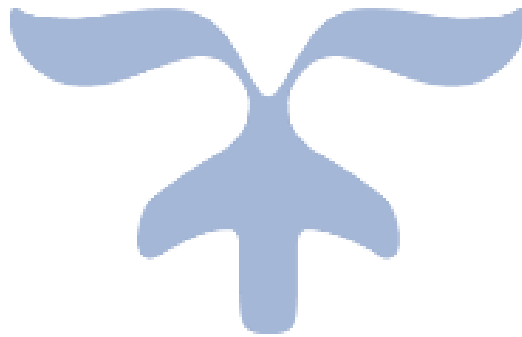


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TCS NQT PREVIOUS YEAR QUESTIONS WITH SOLUTIONS



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TCS NQT Online Test Pattern

The pattern that was followed for the TCS NQT was as follows.

Section Order	Section	# Qs	Duration (minutes)
1	Numerical Ability	26	40
2	Verbal Ability	24	30
3	Reasoning Ability	30	50
4	Programming Logic	10	15
5	Coding	2	45

Syllabus

The following was the syllabus which was tested in the slot.

Numerical ability:

- [Data Interpretation](#)
- [Statistics](#)
- [Time and Work](#)
- [Mensuration](#)
- [Number System](#)
- [Time, Speed and Distance](#)
- [Ratio and Proportions](#)
- [Linear Equations](#)
- [Simple Interest and Compound Interest](#)
- [Percentages](#)
- [Profit and Loss](#)

Verbal Ability:

- [Reading Comprehension](#)
- [Passage Completion - Missing words \(Cloze passage\)](#)
- [Passage Completion - Missing sentences](#)
- [Error spotting](#)

- [Phrasal verbs](#)
- [Subject-Verb agreement](#)
- [Pronoun-Antecedent agreement](#)
- [Sentence Completion](#)
 - [Phrasal verbs](#)
 - [Prepositions](#)
 - [Pronouns](#)
- ? [Knowledge of Formal/Informal language](#)
- ? [Sentence improvement](#)
- ? [Parajumbles](#)

Reasoning Ability:

- ? [Attention to detail](#)
- ? [Unboxing a cube](#)
- ? [Data Arrangements](#)
- ? [Coding and Decoding](#)
- ? [Cuts and unfolds](#)

- ? [Venn diagrams](#)
- ? [Blood relations](#)
- ? [Data Interpretation](#)
- ? [Visual reasoning](#)
- ? [Data sufficiency](#)
- ? [Syllogisms](#)
- ? [Statements and Assumptions](#)
- ? [Alphabet series](#)

Programming MCQ's:

- ? [Operators](#)
- ? [Looping statements](#)
- ? [Control statements](#)
- ? [Arrays](#)
- ? [Strings](#)
- ? [Functions](#)
- ? [Object Oriented Programming \(OOPS\)](#)

- ? [Standard Template Libraries \(STL\)](#)
- ? [Object Modeling](#)
- ? [Compiler Design](#)
- ? [Threading](#)
- ? [Data Structures: Linked List, Stack, Queue, Trees and Graphs](#)
- ? [Recursion](#)
- ? [Pseudocoding](#)
- ? [Algorithms](#)
- ? [Basic Software Development Cycle](#)
- ? [Collections](#)
- ? [Exception handling in JAVA](#)

Coding:

- ? [Fundamentals of Programming - Conditional and looping statements, Arrays, Strings.](#)

Slot Analysis

- ? [The assessment platform used was TCS iON.](#)
- ? [Most of the questions in Numerical Ability did not have the correct answer in the options. In this case, please take the liberty to mark any option.](#)
- ? [As already revealed during the DRC and by FACE Prep, both intra-sectional and inter-sectional navigation were not possible.](#)
- ? [Every question was mandatory, and only upon completing a question would you be able to go to the next question.](#)

