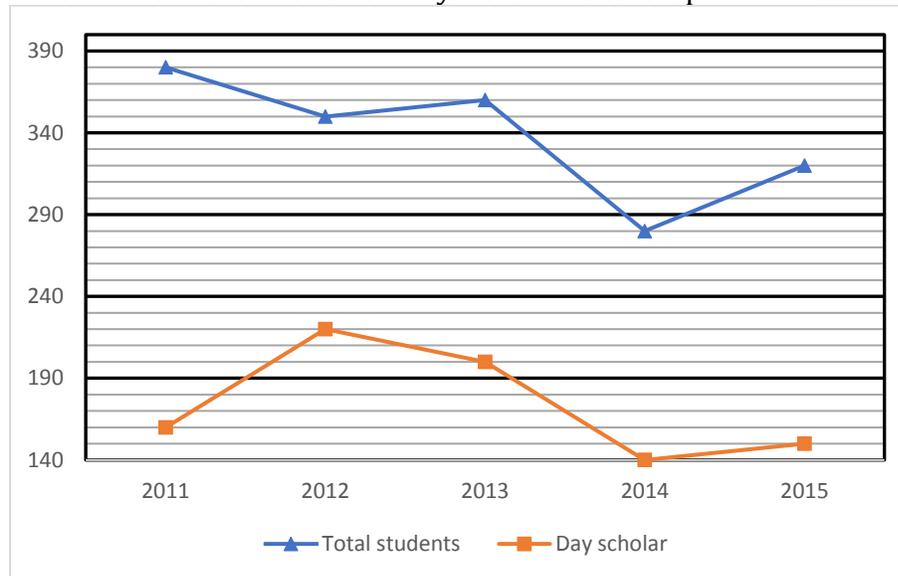


Quiz Date: 31st July 2020

Direction (1-5) : Given below line graph shows total number of students (Hosteler + Day scholar) in five different years in a college 'A', also shows total number of Day scholar students. Read the data carefully and answer the questions.



Q1. $\frac{9}{11}$ th of total hosteler in 2011 and $\frac{5}{7}$ th of total hosteler in 2014 appeared in exam. If 60% of appeared hosteler in exam in 2011 & 72% of appeared hosteler in exam in 2014 passed the exam, then find ratio of total day scholar in 2015 to total hosteler passed in 2011 & 2014 together?

- (a) 5 : 7
- (b) 5 : 9
- (c) 5 : 8
- (d) 5 : 6
- (e) 5 : 4

Q2. In 2016 in college A total students are 25% more than previous year, and total students in college 'B' in 2016 are 40% more than that of total students in college 'A' in same year. If sum of day scholar in the both colleges are 540 and total hostler in college 'A' are 20 more than total hostler in college 'B' and each hostler annual fee in college 'B' in the year 2016 is Rs. 12000, then find total amount hostler paid in college 'B' (in Rs.)?

- (a) 24,00,000
- (b) 22,00,000
- (c) 20,00,000
- (d) 30,00,000
- (e) None of these

Q3. Sum of total day scholar in the year 2015, 2016 & 2017 is 600 and total hostler in the year 2015 & 2017 together is 100 more than total hostler in the year 2016. If total day scholar in 2016, 2017 is 60% & 70% of total students in college, then find total hostler in 2017 is what percent less than total hostler in 2016?

- (a) 41.25%
- (b) 43.75%
- (c) 43.25%
- (d) 44.75%
- (e) 42.25%

Q4. In college 'B' in the year 2012 40% are day scholar and total female day scholar in that year in college 'B' is 60% of total hostler in college 'A' in the year 2012. If total female day scholar in 2012 is 7.5% of total students in college 'B' and 25% of total hostler are female, then find difference between total male hostler and total male day scholar in college 'B' in the year 2012?

- (a) 120
- (b) 110
- (c) 105
- (d) 140
- (e) 130

Q5. Average number of hostlers in the given years in college are what percent more than total hostler in the year 2013?

