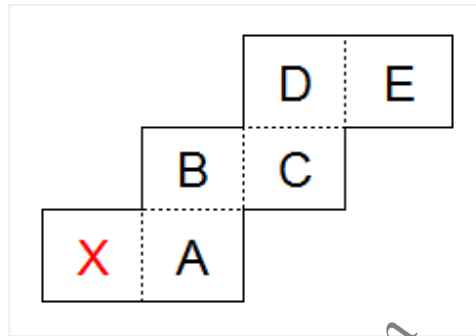


## TCS latest Placement paper Questions - 2015 (19)

1. The figure shown can be folded into the shape of a cube. In the resulting cube, which of the lettered faces is opposite the face marked x?



- a. c
- b. a
- c. d
- d. b

Ans: a

Explanation: If you fold the above picture at the dotted lines, X and C are opposite to each other.

2. In how many ways a team of 11 must be selected from 5 men and 11 women such that the team must comprise of not more than 3 men?

- a. 1565
- b. 1243
- c. 2256
- d. 2456

Ans: C

Explanation;

The team may consist of 0 men + 11 women, 1 men + 10 women, 2 men + 9 women, or 3 men + 8 women.

So Number of ways are =  ${}^{11}C_{11} + {}^5C_1 \times {}^{11}C_{10} + {}^5C_2 \times {}^{11}C_9 + {}^5C_3 \times {}^{11}C_8 = 2256$

3. Given that  $0 < a < b < c < d$ , which of the following the largest ?

- a.  $(c+d) / (a+b)$
- b.  $(a+d) / (b+c)$
- c.  $(b+c) / (a+d)$
- d.  $(b+d) / (a+c)$

Sol: A

Explanation: Take  $a = 1$ ,  $b = 2$ ,  $c = 3$ ,  $d = 4$ . option A is clearly true.

4. Eesha bought 18 sharpeners for Rs.100. She paid 1 rupee more for each white sharpener than for each brown sharpener. What is the price of a white sharpener and how many white sharpener did she buy ?

- a. Rs.5, 10
- b. Rs.6, 10
- c. Rs.5, 8
- d. Rs.6, 8

Sol: B

Explanation: Just check the options. If she bought 10 white sharpeners at Rs.6 per piece, She has spent Rs.60 already. And with the remaining Rs.40, she bought 8 brown sharpeners at  $40/8 = \text{Rs.}5$  which is Rs.1 less than White sharpener.

5.

			7				x				8		
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The fourteen digits of a credit card are to be written in the boxes shown above. If the sum of every three consecutive digits is 18, then the value of x is :

- a. 3
- b. cannot be determined from the given information.
- c. 2
- d. 1

Sol : A

Explanation:

Let us assume right most two squares are a , b

Then Sum of all the squares =  $18 \times 4 + a + b$  ..... (1)

Also Sum of the squares before 7 = 18

Sum of the squares between 7, x = 18

and sum of the squares between x , 8 = 18

So Sum of the 14 squares =  $18 + 7 + 18 + x + 18 + 8 + a + b$  (2)

Equating 1 and 2 we get  $x = 3$

6. Four people each roll a four die once. Find the probability that at least two people will roll the same number ?

- a.  $5/18$
- b.  $13/18$
- c. None of the given choices
- d.  $1295/1296$

Sol: B

Explanation:

The number of ways of rolling a dice where no two numbers probability that no one rolls the same number =  $6 \times 5 \times 4 \times 3$

Now total possibilities of rolling a dice =  $6^4$

The probability that a no one gets the same number =  $\frac{6 \times 5 \times 4 \times 3}{6^4} = \frac{5}{18}$

So the probability that at least two people gets same number =  $1 - \frac{5}{18} = \frac{13}{18}$

7. Jake can dig a well in 16 days. Paul can dig the same well in 24 days. Jake, Paul and Hari together dig the well in 8 days. Hari alone can dig the well in

- a. 96 days
- b. 48 days
- c. 32 days
- d. 24 days

Sol:

Explanation: Simple one. Let the total work to be done is 48 meters. Now Jake can dig 3 mts, Paul can dig 2 mts a day. Now all of them combined dug in 8 days so per day they dug  $\frac{48}{8} = 6$  mts. So Of these 8 mts, Hari capacity is 1 mt.

So he takes  $48 / 1 = 48$  days to complete the digging job.

**Updated :**

8. Eesha bought 18 sharpeners for Rs.100. She paid 1 rupee more for each white sharpener than for each brown sharpener. What is the price of a white sharpener and how many white sharpener did she buy ?

- a. Rs.5, 10
- b. Rs.6, 10
- c. Rs.5, 8
- d. Rs.6, 8

Ans:

Explanation: This question can be solved easily by going through options.

A. White sharpener total cost:  $\text{Rs.}5 \times 10 = \text{Rs.}50$ . Brown sharpeners cost =  $\text{Rs.}4 \times 8 = 32$ . Total cost is only Rs.82.

Wrong option.

B. White sharpener total cost:  $\text{Rs.}6 \times 10 = \text{Rs.}60$ . Brown sharpeners cost =  $\text{Rs.}5 \times 8 = 40$ . Total cost is Rs.100.

Correct option.

9. The sum of the digits of a three digit number is 17, and the sum of the squares of its digits is 109. If we subtract 495 from the number, we shall get a number consisting of the same digits written in the reverse order. Find the number.

- a. 773
- b. 683

c. 944

d. 863

Ans: D

Explanation: Check options. Sum of the squares should be equal to 109. Only Options B and D satisfying. When we subtract 495, only 863 becomes 368.

10. Mark told John "If you give me half your money I will have Rs.75. John said, "if you give me one third of your money, I will have Rs.75/- How much money did John have ?

a. 45

b. 60

c. 48

d. 37.5

Ans: B

Explanation: Let the money with Mark and John are M and J respectively.