- ? [Revisiting of answers already submitted is not possible.](#)
- ? [There was no negative marking.](#)
- ? [All test-takers within the slot got the same questions.](#)
- ? [The test was NOT Adaptive, for a lot of other websites incorrectly communicated this to students. FACE Prep accurately pointed out that the test was not adaptive – just that the test had no intra-sectional and inter-sectional navigation.](#)
- ? [There was 100% repetition of topics, as accurately predicted by FACE Prep.](#)
- ? [There was the presence of an on-screen calculator, which candidates could use.](#)
- ? [As clearly pointed out in the test instructions by TCS, if one had to do rough work, it must be visible clearly in the webcam that one is doing rough work and not performing any malpractice. This has also been accurately pointed out by FACE Prep earlier.](#)
- ? [A few questions from yesterday's test got repeated today](#)
- ? [There were two Fill in the Blanks type questions in the programming MCQs section.](#)
- ? [As opposed to what was predicted earlier, an error log is generated in the compiler in the event of Compilation error. It mentions what error and where the error is \(line number\)](#)
- ? [Most students have been complaining about the Coding Compiler not working properly on Python. What doesn't work is the tab key for indentation. Instead, please use the space bar. Several students have been able to use this tactic to compile successfully.](#)

Questions with Answers:**Numerical Ability**

Q1. A sales representative's commission is 6% on all sales up to Rs.15000 and 5% on all sales exceeding this. He remits Rs.47350 to his company after deducting his commission. What were the total sales?

- A. Rs.50000
- B. Rs.49000
- C. Rs.47500
- D. Rs.50500

Answer: Option A

Q2. When the List Price (LP) of an article is fixed at 30% above the Cost Price (CP), and while selling the same, it is subject to a discount of $x\%$, the profit percentage is 80% of that when the LP is fixed at 25% above the CP and the discount is 16%. What is the value of x ?

- A. 3.6
- B. 3.25
- C. 3
- D. 3.84

Correct Answer: 20

Q3. The ratio of the average speeds of two sprinters A and B is 8:7. In a racing track if B starts at a distance 2m ahead of A, at what distance (in metre) from the starting point of B would A catch up with B?

- A. 2.8
- B. 1.5
- C. 0.4
- D. 4.4

Correct answer: 14

Q4. A sum invested in compound interest (CI) at a certain rate for three years earns the same interest as it would earn by way of an investment in simple interest (SI) at the rate of 18.2% for four years. How much more or less is the percentage rate in case of the CI than that in the case of the SI?

- A. 21.25
- B. 18.43
- C. 16.52
- D. 20.63

Correct answer:

+1.8%

Q5. With symbols having their usual meanings the mean of the data given below is 39.2.

x	36	40	35	44
f	10	13	12	

What is the missing frequency?

- A. 125.2
- B. 124.6
- C. 124.2
- D. 123.8

Correct answer: 15

Q6. What is the fourth proportional of the mean proportionals between (4, 6.25); (0.0027, 300); (1.2 X 10⁻³, 3)?

- A. 4.8
- B. 48
- C. 36
- D. 3.6

Correct answer: 43.92

Q7. What is the mean Deviation from the median for the data given below? Data: 34, 46, 28, 48

- A. 64
- B. 53
- C. 66
- D. 51

Correct answer: 8

Q8. In a competitive exam, 5 marks are awarded for every correct answer and for every wrong answer, 2 marks are deducted. Sathwik and 32 marks in this examination. If 4 marks has been awarded for each correct answer and 1 mark had been deducted for each incorrect answer, Sathwik would have scored 34 marks. If Sathwik attempted all the questions, how many questions were there in the test?

- A. 20
- B. 14
- C. 12
- D. 26

Answer: Option D

Q9. Raju lends Rs. 3000 to Bharath and a certain sum to Charan at the same time at 6% per annum simple interest. If after 5 years, Raju altogether receives Rs. 1650 as the interest from Bharath and Charan, what is the sum lent to Charan?

- A. Rs. 2500
- B. Rs. 2750
- C. Rs. 3250
- D. Rs. 3300

Answer: Option A

Q10. What is the difference between the Range and the Standard Deviation of all the natural numbers between 81 and 90, both inclusive?

- A. 7
- B. 11
- C. 9
- D. 8

Correct answer: 7.13

Q11. What is the simplified value of:

$$1.782+1$$

+

$$1.24$$

$$1-0.343$$

?

$$2.19$$

- A. 0.4
- B. 0.08
- C. 0.8
- D. 0.04

.

Correct Answer: 2.54

Q12. The area of a sector, with central angle 150, of a circle is 231 sq cm. If $\pi = 22/7$, what is the circumference (in cm) of the circle?

