

TCS NQT Paper 2

Numerical Ability:

Question 1: What will be the remainder when the square of the LCM of 4, 6, , 12, and 15 is divided by the square of HCF of 51, 119 and 323?

- 1. 130
- 2. 136
- 3. **132**
- 4. 134

ANSWER – 132

Question 2: The sum of the squares of two fractions is 1. It is given that one of them is $\frac{21}{29}$. The sum and the product of the possible values of the other fractions are, respectively, s & p. What is the value of (s-p)?

Options

- 1. $\frac{441}{841}$
- 2. $\frac{400}{441}$
- 3. $\frac{400}{841}$
- 4. $\frac{100}{441}$

Question 3: The average age of Ram and Mohan is 2 years more than the average age of Mohan and Jitesh. The average age of Jitesh and Ram is 12 years, which is 2 years less than the average age of Mohan and Jitesh. What is the age of Jitesh?

Options

- 1. 12 years
- 2. 8 years
- 3. 10 years
- 4. **14 years**

Question 4: The present ages of four persons are in the ratio 1:2:3:4. The average of their ages seven years ago was 28 years. What will be the average age (in years) of the youngest and the oldest among them, five years from now?

1. 32
2. 36
3. 35
4. **40**

Answer – 40

Question 5: A metallic cuboid is processed by way of which its length, breadth and height increased by 10% and decreased by 8% and increased by 5% respectively. What is the percentage (Correct upto 2 decimal values) change in its volume?

Options

1. Increases by 6.26%
2. Increases by 1.20%
3. Decreases by 1.20%
4. **Decreases by 6.26%**

Answer: Decreases by 6.26%

Question 6: A shopkeeper sold his 25%, 30% and 20% of the items at a profit of 10%, 20% and 30% respectively. The rest of the items are sold at cost price. What is the percentage of profit of all his sale?

1. 14.5%
2. 12.5%
3. 15.5%
4. 13.5%

Answer: 14.5%

Question 7: What will be the compound interest earned on an amount of rs. 16800 in 1(3/4) years at the rate of 6.25% per annum?

1. 1050
2. 2367
3. 1887
4. 9147

Answer: 1887

Question 8: Three containers A, B and C are filled with milk part $\frac{1}{4}$ part of A is put into B. Now $\frac{1}{3}$ part of B is put into C. Again $\frac{5}{11}$ part of C is put into A. In the end, $\frac{1}{4}$ part of A is put into B again. Now the final amount of milk in each container is 6

litres. The initial quantity (in litres) of milk in each container, respectively is equal to:-

1. 4,5,9
2. 3,7,8
3. 3,6,9
4. 4,7,7

Answer: 3,6,9

Question 9: Shyam purchases 20% extra quantity of milk than indicated and sells 20% less than edit and he claims to sell the milk at cost price. Ram wants to earn the

same percentage of profit as Shyam without any dishonesty, so Ram sells milk at 39 per litre. What is the cost price of 1 litre of milk for Ram ?

1. 26
2. 23
3. 21
4. 28

Answer: 21

Question 10: Two persons are moving towards each other in the opposite directions at 21 km/h and 17 km/h. The total distance between them is 19km. In how long will they meet?

1. 30 min
2. 50 min
3. 60 min
4. 40 min

Answer: 30 min

Question 11: A cone and sphere has the same radius of 18cm. If the cone and the sphere have the same volume,then what is the height (in cm) of the cone ?

1. 66
2. 60
3. 54
4. 72

Answer: 72 cm

Question 12: If the quartile deviation of a series is 125,then the mean deviation of the series is: (wrong question)

1. 149
2. 151
3. 150
4. 152

Answer: Mean Deviation is the mean of all the absolute deviations of a set of data.

Quartile deviation is the difference between “first and third quartiles” in any distribution.

$$\text{Mean Deviation} = 4/5 \times \text{Quartile deviation} = 4/5 * 125 = 100$$

Question 13: The ratio of the numbers of boys and girls in a school is 5:9, and the total number of students is 224. If 64 girls left the school and some boys joined, the ratio becomes 6:5. Find the number of boys who joined?

1. 15
2. **16**
3. 13
4. 14

Answer: 16

Question 14 : 5 men and women can earn Rs 2862 in 9 days and 9 men and 12 women can earn Rs 6000 in 8 days. In how many days can 7 men and 9 women earn Rs 11,991?

1. 21 days
2. 19 days
3. 20 days
4. 17 days

Answer:

Question 15: Rhythm spends $16\frac{2}{3}\%$ of her monthly income on food, $5\frac{5}{19}\%$ on entertainment and $8\frac{1}{3}\%$ on travelling. She saves the leftover money, which is Rs 15,900. Find the monthly income in Rs.

No options given

Question 16: A policeman saw a thief from a distance of 100 metres. He started chasing him at a speed of 4 metres per second. On seeing the policeman, The thief

started running at a speed of 2 metres per second . Determine the distance run by the policeman to catch the thief. (In metres)

1. 100
2. **200**
3. 250
4. 150

Answer – 200 m

Question 17: A person distributed 72% of the money he had between Ram and Raj in the ratio of 5 : 7 respectively. Ram and Raj deposited the amount received in a scheme offering 8% and 10% simple interest, respectively, for 10 years. Find the amount in Rs left with the person if the sum of interests earned by Ram and Raj after 10 years is Rs 6,600.

Answer – 2800

Question 18 : Study the following table and answer the question that follows

Percentage of marks obtained by 6 students in five different subjects in a school examination.

Student

	English	Mathematics	Science	Hindi	Social Studies
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Students	(50)	(100)	(100)	(50)	(75)
A	66	89	80	78	84
B	58	58	79	82	60
C	62	62	77	84	88
D	72	72	67	74	68
E	70	70	81	76	64
F	64	83	60	88	68

What are the total marks obtained by D in all the subjects together?

