

TCS NQT Paper 1

Numerical Ability:

Questions 1: What is the sum of LCM and HCF of $\frac{5}{18}$, $\frac{35}{9}$ and $\frac{15}{63}$?

1. $\frac{1475}{252}$
2. $\frac{1475}{126}$
3. $\frac{625}{252}$
4. $\frac{625}{126}$

Ans . $\frac{1475}{126}$

Question 2: The reciprocal of a fraction is more than itself by $\frac{21}{240}$. How much is the difference between the possible values of the fraction more than 2?

1. $\frac{1}{15}$
2. $\frac{1}{16}$
3. $\frac{1}{240}$
4. $\frac{1}{256}$

Ans: C

Question 3: A person invested $\frac{2}{3}$ of his capital at the rate of 6% and $\frac{1}{5}$ at the rate of 10% and the remainder at the rate of 15%. If his actual income is 3,600 the capital will be:

Option

1. Rs. 5000
2. Rs. 2500
3. Rs. 7,500
4. Rs. 4,500

Answer: 45000

note: the answer will be 45000 and the options provided in the exam were wrong.

Question 4: If $8^x+1 + 8^{1-x} = 20$, then $x = ?$

1. $\frac{1}{4}, -\frac{1}{4}$
2. $\frac{1}{2}, -\frac{1}{2}$
3. $\frac{1}{3}, -\frac{1}{3}$
4. $\frac{1}{5}, -\frac{1}{5}$

Ans : c $\frac{1}{3}, -\frac{1}{3}$

Question 5: At an academic institution the break-up of holidays in 2016 was as under.

- 52 weekends
- 30 days of summer vacation which includes 4 weekends
- Autumn and Winter Breaks of (10+10) days each inclusive of one weekend
- 14 holidays on special occasion out of which one was a Saturday and one Sunday

What was the percentage (correct up to two decimal places) of the number of holidays?

1. 45.90%
2. 42.08%
3. 42.19%
4. 43.73%

Answer: 42.08

Question 6:

In a family of 10 adults and a few minors, the average consumption of flour is 12 kg. If the average consumption per adult and minor is 15 and 7 kg respectively. What is the number of minors?(Averages)

1. 6
2. 7
3. 5
4. 8

Answer: 6

Question 7: A person lends 35% of his sum of money at 12.5% per annum, 50% at the end of 10% per annum and the rest at 18% per annum rate of interest. What would be the annual rate (in approx), if the interest is calculated on the whole sum?(SI & CI)

Options

1. 13%
2. 14.5%
3. 13.5%
4. 13.75%

Answer: 13.475% ~ 13.5%

Question 8: The average weight of 6 people increases from 24 to 31.5 kg when one of them leaves the group and a new person joins in. If the weight of the person who joined is 60 kg, find the weight of the person who left the group?(Average)

1. 22.5
2. 37.5
3. 15
4. 30

Answer: 15

Question 9: There are three types of alloys A, B and C. The ratio of Copper, Tin and Nickel in A, B and C is 16:3:1 ,15:3:2 and 14:5:1 respectively. If the amount of A, B, and C 10 kg, 15 kg and 50 kg are mixed together respectively. Then, the final ratio of Copper Tin and Nickel in mixture is equal to

1. 217 65 18
2. 217 65 81
3. 217 56 18
4. 127 65 18

Answer: A

Question 10: Rahul bought a watch which has Rs. 1,875 as a marked price at a 24% discount. Rahul sold the watch to Rohit earning a 28% profit. Rohit then decided to sell the watch and set the marked price at 25% higher than the cost price at which he bought the watch. Mohit bought the watch from Rohit at a 15% discount on the marked price. Mohit later marked up the price to 50% higher than the cost price at which he bought the watch and sold it to Rahul at some discount. If Rahul had to pay Rs. 28.5 extra than the initial price he paid, then at what percent discount Mohit sold the watch? (**Profit and Loss**)