- A. 2.8
- B. 1.45
- C. 2.1
- D. 2.45

Correct answer: 264

Q13. The total surface area of a solid hemisphere is 75 times the area of a circle whose diameter is 6 cm. What is the radius (in cm) of the hemisphere?

- A. 80π
- B. 120π
- C. 100π
- D. 50π

Correct Answer: 15

Q14. A takes 10 days less than B to complete a work, and together they do it in 12 days. In how many days can B alone do the work?

- A. 9
- B. 12
- C. 10
- D. 6

Correct Answer: 30 days

Q15. A shopkeeper calculated his profit as 12% with the selling price of an article as the base. What would have been his actual profit percentage if the selling price was 20% more?

- A. 20
- B. 24
- C. 23
- D. 21
- E.

Correct Answer:

36.66%

Q16. The sum of ages of two friends is 74. After one year the ratio of their ages will be 9:10. What was the ratio of their ages nine years ago?

- A. 4:3
- B. 3:2
- C. 13:12
- D. 7:6

Correct Answer: 13:15

Q17. The table below presents the data of atmospheric pressure (in area of mercury) at a place at four different times of the day during four days P, Q, R, S. A steady rise in atmospheric pressure indicates a fair weather. On which of the given days was the weather fair?

Time/Day	A	B	C	D
0600	742	765	754	761
1000	778	767	755	770
1400	762	745	757	775
1800	760	756	758	774
2200	768	752	760	762

A. 324:283

B. 81:73

C. 326:293

D. 28:25

Correct answer: C

(Also please note that Days are marked as P, Q, R, S in the question but in the options, it is given as A, B, C, D)

Q18. In case of frequency distribution for ten continuous classes, the class width is 4 and the lower class limit of the lowest class is 8. What is the upper class limit for the highest class?

- A. Both R&S
- B. R Only
- C. Neither R nor S
- D. S only

All the answer options are wrong. Correct Answer: 48

Q19. What is the simplified value of:

$$3 \quad 1 \quad 2 \quad 1 \quad 5$$

$$(2 + 2 \text{ of } 5 - 13) / (5 \times)?$$

$$4 \quad 2 \quad 25 \quad 21$$

$$12 \quad 19$$

$$7 \quad 2$$

$$A. \quad 4$$

$$B. \quad 5$$

$$C. \quad 6$$

$$D. \quad 2$$

Answer: Option B

Q20. 10 men can complete a work in 8 days and 10 women take 12 days to complete the same work. How many days will 3 men and 6 women take to complete the same work?

$$3$$

$$A. \quad 11$$

$$7$$

$$3$$

$$B. \quad 9$$

$$73$$

$$C. \quad 10$$

$$7$$

3

D. 12

7

Answer: Option A

Q21. A retailer purchases several pens of same cost for Rs.384 and then sells some of them for Rs.114 at no loss or gain. What is the least possible number of pens that he will be left with?

A. 9

B. 7

C. 8

D. 3

All the answer options are wrong. Correct answer: 45

Q22. The percentage marks scored by two students A and B at four consecutive monthly tests are depicted in the Bar Graph given below. In which month is the percentage marks scored by B 40% more than that by A?

A. 2014

- B. 2013
- C. 2012
- D. 2015

All the options are wrong Correct Answer: August

Verbal Ability

Q1. For the four sentence (S1 to S4) paragraph given below, sentences S1 & S4 are given. From the options P, Q and R, choose appropriate sentences for S2 & S3 respectively.

S-1: Gianni Crea, the head key-keeper of the vatican, is intimately familiar with the contours of history

S-2:

S-3:

S-4: They traverse a 4.6 mile route through the museums which see up to 28,000 visitors per day.

P. Almost every morning for the past 6 years he's opened the doors to the vatican museums.

Q. Crea and the team of 10-five each on the morning and evening shifts-open and close 300 doors everyday, mobilizing about 700 employees along with them. R. Crea has worked in the Vatican for 20-years and as head key-keeper for six.

- A. QR
- B. QP
- C. RP
- D. PQ

Answer: Option D

Q2 to Q3. Direction: Read the passage given below and answer questions:

When behavioral ecologist Liz Derryberry saw a news report of coyotes crossing the Golden Gate Bridge in March, she immediately thought of her birds. For over a decade, Derryberry has studied the white-crowned sparrow and how urban noise has disrupted and degraded the species' ability to communicate.