Answer:- 252

Question 19: If simple interest is offered per year on a sum of money invested for five years, the amount of money payable on maturity after the five years elapse is Rs. 2,340. However, if the sum was invested for only two years , the amount payable on maturity would be 2016. What is the original sum invested?

1. Rs. 1750
2. Rs. 1800
3. Rs. 1600
4. Rs. 2000

Logical Section

Question 1: Identify the letter cluster that does not belong to the following series.

BC, GH, LM, EF, JK, PQ, IJ, NO, ST

1. ST
2. IJ
3. PQ
4. NO

Answer: PQ

Question 2: Select the option in which the pair of letter-clusters share the same relationship as that shared by the given pair of letter cluster. From among the given options choose the letter-cluster pair which is similar to the one given below.

PLGTOXIV : HKOSUZCF

1. BGSFXTEY : CHIKXZEG
2. EGHUZKL : FIKOQADH
3. TGSHCZOK : ZTTQNLLI
4. TDHZNLPK : FINPSVAH

Answer:

Question 3: A question is given followed by two statements labeled as I and II. Identify which of the statements is/ are sufficient to answer the question:

Question: Data regarding the relations in a family is given in the following statements. How many male and female members are there in the entire family?

Statements:

1. Mrudula has five daughters, who have two brothers. Mrudula is the wife of Rakesh
 2. Rakesh is the father of five daughters. Rajeev and Alok's mother Mrudula is the wife of Rakesh. Rajeev and Alok are males
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1. **Statement I alone is sufficient while statement II alone is not sufficient.**
 2. Either statement I alone is sufficient or statement II alone is sufficient.
 3. Both statements I and II are not sufficient.
 4. Statement II alone is sufficient, while statement I alone is not sufficient.

Answer – Statement I alone is sufficient while statement II alone is not sufficient.

Question 4:

In a certain code language,

'M & N' means 'M is the wife of N'

'M @ N' means 'M is the brother of N'

'M \$ N' means 'M is the father of N'

'M # N' means 'M is the mother of N'

'M + N' means 'M is the son's son of N'

How is P's father related to K if 'P+H&Q\$N@JK'?

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

Answer: C

Question 5: A question is given followed by three statements labeled as I ,II and III.

Identify which of the statements is/ are sufficient to answer the question:

Question

There are eight members in the family, four males and four females. Arunima is the wife of Charan. Charan has two sons Jay and Bidan. Taruni is the mother of Roshni. How is Roshni related to Charan?

Statements:

1. Somu is the nephew of Jay. Bidan is married to Dipti.
 2. Taruni is the sister in law of Dipti. Dipti is the wife of Bidan.
 3. Roshni is the niece of Bidan. Bidan is the only sibling of Jay.
-
1. All statement I, statement II, and statement III together are necessary.
 2. **Only statement III alone is sufficient.**
 3. Statement I and Statement II together are sufficient.
 4. Either Statement I and Statement II together or Statement II and Statement III together are sufficient.

Answer: Only statement III alone is sufficient.

Question 6:

In a certain code language,

'A \$ B' means 'A is the father of B'

'A % B' means 'B is the mother of A'

'A @ B' means 'A is the brother of B'

'A * B' means 'B is the sister of A'

'A # B' means 'A is the wife of B'

'A ÷ B' means 'B is the husband of A'

Which of the following statements is NOT true?

1. G @ H % J ÷ K means 'G is the son of K'
2. T ÷ V \$ W # Z means 'T is the mother-in-law of Z'
3. P \$ Q * R ÷ S means 'S is the son-in-law of P'
4. C % D # E @ F means 'F is the uncle of C'

Answer: D

Question 7: Identify the letter cluster that does not belong to the following series.

HUD, JOG, LKJ, NFM, PAP

Answer: JOG

Question 8: The sales price of a drilling machine was increased by 10% and then its price was again increased by 10%. What is the total increase in the initial price of the machine?

1. 22%
2. 21%
3. 24%
4. 23%

Answer: 21%

Question 9: Each of the six students A, B, C, D, E, and F are reading two subjects, one compulsory and one optional. Sociology is one of the subjects by E and F. English is F's compulsory subject, which is optional for C and E. Hind and Geography are A's subjects but just reverse to those of D in terms of compulsory and optional.

Psychology is the optional subject of only one student. Geography is the optional subject of D while it is compulsory for three others. What is the compulsory subject of B?

Enter the answer in the space provided on the screen using the on-screen keyboard.

Answer should be in whole numbers without any symbol(%, kms, ms, etc)

Answer: Geography

Question 10: Following are the criteria for the selection of a Sociology assistant professor in the college.

The Candidate must:

1. have qualified post graduation in Sociology with at least 55% of marks from a UGC recognised University.

2. have passed graduation with Sociology honors obtaining at least 55% marks.
3. have passed both 10th and +2 examination securing at least 50% marks each.
4. have qualified UGC-NET or JRF examination in the subject of Sociology by January 2021 but not prior to December 2016.
5. be in the range of 25-40 years as on 16 March 2021
6. have scored at least 60% marks in the recruitment interview.

If a candidate meets all the aforementioned conditions, except (3) above, he/ she may be treated eligible if he/ she has passed with at least 55% marks in 10th and +2 taken together.

Rahul Mehta, born on 21 February 1989, has acquired his post-graduation degree in Sociology from a UGC recognised University in Rajasthan obtaining 65% marks. He is an Honors graduate (Sociology) with 59% marks and has secured 245/500 in 10th and 365/600 in 10+2 examination. He has qualified UGC NET in the subject of Social Work in June 2018. He received 67% marks in the interview.

Based on the given information, decide the status of the candidate in the recruitment process by selecting your answer from the following options. You should not assume anything other than the information provided for the candidate.

1. The candidate should not be selected.
2. Inadequate information.
3. The candidate should be selected.
4. The candidate should be rejected based on the class 10th criterion.

Answer: The candidate should not be selected.

Question 11: Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement: During a national emergency, even civilians can be deployed into the war field.