Options

1. 35%
2. 50%
3. 45%
4. 40%

Question 11: If a road of 210 km can be constructed by 540 workmen in 28 days, how many workmen are required to build a road of 150 km in 18 days. (**Time and Work**)

1. 600
2. 300
3. 650
4. 450

Answer: 600

Question 12: Two stations P and Q are 42 km apart. Rohit and mohit start from P to Q at the speed of 6km/h and 8km/h, respectively mohit reaches Q first and return to meet rohit at R. Determine the distance between P and R in km (**Time Speed Distance**)

1. 30
2. 36
3. 33
4. 27

Answer: 36 km

Question 13: The railway platform at a certain station is 248m long. In how many seconds it is cleared by the Express train which is 127 m long and travels at a speed of 150 km/h? (**Time Speed Distance**)

1. 9
2. 12
3. 8
4. 10

Answer: 9 seconds

Question 14: Nookaraju and Bhavana have their salaries in 7:3. As Bhavana is skilled, she got an increment of 5,000. But Nookaraju' performance is not up to mark and he got a decrement of \$1,000. If their present salaries are in ratio of 1:1, then Nookaraju's present salary is: (**Ratio and Proportion**)

1. 8,500
2. 9,500
3. 15,000
4. 10,500

Answer: 9500

Question 15: The perimeter of a regular hexagon with area of $21\sqrt{3}\text{ cm}^2$ is: (**Mensuration**)

1. $12\sqrt{3}$
2. $6\sqrt{14}$
3. $9\sqrt{3}$
4. $7\sqrt{15}$

Answer: Option B – $6\sqrt{14}$

Question 16: . If the first quartile $Q_1 = 28$ and third quartile $Q_3 = 42$ Then the coefficient of quartile deviation is: (**Elementary Statistics**)

1. $1/5$
2. $1/3$
3. $1/4$

4. 1/2

Ans - $\frac{1}{5}$

Question 17: A farmer purchased a Trolley and a Tractor for 8,00,000. He sold the Tractor at a profit of 30% and the Trolley at a loss of 10%, in this deal he got a profit of 3%. What is the ratio of the cost price of tractor and trolley. (**Profit and Loss**)

1. 54:31
2. 27:13
3. 13:27
4. 13:54

Answer: Option C : 13:27

Question 18: The marked price of a marker is $\frac{5}{9}$ % higher than its cost price. A discount of $\frac{5}{19}$ % is given on its marked price. Find the difference between cost price and selling price. (**Profit and Loss**)

Answer: 1

Verbal Ability:

Question 1. Parts of the given sentence have been given as options. One of them contains a grammatical error. Select the option that has the error. (**Error Identification**)

A university training enables a graduate seeing things as they are, and to disentangle a plethora of thoughts

1. to disentangle a plethora of thoughts
2. a graduate seeing things as they are
3. to go right to the point
4. A university training enables

Answer – a graduate seeing things as they are

Question 2. Identify the part of the sentence that has an error – (**Error Identification**)

I like to sit at the window for hours and see children playing in the park

Options:

1. I like to sit at
2. The window for hours
3. In the park
4. And see children playing

Answer – *And see children playing*

Question 3: Each sentence contains four underlined phrases. Three of these phases have been correctly used, and one has been incorrectly used. Choose the phrase (from option) which best replaces the wrong phrases in the sentence. (**Sentence correction**)

Explorers embody the finest spirit in human nature which is to seek new challenges, discover new worlds and create new frontiers and one such rare achievement of the indomitable spirit is the ascending of Mount Everest by Hillary and Tenzing.

Options

1. Finer spirits
2. By the dominant
3. To have sought
4. The ascent

Answer – *the ascent*

Question 4: Select the most appropriate set of options to fill in the blanks.