With most San Franciscans staying at home due to the coronavirus pandemic, she decided to seize an unprecedented opportunity to study how this small, scrappy songbird responded when human noises disappeared.

"I realized we gotta do this, and we gotta do this now," she says.

By recording the species' calls among the abandoned streets of the Bay Area in the following months, Derryberry and colleagues have revealed that the shutdown dramatically improved the birds' calls, both in quality and efficiency. Male birds in particular rely on their songs to defend territory and find mates.

"The songs didn't change as much as we predicted—they changed even more," says Derryberry, of the University of Tennessee, Knoxville. "It highlights just how big of an effect noise pollution has."

The research, published today in Science, is among the first to scientifically evaluate the effects of the pandemic on urban wildlife. It also adds to a burgeoning field of research into how the barrage of human-made noise has disrupted nature from ships drowning out whale songs to automobile traffic jamming bat sonar.

Q2. What purpose do the calls of the birds serve?

- A. They help them locate other birds.
- B. They show them the direction during flight.
- C. They help the male secure their territory.
- D. They assist them in finding food.

Answer: Option C

Q3. The passage is primarily about the impact of the pandemic on .

- A. whales**
- B. sparrows**
- C. coyotes**
- D. bats**

Answer: Option B

Q4. The results of Derryberry and her companion's research were unexpected because .

- A. The bird songs became louder and better when human noises reduced.**
- B. The bird songs became fewer and less audible when fewer humans watched them.**
- C. It revealed that birds did not change their songs or their other habits.**
- D. It showed that birds migrated from their original homes due to the pandemic.**

Answer: Option A

Q5. Which word does the writer use to describe the extent of research on normal pollution?

- A. Disrupted**
- B. Improved**
- C. Burgeoning**

D. Drowning

Answer: Option C

Q6 to Q9. Direction: Read the passage given below and answer questions: Archaeology is based on the scientific method. Archaeologists ask questions and develop hypotheses. They use evidence to choose a dig site, then use scientific sampling techniques to select where on the site to dig. They observe, record, categorize, and interpret what they find. Then they share their results with other scientists and the public.

Underwater archaeologists study materials at the bottom of lakes, rivers, and oceans. Underwater archaeology encompasses any prehistoric and historic periods, and almost all sub- disciplines as archaeology. Artifacts and features are simply submerged.

Artifacts studied by underwater archaeologists could be the remains of a shipwreck. In 1985, National Geographic Explorer-in-Residence Dr. Robert Ballard helped locate the wreck of RMS Titanic, which sank in the North Atlantic Ocean in 1912, killing about 1,500 people. Ballard and other scientists used sonar to locate the wreck, which had been lost since the ocean liner sank. By exploring Titanic using remote-controlled cameras, Ballard and his crew discovered facts about the shipwreck (such as the fact the ship broke in two large pieces as it sank) as well as hundreds of artifacts, such as furniture, lighting fixtures, and children's toys.

Underwater archaeology includes more than just shipwrecks, however. Sites include hunt camps on the continental shelf of the Gulf of Mexico, and portions of the ancient city of Alexandria, Egypt, submerged due to earthquakes and sea level rise.

Q6. Which option gives the correct order of the process followed by archaeologists?

- A. Observe, apply evidence, record, dig a site, ask questions, interpret, share, categorize, develop hypotheses.
- B. Ask questions, develop hypotheses, apply evidence, dig a site, observe, record, categorize, interpret, share.
- C. Dig a site, interpret, ask questions, observe, apply evidence, categorize, share, develop hypotheses, record.

- D. Categorize, develop hypotheses, apply evidence, ask questions, record, dig a site, interpret, observe, share.

Answer: Option B

Q7. What significant information did Dr. Robert Ballard discover about the RMS Titanic?

- A. That the liner had broken into two while sinking.
- B. That 1500 people were on board the liner.
- C. That the ship had sunk in the North Atlantic ocean.
- D. That children's toys, furniture, and artifacts had also sunk with the ship.

Answer: Option A

Q8. Which of the following are underwater archaeologists most unlikely to find?

- A. Evidence of previous excavations
- B. Artifacts and prehistoric features.
- C. Portions of an ancient city.
- D. Remains of a shipwreck.