Assumptions:

1. It shows the interest of civilians to safeguard their nation.
2. Due to insufficient military resources, the government has given an opportunity to their civilians.

1. Only assumption I is implicit
2. Only assumption II is implicit
3. Neither assumption I nor II is implicit
4. Both assumptions I and II are implicit.

Answer: Only assumption II is implicit

Question 12: A statement is given followed by two courses of action numbered I and II. Assuming that everything in the statement is true, decide which of the given courses of action logically follow(s).

Statement:

Many social-media celebrities advertise about intra-day trading in their videos about how easily anyone can make money. But they don't show the negative aspect of it, i.e., about losing money.

Courses of Action:

1. The government should ban advertisement of intra-day trading.
 2. The government should make certain guidelines to advertise these kinds of apps.
-
1. Only course of action II follows
 2. Only course of action I follows
 3. Both courses of action I and II follow
 4. Neither course of action I nor II follows

Answer: Only course of action II follows

Question 13: Following are the criteria required to be fulfilled for getting admission in a college for MSc Bioinformatics.

1. The candidate must have scored more than 70% marks in the Intermediate Science stream
 2. The candidate must possess a graduation degree with Zoology, Botany, Mathematics or Computer Science with minimum 65% marks
 3. The candidate should have cleared MSc entrance exam with at least 75% marks and interview with at least 65% marks
 4. The candidate should be at least 21 years and at most 28 years as on 1 July 2022.
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1. In case a candidate fulfills all the aforementioned criteria, except the required percentage as mentioned in (ii), but has scored 75% and above marks in the personal interview, then the case is to be referred to the Director of the college
 2. In case a candidate fulfills all the criteria, except the maximum age criteria as mentioned in (iv), but belongs to the SC/ST community the case is to be referred to the SC/ST cell for consideration.

Mr. Rakesh Ram, who belongs to the ST community, qualified his Intermediate Science examination with five-seventh of ninety eight % marks. He secured 77% marks in the written entrance exam and two-third of one 112% marks in the interview. He secured 67% marks in BSc. Zoology in 2019. He was born on 26.06.1994.

1. The case is to be referred to the Director of the college
2. The candidate is to be selected
3. The case is to be referred to the SC/ST cell for consideration
4. The candidate is to be rejected

Answer: The candidate is to be rejected

Question 14: In an institute, 90 students have opted for English, 70 students for Chemistry, 40 students for Mathematics, 30 students Economics, 10 students for both English and Chemistry, 5 students for both Economics and Mathematics, 20 students for both English and Economics. How many students have opted for English only ?

Answer:

Verbal Ability:

Question 1: Identify the error in the given sentence

I'm literally melting because it's the hottest month of June; it's 47 degrees out here

Options

1. Month of june
2. I'm literally melting
3. It's 47 degrees out here
4. Because it's the hottest

Answer – month of june

Question 2: Parts of the given sentence have been given as options. One of them contains a grammatical error. Select the option that has the error.

Negotiations have reached such a state as management and union leaders are apprehensive that their differences can no longer be reconciled.

1. can no longer be reconciled
2. Negotiations have reached
3. such a state as
4. that their differences

Answer – such a state as

Question 3: Each sentence in the given paragraph contains four underlined phrases. Three of these phrases have been correctly used and one has been incorrectly used, Select the phrase form among the following options that best replaces the INCORRECT phrase in the sentence.

The ability of the Sherpas to brave the vagaries of high altitudes has helped them to prosper and they have come along the way from being just porters to becoming mountaineers.

1. Come a long way
2. To be
3. Capacity
4. On higher altitudes

Answer – come a long way

Question 4: Select the most appropriate options to fill in the blanks in the given passage

The capacity of art (1) _____ a strong source of its contemporary appeal. We are conscious that, individually and collectively, we (2) _____; art can be valuable when it disrupts or astonishes us.

Options

1. (1) to shock remains for same (2) grown complacent
2. (1) to shock remains for same (2) may grow complacent
3. (1) to shock remains for some (2) may grow complacent
4. (1) to shock remains for some (2) may grown complacent

Answer – C

Question 5: In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

We lit the candles, and (A) _____ in our hands and knees. We went about two hundred yards, and then the cave opened up. Tom soon (B) _____ under a wall where there was a hole. We went along a narrow passage and got into a kind of room, all damp and sweaty and cold, and there we stopped. Tom said, "Now, we'll start this (C)_____ of robbers and call it Tom Sawyer's gang. Everybody that wants to join has got to take an oath, and write his name in blood." Everybody was (D) _____. So, Tom got out a sheet of paper he had written the oath on and read it.

1. (A) glided, (B) dropped, (C) crew (D) pleased
2. (A) crawled, (B) ducked, (C) band (D) willing
3. (A) hauled, (B) crossed, (C) herd (D) opposing
4. (A) sailed, (B) dipped, (C) pack (D) obedient

Answer – (A) crawled, (B) ducked, (C) band (D) willing

Question 6: In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Babies and Young children are sponges that soak in practically everything in their environments. It's true!! Even during story time, their minds are at work, (1) _____ all the language they hear and lessons the characters learn. (2) _____ to your child – at any age – will boost their brain development, and your bond, and so much more. And all it takes is a few books, motivation and a (3) _____ time. Reading provides a wonderful opportunity for you and your child to (4)_____. It's a nice way to spend time together and slow down during an otherwise hectic day.

Blank 1 (A) taking in, (B) taking up, (C) taking down, (D) taking off

Blank 2 (A) Speaking, (B) Reading, (C) Writing, (D) Listening

Blank 3 (A) little, (B) few, (C) bit, (D) Small

Blank 4 (A) join, (B) attach, (C) relate, (D) connect

Options

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

Answer – (1)-A (2)-B, (3)-A, (4)-D

Question 7: Select the option in which the underlined idiom has been used appropriately.

