**Latest TCS NQT Aptitude questions & Solutions for TCS National Qualifier Test**

TCS Ninja Aptitude questions with solutions are given here. These were taken from [TCS NQT previous year placement papers](https://faceprep.in/tcs-ninja-placement-papers/). Practice of these is very important as it is **likely that questions of this model would repeat in the actual exam**.

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**TCS NQT Aptitude Test Pattern & Syllabus**

TCS Ninja Aptitude section consists of **15 questions which need to be solved in 30 minutes.** TCS Ninja aptitude questions will be asked from the below-given topics.

* Averages
* Mixtures & Allegations
* Percentages
* Permutations & Combinations
* Profit and loss
* Algebra
* Ratio and proportions
* Probability
* Time, speed, distance
* Time and Work
* Functions
* Geometry
* Numbers

Also, do practice the other sections by referring the below links.

1) [English](https://faceprep.in/tcs-ninja-english-questions/)   
2) [Programming Logic MCQ’s](https://faceprep.in/tcs-ninja-programming-mcqs/)  
3) [Coding](https://faceprep.in/tcs-ninja-coding-questions/)

**TCS Ninja Aptitude questions for TCS NQT 2019**

***TCS Ninja Aptitude questions – Set 1 (Standard section)***

**1) A^B means A raised to the power B. If f(x) = ax^4  – bx^2 + x + 5 and f(-3) = 2, then f(3) = ?**  
a. 3  
b. 8  
c. -2  
d. 1

**Answer: b**  
**Explanation:**  
f(-3) = a(-3)4 – b(-3)2 + (-3) + 5 = 81a – 9b + 2 = 2 So 81a – 9b = 0,   
f(3) = a(3)4 – b(3)2 + (3) + 5 = 81a – 9b + 8  
Substituting the value of 81a – 9b = 0 in the above we get f(3) = 8

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**2) 1/4 of the tank contains fuel. When 11 liters of the fuel is poured into the tank, the indicator rests at the 1/2 mark. Find the capacity of the tank in liters.**

a. 44  
b. 36  
c. 6  
d. 8

**Answer: a**  
**Explanation:**  
Let the capacity of the tank be x liters.   
Given, 1/4 of x + 11 = 1/2 of x  
By solving we get the x value as 44 liters.

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**3) You have been given a physical balance and 7 weights of 47, 46, 43, 48, 49, 42, and 77 kgs. Keeping weights on one pan and object on the other, what is the maximum you can weigh less than 178 kgs.**

a. 172  
b. 174  
c. 175  
d. 177

**Answer: b**  
**Explanation:**  
The maximum weight that can be weighed less than 178 kgs is 174 (48 + 49 + 77 = 174 kgs).

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**4) How many 6-digit even numbers can be formed from the digits 1, 2, 3, 4, 5, 6 and 7 so that the digits should not repeat and the second last digit is even?**

a. 320  
b. 6480  
c. 2160  
d. 720

**Answer: d**  
**Explanation:**  
To form 6-digit even number, the last digit should be an even number so 3 ways (2, 4, or 6) to fill the last digit and second last digit also should be even for which it will take 2 ways to fill.   
The last two digits are filled in 6 ways( 2 x 3 = 6 ways). The rest of the 4 digits can be filled in 5P4 ways i.e. 120 ways. Hence altogether to fill 6-digit even number = 120 \* 6 = 720 ways.

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**5) Out of a group of swans, 7/2 times the square root of the total number are playing on the shore of the pond. The remaining 2 are inside the pond. Find the total number of swans.**

a. 16  
b. 25  
c. 4  
d. 9

**Answer: a**  
**Explanation:**  
Let the number of swans = x2  
x2 = 7x/2 + 2 –> x2 = (7x + 4)/2  
2x2 = 7x + 4, —>  2x2 – 7x – 4 = 0  
The roots of x are 4, -1/2. Here -1/2 is not possible, so the x value will be 4.  
The total number of swans is x2 i.e 16.

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**6) In a village, every weekend, three-eighth of the men and one-third of the women participate in a social activity. If the total number of participants is 54, and out of them 18 are men then the total number of men and women in the village is:**

a. 180  
b. 156  
c. 204  
d. 228

**Answer: b**  
**Explanation:**  
3/8th of men and 1/3rd of women participated and given that the total participants are 54.   
Out of total participants 54, 18 were men and the rest will be women (54-18 = 36 women). From this, we can say that –> 3/8 \* men = 18, therefore men = 48. And 1/3 of women = 36 –> women = 108.  
The total number of men and women in the village is 156.