Bill Gates dropped out from Harvard within a year, Then he formed Microsoft. “Microsoft’s (A) _____ is a computer on every desk and Microsoft software on every computer.” Bill is a visionary and works very hard to (B) _____ his vision. His belief in high intelligence and hard work had put him where he is today. He does not believe in mere luck or God’s grace, but just hard work and (C) _____. His beliefs are so powerful that they have helped him increase his wealth and establish his (D) _____ in the industry.

(Sentence completion)

1. (A)Symbol (B) attain (C)investment (D) control
2. (A)target (B) progress(C)frankness (D) importance
3. (A)logo(B)believe (C)blessings (D) esteem
4. (A)vision (B) achieve (C)competitiveness (D) monopoly

Answer :- (A)vision (B) achieve (C)competitiveness (D) monopoly

Question 5. Select the most appropriate set of options to fill in the blanks.

Mexico is home to more species of oak than any country in the world, though many of them are(1) ___. In the case of the arroyo oak, as it is known, the species now faces a particularly(2)___problem. Though plenty of trees aged more than 100 years can be found, locals(3)___that in recent years there had been no seedlings that have sprouted from their acorns in sight. For some reason, the trees had(4)___stopped reproducing.

(Sentence Completion)

Blank 1 A. threaten B. threatened C. threatens D. threatening.

Blank 2 A. struggling B. troubling C. grieving D. agitating Blank

3 A. regarded B. recognized C. noticed D. caught

Blank 4 A. commonly B. directly C. easily D. simply

1. 1-B, 2-B, 3-C, 4-D
2. 1-A, 2-B, 3-A, 4-D
3. 1-D, 2-A, 3-B, 4-C
4. 1-C, 2-D, 3-B, 4-B

Answer- 1-B (threatened), 2-B (troubling), 3-C, (noticed) 4-D (simply)

Question 6. Choose the most appropriate set of idioms that would fit in the blanks and complete the text given here. (Idioms and phrases)

Sadhguru, the famous mystic, made several attempts to improve the nation's rivers a few years back. The government of India (1) _____ some of his ideas he had

incorporated in the union budget. However, his solutions were not received well in (2) _____. After bearing these criticisms he decided not to provide any more solutions but to focus on the problem itself. His strongest message? We cannot (3) _____ to the fact that soil is being rejected, whether it is concrete paving, denuding vegetation, use of chemicals etc. The soil is not being given the respect it deserves. He has now (4) _____ of the politicians, the bureaucrats and the technocrats to find and execute solutions, if the mystics of their job and things may become **missing**. Of what good is the soul without the soul.

1. 1. Reflected upon 2. certain quarters 3. Turn a blind eye 4 put the ball in the court
2. 1. Reflected upon 2. A chunk of 3. Turned the other way 4. Gave up on
3. 1. Reflected upon 2. A cross section 3. Turned the other way 4. Given up
4. 1. Thought aloud 2. Certain section 3. Turn a deaf ear 4. Taken a back seat

Answer:- 1. Reflected upon 2. certain quarters 3. Turn a blind eye 4 put the ball in the court

Question 7: Choose the sentence in which the underlined idiom has been used appropriately. (**Idioms and phrases**)

1. The way Sanya's obsessing over one doorknob when they're renovating the entire house makes one think that she can't see the wood in the trees.
2. Marcus is so focused on product details that he can't see the wood for the trees when it comes to the overall needs of the company.
3. The safety officer can't see the wood for the trees because she doesn't know which way to look.
4. Raman always argues on the silliest topics, it's like he can't see the tree for the woods.

Answer – B

Question 8. Four idioms are given below. Choose their sequence that would fill in the blanks and complete the text here.