1. Overcoming student debt rapidly may provide a psychological win. However, it is often penny-wise, pound-foolish; coming at the expense of long-term financial security.
2. I just think that it is penny-wise and pound-foolish if we invest in having a detailed analysis done
3. A growing business always requires being penny-wise and pound-foolish.
4. The plans to cut funding are penny-wise and pound-foolish and hence fruitful.

Answer – A

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

My boss was caught red-handed while engaging in fraudulent activities and it's time for him to ____ for the upcoming inquisition by the board members. In the past, he has taken credit for my presentations, and now unbeknown to him, I am going to quietly ____ in the next board meeting, there is no chance of him escaping the truth and he will have to _____ its time that he gets his ____.

1. Face the music
2. Batten down the hatches
3. Comeuppance
4. Even the score

Options

1. 2413
2. 1423
3. 1243
4. 2134

Answer – 2413

Question 9: You never saw such a commotion (1) _____ up and down in a house, in all your life as when my uncle Podger undertook to do a job. A picture would have come from the frame-maker's and (2) _____ be standing in the dining room waiting(3) _____ to be put up and Aunt Podger would ask what was to be done with it and Uncle Podger would say, "Oh you leave that to me. Don't you, any of you worry yourselves about that. I'll do that." And then he would take off his coat and begin. He would send the girl out for six-penorth of nails and then one of the boys after her to tell what size to get and from that he would gradually (4) _____ work down and start and the whole house

1. 1. Up and down 2. Be standing 3. To be put up 4. Work down
2. 1. All over the place 2. Stand up 3. Put up with 4. Work back
3. 1. All over the place 2. Stand up 3. Put up with 4. Work back
4. 1. Run helter skelter 2. Hang up 3. To be in a fix 4. Work back

Answer:- (*incorrect question*)

Question 10: Select the most appropriate set of idioms that would fill in the blanks and complete the given passage

According to the report released by the Global Coral Reef Monitoring Network. Global warming has killed 14% of the world's coral reefs in a decade and more will be (1)____ if oceans keep rising in temperature. "Climate change is the biggest threat to the world's reefs", says Paul Hardsity, CEO of the Australian Institute of Marine science. These are clearly (2) _____ toward coral loss and we can expect these to continue if we (3)_____ and do nothing to reverse the change. As per the report Corals in many parts of the Asia and Gulf are amongst the (4)_____

Options

1. 1. Phased out 2. Scary still 3. Wait and watch 4. The worst off
2. 1. Puffed out 2. Unsettling trends 3. Wait for godot 4. Hard-hitting
3. 1. Wiped out 2. Unsettling trends 3. Sit over the problem 4. Hardest-hit
4. 1. Be kicked out 2. Markable trends 3. Wait on the fence 4. Hard-hitting

Answer – 1. Wiped out 2. Unsettling trends 3. Sit over the problem 4. Hardest-hit

Question 11: Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

1. While firms have always had significant market power over their workers, what has changed recently is the weakening of collective bargaining which allows workers to challenge powerful firms in wage negotiations.
 2. Some ascribe continued low industrial wages to the concentration of power in the hands of a few firms, but this is only part of the story.
 3. Since the 1980's, politicians have been freeing one side of the labor market in the name of competition – by restricting the power of trade unions – but doing very little about the power of firms.
 4. Wages are also affected by firms colluding tacitly: an estimated one in five jobs in the US is now covered by a "non-complete" clause, which restricts workers from moving to rival firms.
-
1. 3,4,2,1
 2. 2,3,4,1
 3. 2,4,1,3
 4. 3,2,1,4

Answer – 3,2,1,4

Question 12: Sentences of a paragraph are given below in jumbled order. Arrange the sentences in correct order to form a meaningful and coherent paragraph

1. In some places in China, the loss of insects is so great that armies of people have to fan out to pollinate crops by hand, in the absence of insects doing these jobs.
2. Insects populations worldwide are under threat: an estimated 40% of all the species are declining and one-third of them are endangered
3. Habitat loss often implies the destructions of rainforests, but the processes can be more mundane ; the conversion of a field of wildflowers into a mall would have the same effect for insects
4. The decline in the world's insect populations is bad news as they play critical roles in pollinating plants, breaking down waste in forest soil and forming the base of a food chain we rely upon

Options

1. 2, 4, 1, 3
2. 4, 3, 2, 1
3. 2, 3, 4, 1
4. 4, 1, 3, 2

Answer – 2,4,1,3

Question 13: For the four sentence (S1 to S4) paragraph below, sentences S1 and S4 are given, From P,Q, R and S, select the appropriate sentences for S2 and S3 respectively.

S1. Just last week, the Victorian Court of Appeal significantly reduced the sentence given to Akon Guode, a mother of three children who killed three of her children.

S2.

S3.

S4. Surveys have shown that almost half of Australian prison entrants report being affected by a mental disorder.

1. With that in mind, how are mental health issues taken into account during the criminal justice process?
2. The main reason for the 8 1/2 year sentence reduction was that the judge had not sufficiently taken Goude's major depression into account.
3. It is common for offenders to have mental health problems.
4. Each of these principles is mitigating, they point towards a more lenient sentence being given.

Options:

1. QR
2. RQ
3. PS
4. QS

Answer – QR

Question 14: Select the most appropriate meaning of the underlined idiom in the following sentence

The financial year closing has all of us snowed under.

Options

1. Busy
2. Feeling cold
3. Depressed
4. Clueless

Answer – busy

Question 15: Select the most appropriate meaning of the underlined idiom in the following sentence

Ritesh is a person who behaves like a servant by always obeying

Options

1. People pleaser
2. Yes-mam
3. Lackey
4. Submissive

Answer – Lackey

Question 16: Select the most appropriate option to fill in the blanks in the given passage.

A large number of industries (1) _____ post-independence India in the private, public, and joint sectors. Bhilai, Bokaro, Ranchi, Jamshedpur, Renukoot, etc, (2) _____ emerged as major centers during the first one and a half decades of independence

Options

1. (1) have been established in (2) emerged major as centers
2. (1) have been established in (2) emerged as major centers
3. (1) have established in (2) emerged as major centers
4. (1) have been established at (2) emerged as major centers

Answer – incorrect question.