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**7) If M is 30% of Q, Q is 20% of P, and N is 50% of P, then M/N = ?**

a. 6/5  
b. 4/3  
c. 3/25  
d. 3/250

**Answer: c**  
**Explanation:**  
Q = 20% of P  
M    =    30% of  Q —> 30% of (20% of P)   —> 30/ 100 \* 20/100 \* P  –> 6/100 \* p  
N    =    50% of P  –> 5/10 \* P  
M/ N = (6/100 \* P) / (5/10 \* P) = 6/50 = 3/25

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**8) There are 20 persons among whom two are sisters. Find the number of ways in which we can arrange them around a circle so that there is exactly one person between two sisters? Please note that the exact position on the circle does not matter (no seat numbers are marked on the circle), and only the relative positions of the people matter.**

a. 2! \* 19!  
b. None of these  
c. 2 \* 18!  
d. 18!

**Answer: c**  
**Explanation:**  
Fix the position of two sisters. Hence there are only 18 people left  
So there are 18 ways in which a person can sit between the two sisters. Now if we swap the bothers we get another 18 ways.  
So hence we have a total of  = 2 \* 18 combinations  
Consider the group of three people(two brothers and the person between them) as a single entity.  
we have another 17 people left so there are 18 entities to be arranged in total.  
Arranging 18 entities around a circle can be done in (18-1)! = 17! ways  
Total no of ways = 2 \* 18 \* 17! = 2 \* 18!

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**9) Find the length of the longest pole that can be placed in an indoor stadium 24m long, 18m wide and 16m high.**

a. 36m  
b. 34m  
c. 30m  
d. 25m

**Answer: b**  
**Explanation:**

Length of the longest pole = diagonal of rectangular indoor stadium   
= √( l²+b²+h²)  
= √(24²+18²+16²)  
= √(576+324+256)  
= √1156  
= 34 m

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**10) Of a set of 30 numbers, the average of first 10 numbers is equal to the average of last 20 numbers. Then the sum of the last 20 numbers is:**

a. Sum of first ten numbers  
b. 2 X sum of the first ten numbers  
c. Cannot be determined with the given data  
d. 2 x sum of last ten numbers

**Answer: b**  
**Explanation:**  
Average = (sum of n numbers)/(n)  
(sum of first 10 numbers)/10 = (sum of last 20 numbers)/20  
Hence, (sum of last 20 numbers) = 2\*(sum of first 10 numbers)

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**11) Thomas takes 7 days to paint a house completely whereas Raj would require 9 days to paint the same house completely. How many days will it take to paint the house if both of them work together (give answers to the nearest integer)?**

a. 4 days  
b. 2 days  
c. 5 days  
d. 3 days

**Answer: a**  
**Explanation:**  
Work done by Thomas in a day = 1/7  
Work done by Raj in a day = 1/9  
Work done by both in a day = 1/7 +1/9 =16/63  
Days required if they both work together = 63/16 = 3.9 = 4 days

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**12) The University of Vikramasila has enrolled nine Ph.D. candidates: Babu, Chitra, Dheeraj, Eesha, Farooq, Gowri, Hameed, Iqbal, Jacob.**

– Farooq and Iqbal were enrolled on the same day as each other, and no one else was enrolled that day.  
– Chitra and Gowri were enrolled on the same day as each other, and no one else was enrolled that day.  
– On each of the other days of hiring, exactly one candidate was enrolled.  
– Eesha was enrolled before Babu.  
– Hameed was enrolled before Dheeraj.  
– Dheeraj was enrolled after Iqbal but before Eesha.  
– Gowri was enrolled after both Jacob and Babu.  
– Babu was enrolled before Jacob.

Who were the last two candidates to be enrolled?

a. Eesha and Jacob  
b. Babu and Chitra  
c. Gowri and Chitra  
d. Babu and Gowri

**Answer: d**  
**Explanation:**  
1.  Easha < Babu  
2. Hameed < Dheeraj  
3. Iqbal < Dheeraj < Easha  
4. Jacob/Babu < Gowri  
5. Babu < Jacob  
from 1 and 5, Easha was before Babu and Jacob so she cannot be in the last two. Option B ruled out  
from 4 and 5, babu is before Jacob and Gowri so he cannot be in the last two. Options a, c ruled out.  
So option d is correct.