- (a) 1.5%
- (b) 2%
- (c) 1%
- (d) 2.5%
- (e) 3.5%

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Q6. Ram and Shyam are travelling from point A to B, which are 60 km apart. Travelling at a certain speed ram takes one hour more than Shyam to reach point B. If Ram doubles his speed he will take 30 minutes less than Shyam to reach point B. At what speed was Ram driving from point A to B ?

- (a) 15 kmph
- (b) 35 kmph
- (c) 30 kmph
- (d) 25 kmph
- (e) 20 kmph

Q7. Sanjay started his journey to a certain place from home at 7 a.m. by bike. After going a certain distance, the bike went out of order. Then he rested for 35 minutes and come back to house walking all the way and come back to home at 1 p.m. If the bike runs at 10 kmph and his walking speed is 1 km/hr, then the distance covered on bike is :

- (a) $4\frac{61}{66}$ km
- (b) $4\frac{65}{66}$ km
- (c) 5 km
- (d) $4\frac{14}{19}$ km
- (e) 4 km

Q8. Soniya and Priyanka started from Amethi and Bellari for Bellari and Amethi respectively , which are 645 km apart. They meet after 15 hours. After their meeting, Sonia increased her speed by 3 km/h and Priyanka reduced her speed by 3 km/h, they arrived at Bellari and Amethi respectively at the same time. What is their initial speeds ?

- (a) 24 km/h and 30 km/h
- (b) 25 km/h and 18 km/h
- (c) 18 km/h and 21 km/h
- (d) 20 km/h and 23 km/h
- (e) None of these

Q9. X started from a point A towards point B. After 2 hours. Y started from B towards A. By the time X travelled one-fifth of the total distance, Y had also travelled the same. If Y's speed is thrice that of X's speed, find the difference in the times (in hours) taken by X and Y to reach their destinations.

- (a) 10
- (b) 20
- (c) 15
- (d) 25
- (e) none of these

Q10. In a journey of 48 km performed by tonga, richshaw and cycle in that order, the distance covered by the three mediums in that order are in the ratio of 8 : 1 : 3 and charges per kilometre in that order are in the ratio of 8 : 1 : 4. If the tonga charges 24 paise per kilometre, the total cost of the journey is

- (a) Rs. 9.24
- (b) Rs. 10
- (c) Rs. 12
- (d) Rs. 28
- (e) Rs 15.24

Directions (11-15): What approximate value should come in place of question mark (?) in the following question?

Note:- (you are not expected to calculate the exact value.)

$$Q11. 23.99 \times 26.003 + \frac{\sqrt{48.97 \times 13.05}}{90.98} = 4.97 \times ?^3$$

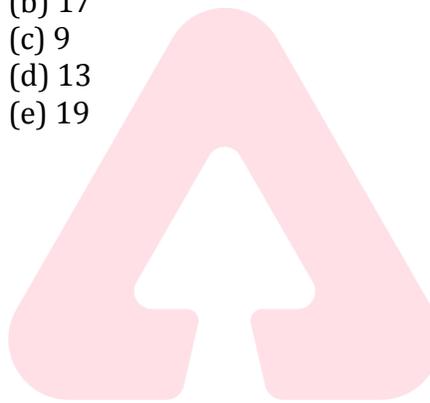
- (a) 1
- (b) 17
- (c) 5
- (d) 12
- (e) 8

$$Q12. 109.07\sqrt{?} - \frac{61}{21.02} \times ? = 47.96\sqrt{?}$$

- (a) 441
- (b) 169
- (c) 250
- (d) 121
- (e) 324

$$Q13. 1332.89 + 171.928 + 17.01 + ?^2 = 1690.87$$

- (a) 27
- (b) 17
- (c) 9
- (d) 13
- (e) 19



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$$Q14. 150.09\% \text{ of } 20 + \frac{322.9}{17.02} + \sqrt{?} = (8.96)^2$$

- (a) 984
- (b) 1024
- (c) 1360
- (d) 1225
- (e) 674

$$Q15. 56.08\% \text{ of } 149.92 + \sqrt{28.02 \times 6.98} - 11\frac{1}{9}\% \text{ of } 998.9 = ?$$