Question 17: Given below is a paragraph with five sentences, which are presented in a jumbled order. Write down the best order (e.g ABCDE) which would form a meaningful unified, and coherent paragraph:

1. Extreme ghosting can be considered gaslighting-the practice of manipulating somebody psychologically so that they doubt their sanity or understanding of a situation
2. The practice of ending a relationship without explaining to the partner and avoiding any communication attempts is named ghosting. Orbiting is identical to ghosting but the disengager still visibly follows the former partner on social media.

3. It is psychologically abusive, and often undetectable within relationships and it is extremely hard to tell when it's happening to you which by design
4. The psychological and behavioral reactions to ghosting and orbiting pass-through different stages of reactions before closure happens in the form of acceptance.
5. Whether you've been gaslit, ghosted, orbited or (insert the latest damaging trend here) a therapist says having a name for the behavior you're experiencing can be beneficial for understanding what happened to you and figuring out a way to move past it.

Answer – BDACE

Question 18: For the four sentence (S1 to S4) paragraph below, sentences S1 and S4 are given, From P,Q, R and S, select the appropriate sentences for S2 and S3 respectively.

S1. One Kashmiri morning in the early spring of 1915, my grandfather hit his nose against a frost-hardened tussock of earth while attempting to pray.

S2._____

S3._____

S4. At that moment, he resolved never again to kiss earth for any god or man.

1. Three drops of blood plopped out of his left nostril, hardened instantly in the brittle air, and lay before his eyes on the prayer mat, transformed into rubies.
2. This decision, however, made a hole in him, a vacancy in a vital inner chamber, leaving him vulnerable to women and history.
3. Lurching back until he knelt with his head once more uptight, he found that the tears which had solidified too and at that moment, as he brushed diamonds contemptuously from his lashes.
4. Unaware of this at first, despite his recently completed medical training.

Answer – PR

Question 19: Read the given passage and answer the questions that follow

In his book *In Our Own Image* (2015), the artificial intelligence expert George Zarkadakis describes six different metaphors people have employed over the past 2,000 years to try to explain human intelligence.

In the earliest one, eventually preserved in the Bible, humans were formed from clay or dirt, which an intelligent god then infused with its spirit. That spirit explained our intelligence – grammatically, at least.

The invention of hydraulic engineering in the 3rd century BCE led to the popularity of a hydraulic model of human intelligence, the idea that the flow of different fluids in the body-the ‘humours’ – accounted for both our physical and mental functioning. The hydraulic metaphor persisted for more than 1,700 years, handicapping medical practice all the while.

By the 1500s, automata powered by springs and gears had been devised, eventually inspiring leading thinkers such as René Descartes to assert that humans are complex machines. In the 1600s, the British philosopher Thomas Hobbes suggested that thinking arose from small mechanical motions in the brain. By the 1700s, discoveries about electricity and chemistry led to new ones of human intelligence again largely metaphorical in nature. In the mid-1800s, inspired by recent advances in communications, the German physicist Hermann von Helmholtz compared the brain to a telegraph

Each metaphor reflected the most advanced thinking of the era that spawned it. Predictably just a few years after the dawn of computer technology in the 1940s, the brain was said to operate like a computer, with the role of physical hardware played by the brain itself and our thoughts serving as software. The landmark event that launched what is now broadly called cognitive science was the publication of Language and Communication (1951) by the psychologist George Mier. Mier proposed that the mental world could be studied rigorously using concepts from information theory computation and linguistics.

This land of thinking was taken to its ultimate expression in the short book The Computer and the Brain (1958), in which the mathematician John von Neumann stated tally that the function of the human nervous system is *prima facie* digital. Though he acknowledged that little was actually known about the role the brain played in human reasoning and memory, they drew parallel after parallel between the

components of the computing machines of the day and the components of the human brain.

Propelled by subsequent advances in both computer technology and brain research, an ambitious multidisciplinary effort to understand human intelligence gradually developed, firmly rooted in the idea that humans are, like computers, Information processors. This effort now involves thousands of researchers, consumes billions of dollars in funding, and has a vast literature consisting of both technical and mainstream articles and books. Ray Kurzweil's book *How to Create a Mind: The Secret of Human Thought Revealed* (2013), exemplifies this perspective, speculating about the algorithms of the brain, how the brain processes data', and even how it superficially resembles integrated circuits in its structure.

The information processing (IP) metaphor of human intelligence now dominates human thinking both on the street and in the sciences. There is virtually no form of discourse about intelligent human behavior that proceeds without employing this metaphor, just as no form of discourse about intelligent human behavior could proceed in certain eras and cultures without reference to a spirit or deity. The validity of the IP metaphor in today sold is generally assumed without question

But the IP metaphor is, after all, just another metaphor-a story we tell to make sense of something we don't actually understand, And like all the metaphors that preceded it will certainly be cast aside at some point- either replaced by another metaphor or in the end, replaced by actual knowledge.

Question 19: Is George Zeki postulating that God's creation of man is an artificial intelligence experiment?

1. By including the myth of the creation of the man while explaining human intelligence, it indeed appears that author believes that this is the first conjecture of the nature of intelligence
2. On the contrary the author is devoted in his belief that God's creation is so highly evolved that any hypothesis about man's intelligence being artificial is sacrilegious.
3. The author appears to be certain that the idea of intelligence is man made. In a sense, his opening sentences are blasphemous, in that the concept of God itself is in question.
4. As an example, the creation of man appears to be included just for shock value, to bring into focus men's enduring desire to give flights of fancy some arcane meaning

Answer: A

Question 20: The concept of ‘humors’ was prevalent in large swathes of the globe for nearly two thousand years. What do you infer was the reason for its unprecedented popularity?