Instead of the big crowd we expected, people arrived in ____ at the musical night. Alpana Alam is a rising star and is usually able to _____. Even before the interval it was obvious that the event was _____. Despite all this, Alpana herself was _____. (**idioms and phrases**)

1. A dead duck
2. Bring the house down
3. Full of beans

4. driblets and drabs

1. 1234
2. 4231
3. 4213
4. 1342

Answer – 4213

Question 9. Given below is a paragraph with five sentences, which are presented in a jumbled order. Write down the best order which would form a meaningful, unified and coherent paragraph. (**Para Jumble**)

1. We need to listen and act upon what birds are telling us, as they disappear ever faster of about 11,000 species and spanning the globe, the populations of half of them are falling, while just 6% are increasing
2. Birds truly are the canary in the coal mine – as indicators for the health of our planet, given their sensitivity to ecosystem changes, their ubiquity around the planet, and how well studied they are.
3. Conservation efforts have been successful at rescuing individual species in specific locations from the brink, but political will and funding are needed to reverse the global decline.
4. Bird populations are affected by the damage caused by human activity, from the destruction of wild habitat, the climate crisis, the pesticides and other pollution to over-hunting and impacts of alien species and diseases.
5. Billions of birds have been lost in recent decades in North America and Europe alone, and while there are more species in the tropics, a higher proportion are at risk of extinction in the temperate and largely richer nations.

Note:- this question had no options. Answer –

BADEC

Question 10. The four sentence (S1 to S4) paragraph below, Sentences S1 and S4 are given. From the options P, Q, R and S, choose the appropriate sentences for this respectively: (**Sentence Arrangement**)

S1. Placebos are essential to the design of reliable clinical trials.

S2. _____

S3. _____

S4. Red, Yellow and orange are associated with a stimulant effect, while blue and green are related to tranquilizing effect; says Dr. A. J. de Craen.

1. Such studies have found that even the color of pills made a difference in placebo results.
2. Their once-surprising effect on participants has become the focus of many studies.
3. Another argument says that by prescribing a placebo to placate a patient, the correct diagnosis of a serious ailment might be postponed
4. At one time, placebos were only used in experiments as a control

Options

1. PS
2. PQ
3. QP
4. QS

Answer – QP

Reasoning Ability:

Question 1: Identify the letter- cluster that does not belong to the following series. (**Letter Series**)

CX, GT, EV, DW, HS, ZA, MN, UF

1. ZA
2. UF
3. HS
4. MN

Ans – HS

Question 2: Four pairs of letter-clusters have been given, out which three are alike in some manner and one is different. Select the one that is different. (**Letter Analogy**)

1. TMKOLFXOY : TOMKLFXOY
2. PVMSYGCXN : VSPMYCGNX
3. XDSWZOIVK : XWSDZIKOV
4. FCHVOTFGW : VHFCOFGTW

Ans – TMKOLFXOY : TOMKLFXOY

Question 3: In a certain code language.

- P&Q means P is the son of Q
- P @ Q means P is the mother of Q
- P % Q means P is the brother of Q
- P # Q means P is the Husband of Q

Based on the above, how is K related to Q if 'K % G & T V @ S @ N % Q'? (**Blood**

Relations) (correct question)

1. Father
2. Father's brother
3. Mother's brother
4. Brother

Ans- Mother's Brother

Question 4: Following are the criteria for the post of a Senior Engineer in an electrical company

1. Be in the range of 22 to 35 years as on 8 March 2017
2. Be a graduate in Electrical Engineering with at least of 60% marks
3. Have passed the recruitment test with a minimum of 70% marks
4. Be willing to deposit an amount of Rs 45000 as part of the agreement

If a candidate fulfills all the criteria except at (b) above, but has appeared in the last semester and has secured at least 65% in the first semester (missing) to the director

If a candidate fulfills all the criteria except at (d) above, but is willing to pay at least 50% of the deposit amount, and has secured 70% marks at the graduation (missing) referred to the chairman.

Based on the above mentioned criteria and without assuming any additional information, take a decision for the following application.