- (a) 17
- (b) -13
- (c) 8
- (d) -16
- (e) 22

Solutions

S1. Ans(d)

Sol.

$$\text{Total Hosteler passed in 2011} = (380 - 160) \times \frac{9}{11} \times \frac{60}{100} = 108$$

$$\text{Total Hosteler passed in 2014} = (280 - 140) \times \frac{5}{7} \times \frac{72}{100} = 72$$

$$\text{Total hosteler passed in 2011 \& 2014} = 108 + 72 = 180$$

$$\text{Required ratio} = \frac{150}{180} = 5 : 6$$

S2. Ans(a)

Sol.

$$\text{Total students in college 'A' in 2016} = 320 \times \frac{125}{100} = 400$$

$$\text{Total students in college 'B' in 2016} = 400 \times \frac{140}{100} = 560$$

Let total hostler in college B be x then total hostler in college A=(x+20)

ATQ

$$400 - (x + 20) + 560 - x = 540$$

$$400 = 2x$$

$$x = 200$$

$$\text{Required amount} = 200 \times 12000 = 24,00,000$$

S3. Ans(b)

Sol.

Let total students in college in 2016 & 2017 be 10a & 10b respectively.

ATQ

$$6a + 7b + 150 = 600$$

$$\text{While, } 6a + 7b = 450 \text{----- (i)}$$

$$170 + 3b = 4a + 100$$

$$4a - 3b = 70 \text{----- (ii)}$$

From (i) & (ii) we get, a = 40, b = 30

$$\text{Total hostler in 2017} = 300 \times \frac{30}{100} = 90$$

$$\text{Total hostler in 2016} = 400 \times \frac{40}{100} = 160$$

$$\begin{aligned} \text{Required percentage} &= \frac{160-90}{160} \times 100 \\ &= 43.75\% \end{aligned}$$

S4. Ans(e)

Sol.

$$\text{Total female day scholar in college 'B' in the year 2012} = (350 - 220) \times \frac{60}{100} = 78$$

$$\text{Total students in college 'B'} = 78 \times \frac{100}{7.5} = 1040$$

$$\text{Total male day scholar in college 'B'} = 1040 \times \frac{40}{100} - 78 = 338$$

$$\text{Total male hostler in college 'B'} = 1040 \times \frac{60}{100} \times \frac{75}{100} = 468$$

$$\text{Required difference} = 468 - 338 = 130$$

S5. Ans(d)

Sol.

$$\text{Total hostler in 2011} = (380 - 160) = 220$$

$$\text{Total hostler in 2012} = (350 - 220) = 130$$

$$\text{Total hostler in 2013} = (360 - 200) = 160$$

$$\text{Total hostler in 2014} = (280 - 140) = 140$$

$$\text{Total hostler in 2015} = (320 - 150) = 170$$

$$\text{Average number of hostlers in the given years in college} = \frac{(220+130+160+140+170)}{5}$$

$$= \frac{820}{5} = 164$$

$$\text{Required percentage} = \frac{164-160}{160} \times 100$$

$$= 2.5\%$$



S6. Ans.(e)

Sol.

$$AB = 60 \text{ km}$$

$$\text{Let Ram's speed} = x \text{ kmph}$$

$$\text{Let Shyam's speed} = y \text{ kmph}$$

$$\frac{60}{x} - \frac{60}{y} = 1 \dots\dots\dots(i)$$

$$\frac{60}{y} - \frac{60}{2x} = \frac{1}{2} \dots\dots\dots(ii)$$

From (i) and (ii)

$$x = 20 \text{ kmph}$$

S7. Ans (a)

$$\text{Sol. Time taken} = 360 - 35 = 325 \text{ min or } \frac{65}{12} \text{ h}$$

$$\text{Let the distance after which bike went out of order} = x \text{ km}$$

$$\frac{x}{10} + \frac{x}{1} = \frac{65}{12}, x = 4 \frac{61}{66} \text{ km}$$

S8. Ans (d)