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**13) In a certain city, 60 percent of the registered voters are Party A supporters and the rest are Party B supporters. In an assembly election, if 75% of the registered Party A supporters and 20% of the registered Party B supporters are expected to vote for Candidate A, what percent of the registered voters are expected to vote for Candidate A?**

a. 20  
b. 60  
c. 75  
d. 53

**Answer: d**  
**Explanation:**  
let there be x number of registered voters  
60% are Party A supporters = 60% of x  
40% are Party B supporters = 40% of x  
Out of 60%, 75% voted for party A = 75%(60% of x) = 18x/40  
Out of 40% ,20% voted for party B = 20%(40% of x) = 8x/100  
=18x/40+8x/100=106x/200  
Percentage of registered voters expected to vote for A = 106x/200\*100 = 53% of x

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**14) When 100 is to be successively divided by 6, 3, 4, first divide 100 by 6. Then divide the quotient 16 by 3. Then divide the quotient 5 by 4.**

**A number when successively divided by 5, 3, 2 gives the remainder of 0, 2 and 1 respectively in that order. What will be the remainders when the same number is divided successively by 2, 3 and 5 in that order?**

a. 4, 1, 2  
b. 1, 0, 4  
c. 2, 1, 3  
d. 4, 3, 2

**Answer:  b**  
**Explanation:**  
Let us assume the number to be N. Now, N is first divided by 5 and leaves a remainder 0. So,  N = 5X+0  
Then the quotient (X) is divided by 3 and leaves a remainder of 2. So, X = 3Y+2  
Again, the quotient (Y) is divided by 2 and leaves a remainder of 1. So, Y = 2Z+1  
Now, let us assume that Z = 1, then Y = 3, X = 11, N=55  
Now, 55/2 remainder is 1, 27/3 remainder is 0 and 9/5 remainder is 4. So the answer is 1, 0, 4

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**15) Professor Nitwit obtains a hash number of a given positive integer > 3 as follows. He subtracts 2 from the number (to get the new number), and multiplies the new number by 2 to get a term. He repeats this with the new number (to get newer numbers and terms) until the number becomes 2 or 1. The hash is defined as the sum of all the terms generated in this process.**

**For example, with the number 5, he multiplies (5-2 =3) by 2 to get the first term 6. He multiplies (3-2=1) by 2 to get the second term 2.  As the number has become 1, he stops. The hash is the sum of the two terms (6+2) or 8.**

**If professor Nitwit is given 3 numbers 4, 9 and 13, what is the sum of the hash numbers he obtains for the three numbers?**

**Explanation:**

We need to continuously subtract 2 from the given number until it becomes 1 or 2 and then we multiply each of those numbers by 2. Following the same,  
For example, as given for 5: (3 + 1) × 2 = 8

Now, let us apply the same for 4, 9, 13.  
4 : (2) x 2 = 4  
9 : (7 + 5 + 3 + 1) × 2 = 32  
13 : (11 + 9 + 7 + 5 + 3 + 1) × 2 = 72  
Sum of the hash numbers = 4 + 32 + 72 = 108

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***TCS Ninja aptitude questions – set 2 (Standard section)***

**1. 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:**  
Let x be the number of questions correct and therefore, (26- x) will be the wrong number of questions,  
8x – 5(26-x) = 0 –> 8x – 130 + 5x =0  
13x = 130, x =10  
Hence 10 questions were correct.

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**2. 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

**Ans: b**  
**Explanation:**  
Let the total work to be done is 48 meters( LCM of 16, 24 and 8). Now Jake can dig (48/16) – 3 meters, Paul can dig (24/12) – 2 meters a day. Now all of them combined dug in 8 days so per day they dug 48/8 = 6 meters. So Of these 8 meters, Hari capacity is 1 meter. So he takes 48 /1 = 48 days to complete the digging job.

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**3. 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.

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**4. The value of a scooter depreciates in such a way that its value of the end of each year is 3/4 of its value of 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:**  
Every year it depreciates 3/4 th of the previous year. So ( 3/ 4 x (3/4 x (3/4 of 40,000))) = 3\*3\*3\*625 = 16875. Hence the value after 3 years is Rs. 16875

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**5. A man has a job, which requires him to work 8 straight days and rest on a 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 x 12 = 108 days passed. Number of odd days = (108 – 1) / 7 = 107 / 7 = 2. So the 12th rest day is Wednesday.