Raini D'Souza is an Electrical Engineering graduate with 70 % marks. She was born on 4 march 1982 and has obtained 76% marks in the recruitment test. (missing) as deposit

1. Not to be selected
2. Data is incomplete
3. To be selected
4. Case to be referred to the chairman.

Question 5: Read the given statement and courses of action carefully and decide which of the given courses of action logically follows: (**Statement and Course of action**)

Statement:

Despite the Hostel warnings, the student was caught exploding crackers secretly on the hostel campus during the birthday celebration.

Course of actions:-

1. All the crackers should be taken away from the students and they should be threatened not to do it again
 2. The students should be severely punished for this wrong act.
-
1. Either I or II follows
 2. Only II follows
 3. Neither I nor II follows
 4. Only I follows

Ans. Either I or II

Question 6: 20 years ago Mohita was 22 years old, how old was she X years ago?

1. $X - 42$
2. 42
3. $42 - X$
4. $62 - X$

Ans. 42-X

Question 7: A question is given followed by two statements labelled I and II. Identify which of the statements (Statements and Conclusion)

Question:-

Let p be the total number of males and q be the total number of females in a family.
What is the difference between P and Q?

Statement:-

1. Vipraja has six daughters, who have a brother, Vipraja is the wife of Shantanu
 2. Shantanu is the father of six daughters. Kiran's mother Vipraja is married to Shantanu. Khan is a male
-
1. Statement I alone is sufficient
 2. Either statement I alone or statement II alone is sufficient
 3. Both statements I and II together are necessary
 4. Statement II alone is sufficient

Answer – Statement I alone is sufficient

Advanced Coding:

Question 1

Ayush is working on a strange algorithm where he wants to convert a string from A to B, both the strings of equal length N

Below are the rules which can be performed to convert a string

- String A and B are of equal length
- Both of them are in lower case
- Choose a subset X from the string A, between the index 1 and N.
- Let 's' be the letter which alphabetically comes before all other letters in the subset. Let 's' be called the 'smallest element' in the subset.
- Replace all the elements of subset with the letter 's'

Find the minimum number of moves which is required to perform the conversion. If it is not possible to convert the string from A to b then return -1

Let us try to understand it with and examples

Suppose there are 2 strings

A = abcab

B = aabab

Operation 1:

Now we have chosen a subset S, let us say we have taken index 2,3,5 from A

Then the subset S becomes [bcb]

Next, we have to choose the smallest element , 6041 here, which is b here in b & c

Next, we have to replace all the other elements in subset with this element. So 'b' will replace everything in [bcb]. which becomes [bbb].

Now we will place all the respective elements back to their respective index. This will update the original string as [abbab]

Operation 2:

Original string [abbab]

Now we have chosen a subset S, let say we have taken a index 1,2,4 from A

Then the subset become [aba]

Next, we have to choose the smallest element, which is here in a & b.

Next, we have to replace the smallest with all the other elements in subset. So 'a' will replace everything in [aba]

Now we will place all the respective elements back to their respective index. This will update the original string as [aabab]

This is exactly same as String B

Hence it is possible to convert string A to B, with 2 operations. So, the answer is 2.

Example 1: Input:

2-> Input integer, N

de-> input string, A

cd-> Input string, B

Output:

-1

Explanation:

In the above example we can clearly see that there is an alphabet in A which is completely different from B. hence it is not possible to convert A to B

So the answer is -1

Example 2:

Input:

4 -> input integer, N

abab-> input string, A

abaa-> input string A

Output:

1 -> Output

Explanation:

Operation 1:

Now we have chosen a subset S, let say we have taken index 3,4 from A

Then the Subset S becomes [ab]

Next, we have to choose the smallest element, which is a here in a & b

Next, we have to replace the smallest with all the other elements in subset. So 'a' will replace everything in [ab], which becomes [aa]

Now we will place all the respective elements back to their respective index. This will update the original string as [abaa]

This is exactly same as String B

Hence it is possible to convert string A to B. with 1 operation. So, the answer is 1.