Sol. let speed of Soniya & Priyanka be x kmph & y kmph respectively

$$x + y = \frac{645}{15} = 43 \text{ kmph} \dots\dots\dots (i)$$

distance covered in 15 hours

by Soniya $15x$ km & Priyanka = $15y$ km

$$\text{ATQ, } \frac{645-15x}{x+3} = \frac{645-15y}{y-3}$$

$$40x + 258 = 46y \dots\dots\dots(ii)$$

Using (i) & (ii)

$$x = 20 \text{ kmph} \text{ \& } y = 23 \text{ kmph}$$

S9. Ans.(a)

Sol. Let the speed of X be x kmph. Distance travelled by X in 2 hours = $2x$ km.

Suppose X takes t hours to travel $\frac{1^{th}}{5}$ of the distance AB.

Y would take $(t-2)$ hours to travel $\frac{1^{th}}{5}$ of the distance AB.

As Y's speed is thrice that of X's speed so it will take $\frac{1}{3}$ rd time taken by X

$$\frac{t-2}{t} = \frac{1}{3}$$

$$t = 3 \text{ hrs}$$

$\frac{1^{th}}{5}$ of the distance AB = $3x$ km.

$$AB = 15x \text{ km}$$

$$\text{Time taken by X to cover } 15x \text{ km} = \frac{15x}{x} = 15 \text{ hours}$$

$$\text{Time taken by Y to cover } 15x \text{ km} = \frac{15x}{3x} = 5 \text{ hours.}$$

\therefore Difference in the times = 10 hours.

S10. Ans.(a)

Sol.

$$\text{Journey covered by Tonga} = 48 \times \frac{8}{12} = 32 \text{ km}$$

$$\text{Journey covered by Rickshaw} = 48 \times \frac{1}{12} = 4 \text{ km}$$

$$\text{Journey covered by Cycle} = 48 \times \frac{3}{12} = 12 \text{ km}$$

$$\text{Charge in Tonga per kilometer} = 24 \text{ paise}$$

$$\text{Charge in Rickshaw per kilometer} = \frac{24}{8} \times 1 = 3 \text{ paise}$$

$$\text{Charge in Tonga per kilometer} = \frac{24}{8} \times 4 = 12 \text{ paise}$$

$$\text{Total cost} = 32 \times 24 + 4 \times 3 + 12 \times 12$$

$$= 924 \text{ paise}$$

$$= \text{Rs. } 9.24$$

S11. Ans.(c)

Sol.

$$23.99 \times 26.003 + \frac{\sqrt{48.97} \times 13.05}{90.98} = 4.97 \times ?^3$$

$$24 \times 26 + \frac{\sqrt{49} \times 13}{91} = 5 \times ?^3$$

$$624 + 1 = 5 \times ?^3$$

$$? = 5$$

S12. Ans.(a)

Sol.

$$109.07\sqrt{?} - \frac{61}{21.02} \times ? = 47.96\sqrt{?}$$

$$109\sqrt{?} - 48\sqrt{?} \approx \frac{61}{21} \times ?$$

$$61\sqrt{?} = \frac{61}{21} \times ?$$

$$? = 441$$

S13. Ans.(d)

Sol.

$$1332.89 + 171.928 + 17.01 + ?^2 = 1690.67$$

$$1333 + 172 + 17 - 1691 \approx -?^2$$

$$?^2 = 169$$

$$? = 13$$

S14. Ans.(b)

Sol.

$$150.09\% \text{ of } 20 + \frac{322.9}{17.02} + \sqrt{?} = (8.96)^2$$

$$30 + 19 + \sqrt{?} = 81$$

$$? = 1024$$

S15. Ans.(b)

Sol.

$$56.08\% \text{ of } 149.92 + \sqrt{28.02 \times 6.98} - 11\frac{1}{9}\% \text{ of } 998.9 = ?$$

$$56\% \text{ of } 150 + \sqrt{28 \times 7} - \frac{1}{9} \times 999 \approx ?$$

$$84 + 14 - 111 = -13$$

For any Banking/Insurance exam Assistance, Give a Missed call @ 01141183264