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**6. George can do a piece of work in 10 days, Paul in 12 days and Hari in 15 days. They all start the work together, but George leaves after 2 days and Paul 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(LCM of 10, 12 and 15). If Paul worked for 3 days, and the remaining days of work are x days, total days to complete the work be x + 3 days. Now George’s is 60/10 = 6, Paul is 5, Hari is 4.   
(6 + 5 + 4) 2 + (5 + 4) (x – 3) + 5 x 3 = 60. On solving we get x = 4. So total days to complete the work is 7 days.

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**7. How many arrangements will start and end with a vowel for TOGETHER?**

a. 1060  
b. 1080  
c. 2024  
d. 1050

**Ans: a**  
**Explanation:**  
No. of ways to put a vowel on start and end = 3 (i.e O..E,  E..O,  E..E ). The number of ways to arrange other 6 letters = 6!/2! = 360 (letter T is two times). Total number of arrangements = 3\*360 = 1080.

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**8. In 4 years, Raj’s father age is twice as raj, Two years ago, Raj’s mother’s age twice as raj. If Raj is 32 years old in eight years from now, what is the age of Raj’s mother and father?**

a. 32,34  
b. 51,50  
c. 32,36  
d. 52,46

**Ans: d**

**Explanation:**

Raj present age = 32 – 8 = 24.  
After 4 years Raj’s age is 28. and Raj’s father’s age is 28 x 2 = 56, and his present age is 52.  
Two years ago, Raj’s age is 22. and his mother’s age is 22 x 2 = 44. His mother’s present age = 46

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**9. A call center agent has a list of 305 phone numbers of people in alphabetic order of names (but she does not have any of the names). She needs to quickly contact Deepak Sharma to convey a message to him. If each call takes 2 minutes to complete, and every call is answered, what is the minimum amount of time in which she can guarantee to deliver the message to Mr. Sharma?**

a. 18 minutes  
b. 610 minutes   
c. 206 minutes   
d. 34 minutes

**Ans: a**

**Explanation:**  
The call center calls the middle no. i.e. (305/2) = 152.5 say 152 and asks them their name to get an idea of whether to go to up or downside of 152 no directory and suppose person replies some name. The starting letter of the name will suggest the call center to decide to weather go up or down the name list.   
So the process goes like >305->152–>76–>38–>19–>9–>4–>2–>1, the minimum time = 9\*2 = **18 mins**.

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**10. 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. 2456  
c. 1243  
d. 2256

**Ans: d**  
**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 = 11C11+5C1 ×× 11C10+5C2 ×× 11C9+5C3 ××11C8 = 2256 ways.

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

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

**Ans: a**  
**Explanation:**  
Let’s assume the value of a , b, c and d as 1, 2, 3, 4 (a=1, b=2, c=3, and d=4), by solving we get the answer as (c+d) / (a+b).

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**12. 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 sharpeners did she buy?**

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

**Ans: c**  
**Explanation:**  
Let’s solve from 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 = Rs.5 which is Rs.1 less than the White sharpener. Hence Rs. 6 and 10 white sharpeners.

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**13. 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. 683  
b. 863  
c. 944  
d. 773

**Ans: b**  
**Explanation:**  
Let’s solve from the options, Sum of the squares should be equal to 109. Only Options a and b satisfying. When we subtract 495, only 863 becomes 368.

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**14. Raj goes to the 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. 50  
b. Rs. 150  
c. Rs. 120  
d. Rs. 100

**Ans: d**  
**Explanation:**  
Let the money with Raj is M. So (M/20)  – (M/30) = 2. Check options. Option c satisfies.

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**15. A city in the US has a basketball league with three basketball teams, the Aziecs, the Braves and the Celtics.  A sportswriter 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**  
**Explanation:**  
By assuming the values, let’s solve it. Be 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.

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**16. A BB CCC DDDD EEEEE….. What is the 120th letter?**

a. L  
b. O  
c. K  
d. N

**Ans: b**  
**Explanation:**  
Number of letters in each term are in AP. 1, 2, 3, … So, n(n+1)/2 <= 120. For n = 15, we get LHS = 120. So 15th letter in the alphabet is O. So 15th term contains 15 Os.

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**17. There are 120 male and 100 female in society. Out of 25% male and 20% female are rural. 20% of male and 25% of female rural people passed in the exam. What % of rural students have passed the exam?**

a. 20%  
b. 18%  
c. 22%  
d. 15%

**Ans: c**  
**Explanation:**  
From the given information, Rural male = 25%(120) = 30, Rural female = 20%(100) = 20. Passed students from rural: male = 20%(30) = 6, female = 25%(20) = 5. Required percentage = 11/50 \* 100 = 22%.