Constraints:

1. $1 \leq N \leq 1000$
2. N integer
3. Only lower case letters of the English alphabet
4. Length of A,B = N

The input format for testing

1. First Input-Accept value of Integer, N.
2. Second Input-Accept value of string, A (Next Line)
3. Third Input-Accept value of string, B(Next Line)

The Output format for testing

1. The output is an integer as per above logic. (Check the output in Example 1, Example 21)
2. Additional messages in output will cause the failure of test cases

Instructions:

1. System doesn't allow any kind of hard coded input value/values.
2. Written program code by the candidate will be verified against the inputs which are supplied from the system.

Python

```
n = int(input())
a = input()
b = input()
if a == b:
    print(1)
res, res2 = "", ""
for x in range(n):
    if a[x] != b[x]:
        res += a[x]
        res2 += b[x]
ans = 0
for i in a:
    if ans != 0:
        break
    if i not in b:
        print(-1)
        break
    else:
        for x in set(res2):
```

```

if x not in a:
    print(-1)
    ans += 1
    break
else:
    print(len(set(res2)))
    ans += 1
    break
if ans == 1:
    break

```

Question 2:

Jack is a sports teacher at St. Patrick's School. He makes games not only to make the student fit, but So smart.

So, he lined up all the N numb class. of students in his class.

At each position he has fixed a board with the Integer number printed on it. Each of the numbers are unique and are in exactly the range of N. Let us say there are 10 students, then the boards will be printed with numbers from 1 to 10 in a random order given by the sequence A[]

As a rule, all students wear a jersey with their numbers printed on it. So if there are students, each will have a unique jersey number just like a football team.

Now, in the beginning, all the students will stand as per the increasing order of their jersey numbers, from left to right.

The only difference will be their respective board number which is placed at their respective location. The board location is fixed and cannot be changed. We can consider the arrangement as below. Suppose there are students, and the board is placed in the order of [2 3 1 5 4]

Board – 2, 3, 1, 5, 4

Student's Jersey – 1, 2, 3, 4, 5

Now the game begins.

- After every beat of the drum, each student will have to move to that location (index), where his board is pointing to. In the above case student with jersey #1 is standing with

board #2, so now he will have to move to location #2. Similarly, all the other students will do.

So after first beat of the drum, the alignment will be:

Board – 2, 3, 1, 5, 4

This keeps going on and on, until all the students are back the way they were at the beginning. So, after 6 beats of the drum, all the students will be aligned the same way as before.

Given N and the order of board of the respective positions, find the number of beats required to bring back the students to their original position.

So, for the above case the answer is 6

Example 1:

Input:

3 Input integer, N

{1, 2, 3}->Input integer. B[], board alignment.

Output:

1 -> Output

Explanation:

All the students will be standing as board positions;

Board – 1, 2, 3

Student's Jersey – 1, 2, 3

After first beat of the drum:

Jersey 1 will move to index 1.

Jersey 2 will move to index 2.

Jersey 3 will move to index 3.

Hence, they will be back on their own position in just 1 beat. So, the answer is 1.

Example 2:

Input:

5 -> Input integer, N

{2, 3, 1, 5, 4} -> Input integer, B[], board alignment.

Output:

6 -> Output

Explanation:

All the students will be standing as below, with the board positions:

Board – 2, 3, 1, 5, 4

Student's Jersey – 1, 2, 3, 4, 5

After Beat-1 of the drum:

Jersey 1 has moved to index 2.

Jersey 2 has moved to index 3.

Jersey 3 has moved to index 1.

Jersey 4 has moved to index 5.

Jersey 5 has moved to index 4.

Board – 2, 3, 1, 5, 4

Student' s Jersey – 3, 1, 2, 5, 4

After Beat-2 of the drum:

Jersey 3 has moved to index 2.

Jersey 1 has moved to index 3.

Jersey 2 has moved to index 1.

Jersey 5 has moved to index 5.

