. The cost price of the pen is Rs.300.

- A) Both I and II
- B) Only I
- C) Neither I nor II
- D) Only II
- E) Either I or II

Option D

Solution:

From statement I: no result comes.

From statement II: $x \times (75/100) = (300 \times 90)/100$

$\Rightarrow x = 27000/75$

34. In how many days, men A , B and C together can finish the same piece of work

I. A and B can together finish the same piece of work in 6 days. B and C together can finish the same piece of work in 12 days. C and A can finish the same piece of work in 10 days .

II. The time taken by A alone to finish the same piece of work is 24 days less than time taken by C alone to finish the same piece of work.

- A) Only I
- B) Either I or II
- C) Neither I nor II
- D) Only II
- E) Both I and II

Option A

Solution:

From statement I: $2(A+B+C) = (1/6) + (1/12) + (1/10)$

From this we can find (A + B + C) 's one day's of work .

From statement II: No such result can be concluded.

35. In a certain village is losing 12% of its water supply each day because of a burst water pipe, then what is the loss in rupees per day?

I. The cost to the village for every 24000 gallons of water lost is Rs. 25.

II. The daily water to the village is 700 m gallon.

- A) Neither I nor II
- B) Either I or II
- C) Only II
- D)Both I and II
- E) None of these

Option D

Solution:

From statement I: We can find the loss in rupees .

From statement II: Loss of water supply = 700 million gallon * 12%

Both the statements are required to answer the question.