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**18.  On the fabled Island of Knights and Knaves, we meet three people, A, B, and C, one of whom is a knight, one a knave, and one a spy. The knight always tells the truth, the knave always lies, and the spy can either lie or tell the truth. A says: “C is a knave.”B says: “A is a knight.”C says: “I am the spy.”Who is the knight, who the knave, and who the spy?**

a. A – Knight, B – Knave, C – Spy  
b. A – Spy, B – Knight, C – Knave  
c. A – Knave, B – Spy, C – Knight  
d. A – Knight, B – Spy, C – Knave

**Ans: d**  
**Explanation:**  
Let us say A is Knight and speaks the truth. So C is Knave and B is a spy. So Cs statement is false and Bs statement is true. This case is possible. If B is Knight,  this is not possible as A also becomes Knight as B speaks the truth.  
Suppose C is Knight,  this is clearly contradicted by C’s statement itself.

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**19. The average temperature of Tuesday, Wednesday and Thursday is 37 C. The average temperature of Wednesday, Thursday and Friday is 38 C. If the temperature on Friday is 39 C. Find the temperature on Tuesday.**

a. 37.33  
b. 38.33  
c. 36  
d. None of the above

**Ans: c**  
**Explanation:**  
The average temperature of Tuesday, Wednesday and Thursday is (Tue + Wed + Thu) / 3 = 37  
Tue + Wed + Thu = 111  ——  (A)  
The average temperature of Wednesday, Thursday and Friday is (Wed + Thu + Fri) / 3 = 38  
Wed + Thu + Fri = 114   ——- (B)  
Given Friday’s temperature as 39, then (B) – (A) –> Fri – Tue = 3. So 39 – Tue = 3 –> Tue = 36.  
Hence, the temperature on Tuesday is 36

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**20. In a certain city, 60% of the registered voters are Congress supporters and the rest are BJP supporters. In an assembly election, if 75% of the registered congress supporters and 20% of the registered BJP supporters are expected to vote for candidate A, what percent of the registered voters are expected to vote for candidate A?**

a. 20  
b. 23  
c. 50  
d. 53

**Ans: d**  
**Explanation:**  
Let the people in the city be 100, Congress supporters = 60% of 100 = 60 and 40% are BJP=40% of 100 = 40.  
Out of 60, 75% voted for congress=75%(60)=45  
Out of 40%,20% voted for congress=20%(40)=8  
In total = 45 + 8 = 53, Hence the total percentage of registered candidates – 53%

***TCS Ninja advanced aptitude questions***

1) How many pairs (m,n) of integers satisfy the equation 4^m = n^2 + 15? Please do not add white space around the answer \_\_\_\_\_\_\_\_\_\_\_\_\_

**Answer: 4**

2) Of all the nonempty subsets S of { 1, 2, 3, 4, 5, 6, 7}, how many do not contain the number |S|, where |S| denotes the number of elements in S? For example, {3, 4} is one such subset, since it does not contain the number 2. Please do not add white space around the answer \_\_\_\_\_\_\_\_\_\_\_\_

**Answer: 63**

3)A chord of a circle has length 3n, where n is a positive integer. The segment cut off by the chord has height n, as shown. What is the smallest value of n for which the radius of the circle ia also a positive integer? Please do not add white space around the answer \_\_\_\_\_\_\_\_

**Answer: 8**

**4) In how many ways can we give change for Rs.100 using 1 rupee and 2 rupee coins? For example, for 5 rs we can give three ways.**

**Answer:** 51  
**Explanation:** The straightforward method to solve this question is to create 3 scenarios for Rs 100.  
1) Only 1 rupee coins – There’s 1 way in which we can do this.  
2) Only 2 rupee coins – There’s 1 way in which we can do this.  
3) Combination of 1 and 2 rupee coins – In a combination, we can have from one 2 rupee coin (and 98 one rupee coins) to 49 two rupee coins (and 2 1 rupee coins). This gives us 49 ways.  
Total number of ways = 51.

5) Find the number of positive integers N<2000 which can be expressed as N=2^m+2^n where m and n are integers (for example, 33=2^0+2^5).