Jersey 4 has moved to index 4.

Board – 2, 3, 1, 5, 4

Student's Jersey – 2, 3, 1, 4, 5

After Beat-3 of the drum:

Board – 2, 3, 1, 5, 4

Student's Jersey – 1, 2, 3, 5, 4

After Beat-4 of the drum:

Board – 2, 3, 1, 5, 4

Student's Jersey – 3, 1, 2, 4, 5

After Beat-5 of the drum:

Board – 2, 3, 1, 5, 4

Student's Jersey – 2, 3, 1, 5, 4

After Beat-6 of the drum:

Board – 2, 3, 1, 5, 4

Student's Jersey – 1, 2, 3, 4, 5

Hence, they will be back on their positions after 6 beats.

So, the answer is 6.

Constraints:

- $1 \leq N \leq 100000$
- $1 \leq A[i] \leq N$
- All $A[i]$ will be distinct numbers
- N and. Only Integers.

The input format for testing:

- First Input – Accept value of $\ln 1101$
- Next 'N' Lines-Elements of sequence $A[]$

C++

```
#include <bits/stdc++.h>
#include
using namespace std;

int main()
{
    int n;
    int B[50], arr[50];
```

```

cout<<"Value of n "; cin>>n;
    for(int i=0; i<n; i++){ int a; for(int j=n-1; j>0;
i++) {
        cin>>a;
        B[j]=a;
        arr[i]=i+1;
    }
}
int ans=0;
while(true) {
    ans = ans+1;
    int ar[n];
    for(int i=0; i<n; i++) {
        ar[i] = arr[B[i]-1];
    }
    if(ar==sort(ar,ar+n)) {
        break;
    }

    arr = arr;
    cout<<ans;

}

return 0;
}

```

Python

```

n = int(input())
B = []
arr = []
for i in range(n):
    B.append(int(input()))
    arr.append(i+1)

ans = 0
while 1:
    ans += 1
    ar = [None]*n
    for i in range(n):
        ar[i] = arr[B[i]-1]
    if ar == sorted(ar):
        break

```

```
arr = ar  
print(ans)
```

Advanced Quantitative:

Question 1: If the equation $(1 + \lambda^2)x^2 + 2\lambda cx + (c^2 - a^2)$ has equal roots, then $a^2(1 + \lambda^2) =$ _____

1. c2
2. -2
3. a2
4. -4

Ans:

Question 2: A five-digit number is to be written using 1, 2, 3, 4 and 5 using each exactly once such that the number is divisible by 4. How many such numbers are there?

Enter the answer in the space provided on the screen using the keyboard. Answer should be in whole number without any symbols (E.g %, kms, ms, ₹ etc.)

Answer: 6

Question 3: What is the value of x for the below equation?

$$4 + 4\sqrt{x-1} = 2\sqrt{x+1}$$

Enter the answer in the space provided on the screen using the keyboard. Answer should be in whole number without any symbols (E.g %, kms, ms, ₹ etc.)

Answer: 1

Question 4: Which of the following points lie in the region of inequations $x \geq 1$, $y \geq 1$ and $x+y \leq 6$?

1. (4,2)
2. (3,2)
3. Both (2,5) & (4, 2)
4. (2,5)

Answer: Both (2,5) & (4, 2)

Question 5: The equation $(k+3)x^2 - 10(k+3)x + 15(k+9)=0$, $k \neq 3$, has equal roots, then
 $k = \underline{\hspace{2cm}}$

Enter the answer in the space provided on the screen using the keyboard. Answer should be in whole number without any symbols (E.g %, kms, ms, ₹ etc.)

Answer: $k = 6$

Question 6: Find the ratio of the average sale of all the branches for the years 2020 and 2021?

1. 80:81
2. 66.5: 81
3. 88 : 76.5
4. 76.5 : 82

Answer: 76.5 : 82

Question 7: A metallic solid cube of side length 4cm is melted and made into a hollow sphere of internal radius 3cm. What is the external radius of the sphere?