1. From ancient Egypt, Mesopotamia and India medicine was an area of interest. Dhanvantari in 2000 BC and Hippocrates in 3BC described four basic elements making up man and solutions to ailments arising due to imbalance. These worked and served well for 1600-1700 years!
2. Common sense and the study of mechanics of liquids gave us the ‘humors’. Philosophers decoded the human body as made up of balanced hot, wet, cold and dry elements. This appealed to all as being the right deduction and hence its popularity.
3. **Periodic technological leaps to new theories about man, his health and his mind.** **Hydraulics gave us ‘humors’ and it served man well until the 1500s when machinery made man think that he too was a complex machine.**
4. Since man was naturally agrarian, and close to nature, their understanding of the self, mirrored nature as well. From birth to death, nature explained all ‘humors’. This appeal and knowledge outlived other quackery as it solved many problems.

Answer: C

Question 21: Would you infer this sentence to be satirical, critical, resigned or appraising – ‘Each metaphor reflected the most advanced thinking of the era that spawned it.’ Which option seems closest in meaning?

1. The author is seemingly resigned to the vagaries of man’s leaps of faith. His essay reflects the uselessness of man’s effort to bring meaning to his body and self.
2. When birth and death could not be explained by philosophers, the author appraises the mindset of philosophers, who proclaimed that they understood man’s physical and mental makeup with ample doubt.
3. Advancements in industry and engineering gave man an unnatural belief that he could understand his brain and his body. This arrogance was misplaced as he latched on to any discovery outside and compared his brain to it. The author is critical of man’s futile hunt.
4. The author is discreetly satirical about thinkers and philosophers down the ages, who, not having anything original to say, latched on to the newest scientific invention to bestow its values on man.

Answer – D

Question 22: Would you infer that IP is the acme of discovery about the nature of the brain?

1. Scientists may say that the function of the human nervous system is ‘prima facie digital’, but to justify research funding, they draw parallels between brains and computers. Yet, they admit in private that they are flummoxed how the brain reasons or retains memories.

2. The allegory that the human brain is a super computer is popular currency, and is rightly so. Trillion of neurons fire away in the brain, directing thousands of disparate activities, and above all thinking – ideas, plans and discoveries ! The brain is an incredible digital processor.
3. **The 21st century discovery of digital computing convinced scientists to propose that the human who can create such a machine has a far superior machine inside his head! The author is skeptical however, and opines that history is sadly repeating. We just don't know better!**
4. No for nothing have governments poured billions of dollars to understand the brain. It is the most complex machine known in history, It is a grey mass of fat, yet can remember facts of 100 years ago and plan to create memories out for 100 years hence.

Answer – C

Question 23: She sent him kites. They came in a trim balsa wood box-light as paper but large. At Canning's harbor, postmen admired the alien markings on its wrapper. 'From where?' asked a new recruit. The experienced ones smiled. Like a giant street sign, it rode on a cycle rickshaw, the hooting puller struggling to clear its delicate edges from the start of the dock. Then, it sat on the ferry, all tidy and proper held by a proud mailman. It crossed the Matla without spilling a drop on its canvas-brown cover neatly tied with black cord. Chattering kids formed a circle around it peasants gawked over their drooping shoulders, even the bearded sadhu abandoned contemplation of waves for a quick glance. It was a safe passage barring a few jabs from little grimy fingers checking the box for what was inside. At Shonal the landing was tricky-the swollen river had drowned the island's meager jetty. Men formed a human chain on the slippery bank and the box passed from one pair of outstretched arms to another, pausing briefly at each transfer. When it reached the dry shore, an eager crowd cleared its way to yet another rickshaw. From there it moved smoothly through village paths lined with the swaying tamarind and neem, ignored by sleeping dogs, treated by more children, creaking slightly at uneven bends.

His aunt received the box like a returning bride. Waiting with neighbors in front of their yellow-and-white home, the only one in cement and brick, she let the younger women welcome it indoors-to his room. There, it sat all afternoon in the cone of a shadow listening to the purr of mating cats, in the company of an unmade bed and a dresser full of knick-knacks, facing a painting of a rising sun over a flaming volcano.

Entering the room, Snehamoy closed the door behind him, feeling faint from the heat and the day's excitement. Fellow teachers arriving late had informed him of a certain box that bore his name -in English, along with markings in an alien alphabet-making its way over the Matla. Finishing his lecture, he had announced a snap test in arithmetic, giving him time to think. Exactly at four, after the bell had rung announcing the end of the school day, he had mounted his cycle and made his way back through the rustling trees. Once inside, he stood facing the box propped up by his bed like a timid visitor, then started unwrapping the canvas-brown cover just as impatiently as he had opened his wife's first letter from Japan, twenty years ago, similarly marked with two alphabets.

1. According to the passage, which of the following options is true?
2. Snehamoy's gift was secured safely in a paper box, crossed the Matla river in a ferry and traveled a long distance before ultimately reaching its ultimate destination.
3. Snehamoy had already gotten to know about the gift from Japan even before he reached home and had grown impatient to go back home.
4. Shehamoy's gift had been opened first by his aunt along with their neighbors who had gathered to see the strange object from an alien land.
5. After crossing the Matla river, a great human chain was formed till Snehamoy;s house to transport the huge gift which otherwise would have been impossible to be delivered.

Answer – A

Question 24: Which of the following statements does NOT hold good as per the passage?

1. Few of Snehamoy's colleagues were the first one to inform him about the arrival of the gift even before he could actually go home and see it.
2. There are instances in the narrative when Sheamoy's gift has been personified and has been given a human touch as it is not a material thing but actually his wife.
3. Even though two decades have passed from the first time that Snehamoy had received any communication from the alien land, he was still excited in the similar manner.
4. There was no one in the locality who was aware of the place from where Snehamoy;s gift had arrived and therefore everyone was curious.

Answer – D

Question 25: On the basis of the information given in the passage, what may be deduced as the most correct option?