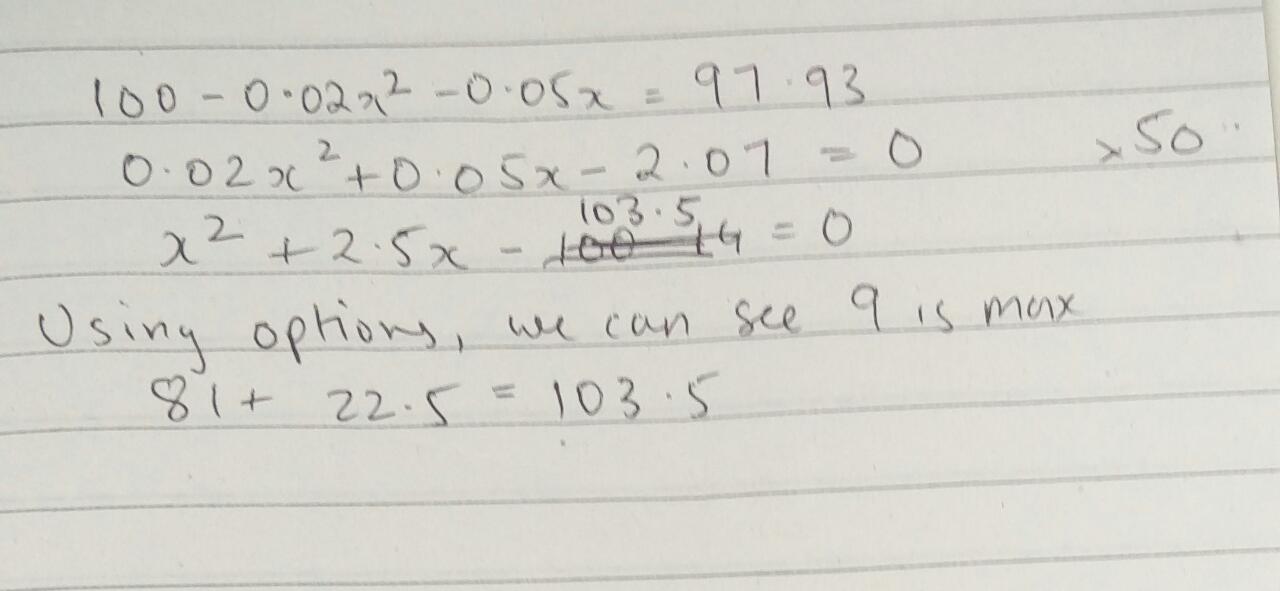
a) 25  
b) 65  
c) 100  
d) 150

**Answer:** b  
**Explanation:** We know that 2^10 = 1024 < 2000 < 2048 = 2^11  
Since 2^10+2^9 = 1536 < 2000, any combination of 2^m + 2^n < 2000 (as long as both m or n are not 10)  
So, we would have the following possibilities;  
2^10 + 2^n, (n = 1,2….9)  
2^9 + 2^n, (n = 1,2….8)  
And so on;  
Therefore, the answer is (10\*11)/2 = 65.

6) Fishing is a serious environmental issue. It has been determined by the scientists that if the net of a trawler has mesh size x cm by x (square mesh) then the percentage of fish entering the net that is caught in the net is 100-0.02x^2-0.05x. For example, if the mesh size is zero, 100% of the fish that enter the net will be caught. The trawler with a square mesh that was suspected of using an illegal size net, dropped its net to the ocean floor near the damans and coast guard officials arrested the crew. The scientists later looked at the size of the fish caught and estimated that the net used by the trawler at least caught 97.93% of the fish entering the net. What is the maximum value of x for the net by the trawler?

a) 8.5  
b) 9  
c) 11  
d) 12

**Answer:** b  
**Explanation:**



# Latest TCS Aptitude Questions asked in TCS Aptitude Test Online | FACE Prep

TCS aptitude questions with solutions are given here. TCS aptitude test questions are of medium to high difficulty level. A good practice is a must to solve them faster. This article will give you an idea about what type of questions are asked ad how to answer them within no time.

Table of Contents

* [TCS Aptitude Questions Syllabus](https://www.faceprep.in/tcs/tcs-aptitude-questions/#TCS_Aptitude_Questions_Syllabus)
* [TCS Aptitude Questions with Solutions](https://www.faceprep.in/tcs/tcs-aptitude-questions/#TCS_Aptitude_Questions_with_Solutions)
* [TCS Aptitude Questions: Preparation Strategy](https://www.faceprep.in/tcs/tcs-aptitude-questions/#TCS_Aptitude_Questions_Preparation_Strategy)
* [TCS Aptitude Questions – FAQs](https://www.faceprep.in/tcs/tcs-aptitude-questions/#TCS_Aptitude_Questions_FAQs)