1. $(24/\pi + 27)^{1/3}$
2. $(48/\pi + 27)^{1/3}$
3. $(24/\pi + 9)^{1/3}$
4. $(48/\pi + 9)^{1/3}$

Answer: $(48/\pi + 27)^{1/3}$

Advanced Logical

Question 1. The desired description of the role of an actress described by the screenplay is an average-sized lady of age range 45 to 50 years, big body frame, with a grey head, large-sized blue eyes, quite fair skin, smiling face and decently good looking According to the director and casting assistant of the film, there will be no compromise with the resemblance of the character as described in the screenplay, no matter how talented they are. The candidate who appeared for the screen test is

a highly appreciated actress who has black hair,big blue eyes,and quite a fair complexion. She is in her thirties and medium build. Will the candidate be selected or not? (Answer: Selected/Not Selected)

Enter the answer in the space provided on the screen using the keyboard. Answer should be in whole numbers without any symbols (e.g %,kms,ms ,etc)

Answer:- *Not selected (not matching the physical characteristics)*

Question 2. Rani gives 6 numbers to friends 1,2,3,4,5, and 6. All numbers are related to different names i.e 1 is related to Amabad, 2 are Domabad, 3 are Taimabad, 4 are chomabad, 5 pemanad, and 6 are chamabad. 1 is like to chamabad 3 and 4 like to Pemabad. 6 and 1 like to Taimabad, Pemabad, Domabad.

Which number like Pemabad and Taimabad but not Chambad?

Answer: 6

Question 3: Eight students namely 1,2,3,4,5,6,7 and 8 are seated around a circle facing the center. 5 is second to the right of 3 who is the third of the _____ of 2. 8 is third to the right of 6 who is not an immediate neighbor of 1. Who is the second to the right of 5?

Answer: _____

Question 4: In certain code language JAVA is written as JVAA. How will MAWAA be written in that language?

Answer: MWAAA

Question 5. A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

Question: In a dance school, the teacher made her five students B, L, P, R and D stand in a row facing the north direction to distribute chocolates. Who among them stood to the immediate left of R?

Statements:

1. B stands at one of the extreme ends. L stood between B and P
 2. Only one student stands between P and D. D is not to the right of L
-
1. Data in statement II alone is sufficient to answer.
 2. Neither data in statement I nor II are sufficient to answer.
 3. Data in statement I alone is sufficient to answer.
 4. Data in both statements I and II are sufficient to answer.

Answer:- D

Question 6. In a certain code language, SUM is coded as NLVTTR and LATE is coded as FDUSZMK. How will ROAST be coded in that language? (Here there should be FDUSZBMK)

1. SQPMBZTRUS
2. UTPSSRZNQ
3. USTRBZPNSQ
4. ZPNSQUSTRB

Answer: USTRBZPNSQ

Question 7. A statement is given followed by two arguments numbered I and II. Decide which of the arguments is/are strong with respect to the statement/question.

Statement:

Each and every institute in India should be linked with an incubation centre

Arguments:

- Students will be aware of start-ups and how it can benefit the society
 - Having more and more start-ups will help building economy of the nation
-
1. Neither argument I nor II strong
 2. Argument II is strong
 3. Both arguments I and II are strong.
 4. Argument I is strong

Answer:- Argument I is strong

Question 8. A statement is given followed by three arguments numbered I, II and III. Decide which of the arguments is/are strong with respect to the statement/question.

Statement:

Educational institutes at the school level should encourage extra-curricular activities along with academic teaching

Arguments:

- Sports is a good career option for a student
 - Extra-curricular activities enhance learning abilities.
 - Extra-curricular activities help build a skill
1. Argument I is strong.
 2. Arguments I, II and III are strong
 3. Argument III is strong
 4. Argument II is strong.

Answer: D