Answer: Option C

Q9. According to the passage, which was the research technology used by Underwater Archaeologists to get the most effective visual feedback of the artifacts?

- A. Remote controlled cameras
- B. Miniature submarines
- C. Sonar Technology
- D. Scuba diving teams with cameras

Answer: Option C

Q10. The following sentence can be revised into one better sentence. Choose the sentence that is the best revision:

I was at the fair.I got lost.I got scared.

- A. I got lost at the fair and was scared.
- B. I went to fair and got scared as I was lost
- C. I am scared after I am lost at the fair
- D. I am lost at the fair so I am too scared

Answer: Option A

Q11. Which of the following sentences does NOT use informal language?

- A. I sincerely apologise for the oversight.
- B. Can we sort this out together?
- C. Thanks a lot for sharing this information.
- D. This is a high-priority account, take care!

Answer: Option A

Q12. For the four-sentence (S1 to S4) paragraph below, sentences S1 and S4 are given. From the options P, Q and R, choose the appropriate sentences for S2 and S3 respectively.

S-1: Finland's Helsinki Airport is using a unique method for screening arriving passengers for COVID-19 - specially-trained dogs that can detect the virus in humans

- even before they show any symptoms S-2:

S-3:

S-4: According to the press release: "The dog will perform its work in a separate booth so that the fear of spreading the infection is reduced."

- P. Those taking the test will swipe their skin with a test wipe and drop it into a cup, which is then given to the dog.
- Q. Upon arrival at the airport, passengers may be asked to volunteer for the program, and if they agree, are given a wipe to collect a sweat sample.
- R. More dogs are currently being trained and should be available for the screening procedure in a few months.
- A. RP
- B. RQ
- C. PQ
- D. QP

Answer: Option D

Q13. Select the most appropriate options to complete the sentence.

While MSMEs are waiting the release around Rs. five lakh crore pending payments, no major relief has come their way so far.

- A. to, with
- B. of, at
- C. for, of
- D. from, on

Answer: Option C

Q14. Select the most appropriate option to fill in the blank.

The security guard leave ended two days ago has not yet reported to work.

- A. Whose
- B. Who
- C. Whom
- D. Which

Answer: Option A

Q15. One part of the sentence below may contain error. Identify the part. If there is no error, choose 'No error'.

Either Rahul or Rohit accompany their grandmother and grandfather whenever they go to the hospital

- A. Either Rahul or Rohit accompany
- B. their grandmother and grandfather
- C. No error
- D. whenever they go to the hospital

Answer options were wrong

Correct Answer: Option A and Option B

Q16. For the four-sentence (S1 to S4) paragraph below, sentences S1 and S4 are given. From the options P, Q and R, choose the appropriate sentences for S2 and S3 respectively.

S-1: COVID-19 spreads mainly among people who are in close contact (within about 6 feet) for a prolonged period.

S-2:

S-3:

S-4: Since people can spread the virus before they know they are sick, it is important to stay at least 6 feet away from others, when possible, even if you--or they--do not have any symptoms.

P. Social distancing is especially important for people who are at higher risk for severe illness from COVID-19.

Q. Spread happens when an infected person coughs, sneezes, or talks, and droplets from their mouth or nose are launched into the air and land in the mouths or noses of people nearby.

R. The droplets can also be inhaled into the lungs.

A. PQ

B. RP

C. RQ

D. QR

Answer: Option D

Q17. You are going to read a text about an interesting initiative. Some sentences are missing from the text. Choose from the list(A-C) the most appropriate sentence for each gap (1-2) in the text. There is one extra sentence that you do not need to use.



This year's Covid-19 pandemic has introduced a wide swath of Americans to the joys of gardens and gardening.(1)

American's Rose Center is seeking Volunteers to participate during its upcoming Volunteer Days from 8 a.m. to 3 p.m. on oct 23 and 24. (2) Mask wearing and social distancing will be observed and a brown bag lunch will be provided to all who register.

- A. Volunteers are welcome to come and work in the garden any time during the two days
- B. The fresh air and other healthful benefits of outdoor exercise, together with the good feeling of accomplishing some useful have drawn many to begin gardening or increase activities in the garden.
- C. After the tour, Volunteers will be guided through tasks by garden team leaders.

