

TEACHERS' VISION

WAY TO GOVERNMENT JOBS

TEST - 1

- 1) The speed of the man in still water is 12 km/hr and the rate of flow of water is 4 km/hr. He takes 9 hours to row to a place and come back. Find the distance between these two places?
a) 48 km b) 72 km c) 86 km d) 64 km e) None of these
- 2) A, B and C entered into a partnership with investment in the ratio of 6 : 7 : 9 respectively. After one year, B doubled his investment. At the end of two years, they earned a profit of Rs.59500. Find the share of B in the total profit?
a) Rs. 36800 b) Rs. 29400 c) Rs. 24500 d) Rs. 33200 e) None of these
- 3) A student got 48 % marks and failed by 12marks and another student got 62 % marks and get 16 more than the passing marks. Find the passing marks in the certain examination?
a) 126 b) 144 c) 132 d) 108 e) None of these
- 4) Divide Rs. 65000 into two parts such that the simple interest on the first part for 4 years at 12 % per annum is equal to the simple interest on the second part for 6 years at 5 % per annum. Find the two parts?
a) Rs. 33000 and Rs. 32000 b) Rs. 25000 and Rs. 40000 c) Rs. 20000 and Rs. 45000
d) Rs. 30000 and Rs. 35000 e) None of these
- 5) Two trains A and B having length of 300 m each running in opposite direction with a speed of 65 km/hr and 55 km/hr respectively can cross each other in how many seconds?
a) 24 sec b) 16 sec c) 26 sec d) 20 sec e) None of these
- 6) 8 men and 10 women can complete a piece of work in 10 days while 6 men and 10 women can complete the same work in 12 days. Then find the number of days taken by 10 men and 15 women to complete the same work?
a) 7 ½ days b) 9 days c) 10 ½ days d) 11 ¼ days e) None of these
- 7) A circular path is surrounding the circular plot is being gravelled at a total cost of Rs. 5390 at Rs. 5 per square meter. Find the width of the path, if the radius of the circle is 21 m?
a) 8 meter b) 6 meter c) 7 meter d) 9 meter e) None of these
- 8) The average marks scored by Ragu in a certain examination is 75. If he got 15 more marks in Science and 20 more marks in English, then the average becomes 80. Find the total number of subjects he studied?
a) 6 b) 8 c) 9 d) 7 e) None of these
- 9) If the compound interest on a certain sum for 3 years at 5 % per annum is Rs. 6305, then find the corresponding simple interest?
a) Rs. 7500 b) Rs. 6000 c) Rs. 9000 d) Rs. 8500 e) None of these
- 10) 6 years ago, the ratio of age of Arun and Bhargavi is 5: 6. Present age of Rahul is 14 years more than one-sixth of the present age of Bhargavi. Find the ratio between the present age of Bhargavi and Rahul, if the age of Rahul, 6 years hence is 26 years?
a) 5 : 3 b) 11: 7 c) 13: 9 d) 9: 5 e) None of these
- 11) Three children took part in racing competition in their school with their respective probabilities to reach the finishing point being 1/3, 1/5 and 1/4 respectively. What is the probability that at least one of them will finish the race?

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A. $\frac{2}{5}$

B. $\frac{3}{5}$

C. $\frac{1}{5}$

D. $\frac{1}{4}$

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

12) In a cricket between 2 teams, Team 'x' gets 70% of the total score and defeated team 'y' by 72 runs. The no of runs scored by winner?

- a) 260 runs b) 190 runs c) 182 runs d) 112 runs e) 126 runs

13). The monthly income of Guru and Vinothini together is Rs. 52,200. The income of Guru and Vinothini is increased by 20% and 12% respectively. The new income of Vinothini is Rs. 2784 more than the new income of Guru. What is the new income of Vinothini?

- a) Rs.35072 b) Rs. 31584 c) Rs.34150 d) Rs.29658 e) None of these

14) A vessel contains the mixture of milk and water in the ratio of 4: 1. If 25 liters of water is added to the vessel, then the ratio of the milk and water becomes 16: 9, what is the initial quantity of the mixture?

- a) 50 liters b) 75 liters c) 100 liters d) 150 liters e) None of these

15) Total number of pizzas sold by all the given stores in the month of September is approximately what percentage more/less than the total number of pizzas sold by all the given stores in the month of October?

- a) 33 % less b) 33 % more c) 21 % more d) 21 % less e) 12 % more

ANSWERS

1 A

Let the distance be x,

Speed of man in still water = 12 km/hr

Speed of stream = 4 km/hr

Speed of upstream = 12 - 4 = 8 km/hr

Speed of downstream = 12 + 4 = 16 km/hr

According to the question,

$$(x/16) + (x/8) = 9$$

$$(x + 2x)/16 = 9$$

$$x = 48 \text{ km}$$

(Or)