## ****TCS Aptitude Questions Syllabus****

The syllabus for TCS aptitude questions is given below. Questions in the recent TCS on-campus drive (TCS Ninja) and TCS off campus drive were asked from these topics.

| **Topic** | **Number of Questions** | **Difficulty Level** |
| --- | --- | --- |
| Number system | 2 – 3 | Easy |
| HCF & LCM | 1 – 2 | Easy |
| Time, Speed & Distance | 2 – 3 | Medium |
| Mixtures & Allegations | 2 – 3 | Medium |
| Time & Work | 2 – 3 | Medium – Difficult |
| Percentages | 2 – 3 | Medium – Difficult |
| Permutations & Combinations | 1 – 2 | Medium |
| Profit & Loss | 1- 2 | Medium – Difficult |
| Functions & Equations | 1- 2 | Medium – Difficult |
| Series & Progression | 1 – 2 | Easy – medium |
| Blood Relations | 1 – 2 | Easy |
| Averages | 1 – 2 | Easy |
| Geometry | 1 – 2 | Easy |
| Clocks & Calendars | 1 – 2 | Easy – Medium |

If you want to register for TCS drive, then check this page – [TCS Off Campus drive](https://www.faceprep.in/tcs/off-campus-drive/)

## ****TCS Aptitude Questions with Solutions****

TCS aptitude questions with solutions are given here. These are the questions asked in the recent TCS drive 2018. Practicing them will give you a better idea about the question types asked and will also help you solve more number of questions appropriately.

**1) A, B, and C can together do some work in 72 days. A and B can together do two times as much work as C alone, and A and C together can do four times as much work as B alone. Find the time taken by C alone to do the whole work.**

a. 144 days  
b. 360 days  
c. 216 days  
d. 180 days

**Answer:**216 days

The work done by A, B and C together = A + B + C = 72 days  
A + B = 2C  
A + C = 4B   
On solving, we get 3C = 72 days and hence C = 72\*3 = 216 days

**2) A and B completed certain work together in 5 days. Had A worked at twice his own speed and B half his own speed, it would have taken them 4 days to complete the job. How much time would it take for A alone to do the job?**

a. 10 days  
b. 20 days  
c. 25 days  
d. 15 days

**Answer:**10 days

A and B can together do a work in 5 days = A + B = 1/5 days  
2A + B/2 = 1/4  
On solving these equations, we get A = 1/10 and hence A will take 10 days to complete the work all alone.

**3) A sum of Rs 2387 is divided into three parts in such a way that one-fifth of the first part, one half of the second part and the fourth one and the third part are equal. Find the sum of five times the first part, three times the second part and four times the third part (in rupees).**

a. 9982  
b. 7812  
c. 9114  
d. 10199

**Answer:**10199

Let the amount be divided into three parts X, Y, and Z.   
X + Y + Z = 2387  
X/5 = Y/2 = Z/4 = K  
X = 5K  
Y = 2K   
Z = 4K  
Hence, 5K + 2K + 4K = 2387   
11K = 2387   
K = 217  
5 times of 1st part + 3 times of 2nd part + 4 times of 3rd part = 5X + 3Y + 4Z  
= 5(5K) + 3(2K) + 4(4K) = 5(5\*217) + 3(2\*217) + 4(4\*217)  
= 5425 + 1302 + 3472 = 10199

**4) What is the greatest possible positive integer n if 16^n divides (44)^44 without leaving a remainder.**

a. 14  
b. 15  
c. 28  
d. 29

**Answer:**29

**5) In a test with 26 questions, five points were deducted for each wrong answer and eight points were added for every correct answer. How many were answered correctly if the score was zero?**

a. 11  
b. 10  
c. 13  
d. 12

**Answer:**10

Let the number of correct answers be y and number of wrong answers be x.  
(-5)x + 8(y) = 0  
x + y = 26  
On solving these, we get x = 16 and y = 10

**6) The air-conditioned bus service from Siruseri industry park runs at regular intervals throughout the day. It is now 3:12 pm and it has arrived 1 minute ago but it was 2 minutes late. The next bus is due at 3:18 pm. When is the next bus due?**

a. 3:27 pm  
b. 3:29 pm  
c. 3:24 pm  
d. 3:25 pm

**Answer:**3:27 pm

Time right now = 3:12 pm  
Time at which the bus should have arrived = 3:09 pm  
The next bus timing = 3:18 pm   
The interval between 1st bus and 2nd bus = 0.09 min   
so next bus will be at = 3:18  +0.09= 3:27 pm