1. Snehamoy lived in a remote place far away from the bustles of urban life and his immediate environment was still untouched by the so-called refinement of modern living.

2. Snehamoy's gift crossed various hurdles on the long way from Japan to his small village. Shoani, on the shores of the river Malta and miraculously reached the yellow and white thatched house, its ultimate destination.
3. Even though Snehamoy received giant kites from his wife in Japan regularly, people all around his locality were curious because such kites were not available at their palace.
4. Snehamoy's gift crossed the post office, was transported to the ferry on a cycle rickshaw, crossed the river, was taken down by a lot of people, was transported again by another rickshaw and in the process was jabbed by curious people and ultimately reached its destination in shambles.

Answer – A

Advanced Quantitative:

Question 1: The following data shows the marks obtained by students in a class.

39	30	5	65	5
21	5	65	89	30
91	30	64	64	91
15	89	48	30	64
85	30	69	51	32
85	48	91	30	28
68	48	65	30	65
35	65	48	48	15
91	30	91	48	71
15	65	48	71	38

Find the mode of the class marks of the students.

1. 31
2. 65
3. 48
4. 30

Answer: 48

Question 2: The median of the class mark is (For image- refer Q.1):

1. 51
2. 50
3. 48
4. 49

Answer: 51

Question 3: Find the arithmetic mean of the marks of the students (For image-refer Q.1):

1. 52.5
2. 49.26
3. 50.3
4. 52.3

Answer: 50.3

Question 4: Eight people A, B, C, D, E, F, G and H sit around a round table, each facing the centre of the table. If A does not sit adjacent to B, then in how many ways they can sit around the table?

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

Answer: 480

Question 5: If x, y, z are positive integers such that $x^8 = y^6$ and $x^3 = z^5$ and $y^{27} = z^m$, then what is m ?

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

Answer:

Question 6: If the roots of the quadratic equation $x^2 + ax + b = 0$ are $\tan 15^\circ$ degree and $\tan 30^\circ$ degree, respectively, then the value of $2+b-a$ is:

1. 12
2. 1
3. 0
4. 3

Answer:3

Question 7: Consider a right circular cylinder $(x-1)^2 + (x-2)^2 = 16$. What is the volume of the portion of the cylinder bounded by the plane $y=0$ and $x+y+z=10$?

1. 108 π units
2. 96 π units
3. 116 π units
4. 112 π units

Answer:

Question 8: Let A and B be two independent events. If the probability that both A and B happen is $1/30$ and the probability that neither A nor B happens is $2/3$, then the values of $P(A)$ and $P(B)$, respectively, are:

1. $3/10$ and $1/9$
2. $1/5$ and $1/6$
3. $2/5$ and $1/12$
4. $1/15$ and $1/2$

Answer:

Advanced Reasoning:

Question 1: 1, 12, 3, 4, 15, 21 and 6, are names of people sitting in a row and all are facing towards north. 15 is in the center, and 1 and 12th at the ends 3 is sitting on the left of 15. 21 is sitting right of the one 6 change position with 12 and 12 sitting before 6. Then who is Sitting on the night of 15? (**Might be error of 12 typed 2 times**)

Answer: 6

Question 2: If $B = 4$ and $F = 12$ Then $PUT =$

Answer: $P = 16 * 2 = 32$

$U = 21 * 2 = 42$

$T = 20 * 2 = 40$

Hence $PUT = 114$

Question 3: A statement is given followed by two courses of action numbered I and II. Assuming that everything in the statement is true, decide which of the given courses of action logically follows:

Statement:

In the COVID-19 pandemic, it was seen that very few doctors were there for a huge mass of people

Courses of Action:

1. The government should open more medical institutes.

2. The government should encourage private firms to invest in the medical sector
 1. Only course of action II follows
 2. Only course of action I follows
 3. Both courses of action I and Action II follows
 4. Neither Courses of action I nor action II follows

Answer: Only course of action I follows

Question 4: Following are the criteria to get a job in a drug firm

The applicant must:

1. have passed graduation with a Science subject with at least 60% of marks.
2. have completed 21 years (male) and 20 years (females) of age as on or before July 2016
3. iii. pay deposit as follows

Marks at graduation	If son/daughter of staff	If not son/daughter of staff
75% and above	10,000	12,000
61% to 74%	12,000	15,000
60% and below	15,000	20,000

However,

1. If the candidate has secured more than 90% marks at graduation, his/her case should be referred to the Managing Director for consideration for further concession on the deposit.
2. In case of SC/ST candidates, the deposit payable is 25% less in each of the cases given in the above table
3. If the candidate remits the amount of deposit immediately on the date of the first call, the candidate can be selected provided he/she fulfills conditions (i) and (i)

4. If on the date of the first call, the amount of deposit brought by the candidate eligible as per (i) and (ii) is less than the total amount required but more than three-fourth, the candidate can be provisionally selected provided he deposits his balance amount within the next ten days.
5. if on the date of first call, the amount of deposit brought is less than three-fourth but more than half, the candidate though eligible as per (i) and (ii) can be referred to the Managing Director.
6. If on the date of the first call the amount of deposit brought is less than half, the candidate though eligible as per (i) and (ii),cannot be selected

On the basis of the aforementioned criteria, decide which of the following options is correct for the given candidate.

Prateek is a graduate in Science with 79% marks. He is a general category candidate and his father is a class one officer. His date of birth is 18 November 1994. He has brought a deposit of 8,000/-

1. The candidate cannot be selected.
2. The candidate can be selected.
3. The candidate can be provisionally selected.
4. The candidate's case should be referred to the Managing Director.

Answer: The candidate can be provisionally selected.

Question 5: A statement is given followed by two courses of action I and II. Assuming that everything is true, decide which of the given courses of action logically follow(s).