Distance = Time * [(Speed of still water² - Speed of stream²) / (2* Speed of still water)]

$$D = 9 * [(144 - 16) / (2 * 12)]$$

$$D = 9 * [128/24] = 48 \text{ km}$$

2 C

The share of A, B and C

$$= > [6*2] : [7*1 + 14*1] : [9*2]$$

$$= > 12 : 21 : 18$$

$$= > 4 : 7 : 6$$

$$17's = 59500$$

$$1's = 3500$$

The share of B = Rs. 24500

3 D

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Let the maximum mark be x ,

Here passing mark is equal. So,

$$(48/100)*x + 12 = (62/100)*x - 16$$

$$(14/100)*x = 28$$

$$x = 28*(100/14) = 200$$

$$\text{Passing mark} = 200*(48/100) + 12 = 108$$

4 B

Let two parts be x and $65000 - x$,

$$(x*4*12)/100 = [(65000 - x)*6*5]/100$$

$$48x = 1950000 - 30x$$

$$78x = 1950000$$

$$x = 1950000/78 = 25000$$

Two parts are Rs. 25000 and Rs. 40000

5 E

Time required to cross each other in,

$$=> (300+300) / [(65 + 55) * (5/18)]$$

$$=> [(600*18) / (120*5)] = 18 \text{ sec}$$

6 A

$$(8m + 10w) * 10 = (6m + 10w) * 12$$

$$40m + 50w = 36m + 60w$$

$$4m = 10w$$

$$m = (10/4) * w = (5/2) * w$$

$$8m + 10w = 8 * (5/2) * w + 10w = 20w + 10w = 30w$$

$$10m + 15w = 10 * (5/2) * w + 15w = 25w + 15w = 40w$$

$$30 * 10 = 40 * x$$

$$x = (300 / 40) = 7 \frac{1}{2} \text{ days}$$

7 C

Radius of the circular plot = 21 m

Area of the circular path = $5390 / 5 = 1078$

Area of the path = $\pi * (r + x)^2 - \pi r^2$ (Here x is the width of the path)

$$=> (22/7) * [(21 + x)^2 - 21^2]$$

$$=> (22/7) * [441 + 42x + x^2 - 441]$$

$$=> (22/7) * [42x + x^2]$$

$$(22/7) * [42x + x^2] = 1078$$

$$42x + x^2 = 1078 * (7 / 22)$$

$$42x + x^2 = 343$$

$$x^2 + 42x - 343 = 0$$

$$(x - 7) (x + 49) = 0$$

$$x = 7 \text{ meter}$$

8 D

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Let the total number of subjects be x ,

$$= > (75x + 15 + 20) / x = 80$$

$$= > 75x + 35 = 80x$$

$$= > 5x = 35$$

$$= > x = 7$$

Total number of subjects = 7

9 B

Let the sum of money be x ,

$$x * [(1 + (5 / 100))^3 - 1] = 6305$$

$$x * [(105 / 100)^3 - 1] = 6305$$

$$x * [(21 / 20)^3 - 1] = 6305$$

$$x * [(9261 / 8000) - 1] = 6305$$

$$x * [1261 / 8000] = 6305$$

$$x = 6305 * (8000 / 1261) = \text{Rs. } 40000$$

$$\text{Simple interest} = (40000 * 5 * 3) / 100 = \text{Rs. } 6000$$

10 D

6 years ago, the ratio of age of Arun and Bhargavi = 5 : 6 ($5x$, $6x$)

Present age of Arun and Bhargavi = $5x + 6$, $6x + 6$

Present age of Rahul = $(1/6) * (6x + 6) + 14 = x + 1 + 14 = x + 15$

$$x + 15 = 20$$

$$x = 5$$

The present age of Bhargavi = $6x + 6 = 36$

Required ratio = $36 : 20 = 9 : 5$

11 B

Let the names of children be x , y and z . The probabilities of the three children to finish the race are $1/3$, $1/5$ and $1/4$ respectively. It may be noted that one reaching the finishing point is independent of other reaching. If $P(x)$, $P(y)$ and $P(z)$ denotes the probabilities.

The probability of at least one of them reaching the finishing point = $1 - P$ (none of them finishing the race)

$$= 1 - \left(\frac{2}{3}\right)\left(\frac{4}{5}\right)\left(\frac{3}{4}\right) = \frac{3}{5}$$

12 E

Team x = 70 %

Team y = 30 %

According to the question,

(70 % - 30 %) of the total score = 72

40 % of the total score = 72

$(40/100) * \text{total score} = 72$

Total score = $72 * (100/40) = 180$

Total score get by the winner = $180 * (70/100) = 126$ runs

13 B

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Let the income of Guru and Vinothini be G and V,
The monthly income of Guru and Vinothini = 52200
 $G + V = 32000$
Guru's income = x; Vinothini's income = $52,200 - x$
New income of V = New income of G + 2784
V's new income = $(52200 - x) * 112/100$
G's new income = $x * 120/100$
 $(52200 - x) * (112/100) = x * (120/100) + 2784$
 $(5846400 - 112x)/100 = (120x/100) + 2784$
 $(5846400 - 112x)/100 = (120x + 278400)/100$
 $(5846400 - 112x) = (120x + 278400)$
 $5846400 - 278400 = 112x + 120x$
 $5568000 = 232x$
Guru's income X = $(5568000/232) = 24000$
Vinothini's income = $52200 - x = 28200$
New Income of Vinothini = $28200 * (112/100) = \text{Rs. } 31584$

14 C

$4x/(x + 25) = 16/9$
 $16x + 25 * 16 = 36x$
 $20x = 400$
 $x = 20$
Total quantity = $20 * 5 = 100$ liters

15 C

Total number of pizzas sold by all the given stores in the month of September
= $> 6000 + 6400 + 5800 = 18200$
Total number of pizzas sold by all the given stores in the month of October
= $> 4800 + 5000 + 5200 = 15000$
Required % = $[(18200 - 15000)/15000] * 100 = 21.33 \% = 21 \% \text{ more}$

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