**7) How many number plates can be made if the number plates have two letters of the English alphabets (A-Z) followed by two digits (0-9) if the repetition of digits or alphabets is not allowed?**

a. 56800  
b. 56500  
c. 52500  
d. 58500

**Answer:**58500

The number of English alphabets (a-z) = 26  
The number of digits (0-9) = 10  
Number of ways to arrange two alphabets without repetition = 26\*25  
Number of ways to arrange two digits without repetition = 10\*9  
Number of number plates that can be made = 26\*25\*10\*9 = 58500

**8) In a cricket tournament, 16 school teams participated. A sum of Rs. 8000 is to be awarded among them as prize money. If the team placed last is awarded Rs. 275 as prize money and the award increases by the same amount for successive finishing teams, how much will the team placed first receive?**

a. 1000  
b. 500  
c. 1250  
d. 725

**Answer:**725

Let the team which got placed first receive an amount a.  
Since the award money increases by the same amount for successive finishing teams, the series will be in AP. Let the constant amount be d.  
Now, l = 275 , n = 16 and S16 = 8000  
l = a + (n – 1) d and hence  275 = a + 15d  
S16 = 16/2 [2a + (16 -1)(d)] and hence 8000 = 8 (2a + 15d)  
On solving these equations,   
275 = a + 15d  
1000 = 2a + 15d  
(2a + 15d) – (a + 15d) = 1000 – 275   
a = 725

**9) Eesha’s father was 34 years of age when she was born. Her younger brother, Shashank, now that he is 13, is very proud of the fact that he is as tall as her, even though he is three years younger than her. Eesha’s mother, who is shorter than Eesha, was only 29 when Shashank was born. What is the sum of the ages of Eesha’s parents now?**

a. 92  
b. 76  
c. 66  
d. 89

**Answer:**92

Let Eesha’s present age be x.  
Eesha’s father’s present age = x + 34  
Shashank’s age = 13  
Eesha’s present age = 13 + 3 = 16  
Eesha’s mother’s present age = 29 + 13 =  42  
Sum of the ages of Eesha’s parents now = 42 + 16 + 34 = 92

**10) Fishing is a serious environmental issue. It has been determined by the scientists that if the net of a trawler has mesh size x cm by x (square mesh) then the percentage of fish entering the net that is caught in the net is (100-0.02x^2-0.05x). For example, if the mesh size is zero 100% of the fish that enters the net will be caught. The trawler with the net with a square mesh that was suspected of using an illegal size net dropped its net to the ocean near the damans and coast guard officials arrested the crew. The scientists later looked at the size of the fish caught and estimated that the net used by the trawler at least 97.93% of the fish entering the net would be caught. What is the maximum value of x for the net by the trawler?**

a. 8.5  
b.9  
c. 11  
d. None of the answers

**Answer:**9

**11) In this question, x^y stands for x raised to the power y. For example, 2^3=8 and 4^1.5=8. If a,b are real numbers such that a+b=3, a^2+b^2=7, the value of a^4+b^4 is?**

a. 49  
b. 45  
c. 51  
d. 47

**Answer:**47

12) The set A (0) is (1,2,3,4). For n > 0, A(n+1) contains all possible sums that can be obtained by adding two different numbers from what is the number of integers in A(10). **(This is an advanced question)**

**Answer:**67

13) Considering a hash table with 100 slots. Collisions are resolved using chaining. Assuming simple uniform hashing, what is the probability that the first 3 slots are unfilled after the first 3 insertions? (NOTE:100 ^ 3 means 100 raised to the power 3) **(This is an advanced question)**

a.(97\*96\*95)/100^3  
b.(97\*96\*95)/(6\*100^3)  
c.(97\*97\*97)/100^3  
d. (99\*98\*97)/100^3

**Answer:**(97\*97\*97)/100^3

14) **Advanced**In this question x^y stands for x raised to the power y. For example 2^3=8 and 4^1.5=8. Find the number of positive integers n>2000 which can be expressed as n=2^m+2^n where m and n are integers (for example, 33=2^0+2^5) **(This is an advanced question)**

**Answer:**65

15) A road network covers some cities. City C can be reached only from the city A or city B. The distance from A to C is 65 km and that from B to C is 30 km. The shortest distance from A to B is 58 km. The shortest distance from city P to A is 420 km and the shortest distance from city P to B is 345 km. The shortest distance from city P to city C in kms is:

a. 153  
b. 478  
c. 403  
d. 375

**Answer:**375