Statement:

Every year, many engineers graduate in India, but they are not getting jobs

Courses of Action:

1. The government should change the engineering curriculum to primarily focus on skill building instead of just bookish knowledge
2. Students, while pursuing engineering, should make an extra effort to build skills
3. Only course of action I follows
4. Both courses of action I and II follow
5. Only course of action II follows

6. Neither course of action I nor II follows

Answer: Only course of action II follows

Question 6: In a certain code language, Words in capital letters in column I are written in small letters in column II but the letters in column II are jumbled up.

Column 1	Column 2
TONE	fbcz
FACTOR	sbkdzm
RAP	tmd
HEAT	mzpc

Decode the language and select the correct code (coded letters in the proper order) for the word PARENT

1. dcmzft
2. tmsfcz
3. tmdcfz
4. kmdcfz

Answer:

Question 7: City police received a complaint from one of the foreign residents that he was bullied and manhandled by some people at a public place in the evening. During the investigation, one eye witness was located, who narrated about the incident and reported that he saw four people surrounding the foreigner and out of these four, one was holding the foreigner by his hair and the rest were all laughing at him. Should the police arrest the four persons identified by the eye witness and the victim foreigner?

Answer: Yes

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

Question 8: In a cafeteria, eight girls, Keerthi, Swetcha, Uma, Vani, Pari, Deepa, Esha and Harini, are sitting around a circular table facing the center. Keerthi is sitting second to the left of Uma and third to the right of Swetcha. Deepa and Pari are the immediate neighbours of each other and one of them is an immediate neighbour of Keerthi. Vani is sitting second to the right of Esha. Harini is sitting second to the left of Deepa.

Which of the following girls is sitting to the immediate right of Vani?

Answer: Uma

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

Question 9: 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:

Five persons, Prakruthi, Qubal, Xavier, Yamuna and Zeol, are sitting around a circular table, with all of them facing towards the centre. Who sits to the immediate left of Qubal?

Statements:

1. Prakruthi sits third to the right of Qubal. Xavier sits third to the right of Prakruthi.
 2. Qubal sits to the immediate left of Xavier, who sits second to the left of Prakruthi. Yamuna does not sit adjacent to Qubal.
-
1. Data in statement I alone is sufficient to answer the question, while data in statement II alone is not sufficient to answer the question.
 2. Data in both statements I and II together are not sufficient to answer the question
 3. Data either in statements I and II together are not sufficient to answer the question
 4. Data in statement II alone is sufficient to answer the question, while data in statement I alone is not sufficient to answer the question.

Answer:

Question 10: Yukti, Sonal, Rashi, Mahak, Anjali and Kuhu are girls living in the same society. No two girls are of the same age, but all have birthdays on the same date. The youngest is seven years old and the oldest is Anjali is twelve years old. Kuhu is somewhere between Sonal and Mahak in age. Yukti is older than Sonal. Rashi is older than Mahak.

Which of the following is NOT possible?

1. Kuhu is 8 years old.
2. Kuhu is 10years old
3. Mahak is 10years old
4. Kuhu is 9 years old.

Answer: Kuhu is 10years old

Advanced Coding:

Question 1: Alice and her friends are playing a game of verbal Kho-Kho. Alice is acting as a mediator, and the rest of the N friends are seated on N chairs, one each.

Alice starts by providing a paper with a single digit number to the friend present at number 1. Let's denote friends by F, where F will be of size N.

$F[1] \dots F[N]$ represents friends seated respectively.

After receiving the paper with a digit, $F[1]$ will enact and try to tell $F[2]$ without speaking.

Similarly, $F[2]$ will communicate to the next person i.e., $F[3]$.

This continues until the last person $F[N]$ understands the digit.

Finally, the last person will write the digit on a separate paper and will give it to Alice

Alice will compare both the papers. If the digits are similar then, Alice will give a T-shirt to each friend.

However, if the digits do not match then Alice will ask digits from each friend, and she will offer the T-shirts to only the ones who understood the digits correctly.

Given N number of friends and digit array D, denoting the digit understood by each friend F. find out how many of Alice's friends have not enacted well OR did not understand the enactment by the previous friend correctly.

Example 1:

3 -> N, number of friends

4 4 4 – array D. denoting digit understanding by N friends

Output:

0

Explanation:

All of them have understood digits correctly.

Example 2:

5

1 2 3 2 2

Output:

4

Explanation:

1st, 2nd, 3rd and 4th friends could not enact OR understand the enactment.

Constraints:

- $1 \leq N \leq 10000$
- $0 \leq D[i] \leq 9$

The input format for testing:

- First-line Contains a Positive Integer denoting N
- Next line: Contains N elements of the array space separated denoting array D .

The Output format for testing:

Output the single integer denoting how many have not enacted well OR have not understood the enactment.

Python

```
n = int(input())

arr = list(map(int, input().split()))

print(n - arr.count(arr[0]))
```

C

```
#include<stdio.h>
```

```
int main()
{
    int n, z=0;
    scanf ("%d", &n);
    int arr[n];
    for(int i=0;i<n;i++)
    {
        scanf ("%d", &arr[i]);
    }
    for(int i=1;i<n;i++)
    {
        if(arr[0]==arr[i])
            z++;
    }
    printf ("%d", n-z-1);

    return 0;
}
```

C++

```
#include<iostream>
using namespace std;
```

```
int main()
{
    int n, z=0;
    cin>>n;
    int arr[n];
    for(int i=0;i<n;i++)
    {
        cin>>arr[i];
    }
    for(int i=1;i<n;i++)
    {
        if(arr[0]==arr[i])
            z++;
    }
    cout<<n-z-1;

    return 0;
}
```

Java

```
import java.util.*;
import java.util.Scanner;
public class Main
{
```

```
public static void main(String[] args)
{
    Scanner sc = new Scanner(System.in);

    int n = sc.nextInt();

    int[] arr = new int[n];

    int i;

    for (i = 0; i < n; i++)

    {
        arr[i] = sc.nextInt();
    }

    int count = 0;

    for (i = 0; i < n; i++)

    {
        if (arr[i] == arr[0])
    {
        count++;
    }
}
System.out.println(n-count);
}
```