Now

$$M + J/2 = 75$$

$$M/3 + J = 75$$

Solving we get M = 45, and J = 60.

11. Eesha has a wheat business. She purchases wheat from a local wholesaler of a particular cost per pound. The price of the wheat of her stores is \$3 per kg. Her faulty spring balance reads 0.9 kg for a KG. Also in the festival season, she gives a 10% discount on the wheat. She found that she made neither a profit nor a loss in the festival season. At what price did Eesha purchase the wheat from the wholesaler ?

a. 3

b. 2.5

c. 2.43

d. 2.7

Ans: C

Explanation: Faulty spring balance reads 0.9 kg for a kg" means that she sells 1 kg for the price of 0.9 kgs, so she loses 10% of the price because of the faulty spring balance. She loses another 10% because of the discount. So, she actually sells 1 kg for  $\$3 \times 0.9 \times 0.9 = \$2.43$  and since at that price she made neither a profit nor a loss, then Eesha purchase the wheat from the wholesaler for \$2.43.

12. Raj goes to market to buy oranges. If he can bargain and reduce the price per orange by Rs.2, he can buy 30 oranges instead of 20 oranges with the money he has. How much money does he have ?

a. Rs.100

b. Rs.50

c. Rs.150

d. Rs.120

Ans: D

Explanation: Let the money with Raj is M. So  $\frac{M}{20} - \frac{M}{30} = 2$ . Check options. Option D satisfies.

13. A city in the US has a basketball league with three basketball teams, the Aziecs, the Braves and the Celtics. A sports writer notices that the tallest player of the Aziecs is shorter than the shortest player of the Braves. The shortest of the Celtics is shorter than the shortest of the Aziecs, while the tallest of the Braves is shorter than the tallest of the Celtics. The tallest of the Braves is taller than the tallest of the Aziecs.

Which of the following can be judged with certainty ?

X) Paul, a Brave is taller than David, an Aziec

Y) David, a Celtic, is shorter than Edward, an Aziec

a. Both X and Y

b. X only

c. Y only

d. Neither X nor Y

Ans: B

Sol: We solve this problem by taking numbers. Let the shortest of Braves is 4 feet. Then tallest of Aziecs is less than 4. So let it be 3 feet.

A -> 2 - 3

B -> 4 - 6

C -> 1 - 7

From the above we can safely conclude X is correct. but Y cannot be determined.

14. There are 3 classes having 20, 24 and 30 students respectively having average marks in an examination as 20, 25 and 30 respectively. The three classes are represented by A, B and C and you have the following information about the three classes.

a. In class A highest score is 22 and lowest score is 18

b. In class B highest score is 31 and lowest score is 23

c. In class C highest score is 33 and lowest score is 26.

If five students are transferred from A to B, what can be said about the average score of A; and what will happen to the average score of C in a transfer of 5 students from B to C ?

a. definite decrease in both cases

b. can't be determined in both cases

c. definite increase in both cases

d. will remain constant in both cases

Ans: B

Explanation:

Class A average is 20. And their range is 18 to 22

Class B average is 25. And their range is 23 to 31

Class A average is 30. And their range is 26 to 33

If 5 students transferred from A to B, A's average cannot be determined but B's average comes down as the highest score of A is less than lowest score of B.

If 5 students transferred from B to C, C's average cannot be determined the B's range for marks and C's range of marks are overlapping.

15. The value of a scooter depreciates in such a way that its value at the end of each year is  $\frac{3}{4}$  of its value at the beginning of the same year. If the initial value of the scooter is Rs.40,000, what is the value at the end of 3 years ?

- a. Rs.13435
- b. Rs.23125
- c. Rs.19000
- d. Rs.16875

Ans: D

Explanation:  $40,000 \left(\frac{3}{4}\right)^3 = 16875$

16. Rajiv can do a piece of work in 10 days, Venky in 12 days and Ravi in 15 days. They all start the work together, but Rajiv leaves after 2 days and Venky leaves 3 days before the work is completed. In how many days is the work completed ?

- a. 5
- b. 6
- c. 9
- d. 7

Ans: D

Explanation: Let the work be 60 units. If Venky leaves 3 days before the work, last 3 days must be worked by Ravi.

So the remaining days of work be  $x$  days, total days to complete the work be  $x + 3$  days.

Now Capacities of Rajiv is  $60/10 = 6$ , Venky is 5, Ravi is 4.

$$(6 + 5 + 4) 2 + (5 + 4) (x - 3) + 4 \times 3 = 60.$$

$$30 + 9x - 27 + 12 = 60$$

$$9x - 15 = 30$$

$$9x = 45$$

$$x = 5$$

So total days to complete the work =  $2 + 5 = 7$  days.

17. A man has a job, which requires him to work 8 straight days and rest on the ninth day. If he started work on Monday, find the day of the week on which he gets his 12th rest day.

- a. Thursday
- b. Wednesday

c. Tuesday

d. Friday

Ans: B

Explanation:

He works for 8 days and takes rest on the 9th day. So On the 12th rest day, there are  $9 \times 12 = 108$  days passed.

Number of odd days =  $(108 - 1) / 7 = 107 / 7 = 2$ . So the 12th rest day is wednesday.

18. On a 26 question test, five points were deducted for each wrong answer and eight points were added for each correct answer. If all the questions were answered, how many were correct, if the score was zero ?

a. 10

b. 12

c. 11

d. 13

Ans: A

Explanation:

Take options and check. If 10 are correct, his score is  $10 \times 8 = 80$ . But 16 are wrong. So total negative marking is  $16 \times 5 = 80$ . So final score is zero.

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