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

Answer: Option C

Q18. One part of the sentence below may contain an error. Identify the part. Something about the way he spoke stuck a bell in Lauren's mind.

- A. in Lauren's mind
- B. way he spoke
- C. stuck a bell
- D. Something about

Answer: Option D

Q19. The exotic remedies for some illnesses have been from generation to generation in the tribe.

- A. Handed down
- B. Handed over
- C. Handed in
- D. Handed out

Answer: Option A

Q20. Complete the following sentence by filling in the blanks (1) and (2) with the right word from the list given below:

Compared with conventional agriculture, organic farming uses fewer pesticides, reduces soil erosion, decreases nitrate leaching into groundwater and surface water, and _____ animal wastes back into the farm. These benefits are _____ by higher food costs for consumers and generally lower yields.

1.A. recycling B. recycle C. recycles D. recycled

2. A. Increased B. balanced C. counterbalanced D. encountered

A. 1-D,2-B

B. 1-D,2-A

C. 1-C,2-C

D. 1-B,2-D

Answer: Option C

Q21. You are going to read a text about fighting pollution. Some sentences are missing from the text. Choose from the list (A-C) the most appropriate sentence for each gap(1- 2) in the text.

There is one extra sentence that you do not need to use.

A team of scientists at the university of Portsmouth in England has developed a new enzyme that has the ability to break down plastics six times faster than standard enzymes; according to CNN (1) _____ in reducing the amount of non-biodegradable plastic on the earth Enzymes have been used to help combat pollution by breaking polyethylene terephthalate(PET) chain molecules, the most common thermoplastic that makes up everyday items like single-use bottles, clothing and carpets.(2) _____. The first altered enzyme was called PETase, which will now be connected with MHETase to create the university's new enzyme protein. Between these two enzymes connecting, PET chains in plastic were found to breakdown twice as fast as PETase alone.

A. The researchers who had earlier engineered an enzyme found within bacteria of plastic bottles, combined it with a second enzyme to accelerate the breakdown of plastics.

B. A tool called the diamond light source was used to map the molecular structure of MHETase.

C. Enzymes, proteins that are key components in chemical reactions within the human body, act as catalysts that speed up the breakdown of substances.

A. 1-C,2-A

B. 1-A,2-B

C. 1-B,2-C

D. 1-B,2-C

Answer: Option A

Q22. One part of the sentence below may contain an error. Identify the part. If there is no error, choose 'No error'.

Whatever she said in her defence was not taken seriously by the investigating authorities.

- A. was not taken seriously
- B. No error
- C. by the investigating authorities
- D. Whatever she said in her defence

Answer: Option D

Q23. As we scrutinize our own faces for wrinkles and flaws, we can fail to notice what a marvelous organ the face is. Our faces are the most (1) part of our visible body, a mysterious mosaic of the physical and psychical. Faces are the body's workaholics. They confer and confirm identity, express emotion, communicate meaning, perform (2)

functions necessary for life and enable us to experience the world through our senses.

Blank 1: A.distinctive B.typical C.average

D.classic Blank 2: A. Plain B.basic C.needed D.compulsory

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

Answer: Option A

Q24. You are going to read a text about fighting pollution. Some sentences are missing from the text. Choose from the list (A-C) the most appropriate sentence for each gap(1- 2) in the text.

There is one extra sentence that you do not need to use.

Disney is an international maze of parent companies and subsidiaries that leave few corners of the globe untouched. It's vast holdings are a maze of media networks, film studios, production companies, merchandising ventures, parks, resorts, distribution operations, finance firms, gaming cooperation, publishing companies, construction firms, vacation and cruise lines, music studios, and digital content providers. (1)

However, the company's reach spreads further than many people might think--in movies and television alone. (2)

Forbes ranks Disney--which employs more than 2,00,000 people--among the top 10 most powerful brands in the world and values the company at more than \$238 billion.

A. It is common knowledge that Disney is behind classics like "Beauty and the Beast" and "The Lion King"

B. There's also a seemingly endless web of companies, properties, holdings, and franchises that don't bear the Disney name yet serve as revenue streams for the corporate empire just the same.

C. Walt Disney World in Orlando, Florida re-opened the park in July with new safety precautions in place following months of being shut down amid the Coronavirus pandemic.

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

Answer: Option A

Reasoning Ability

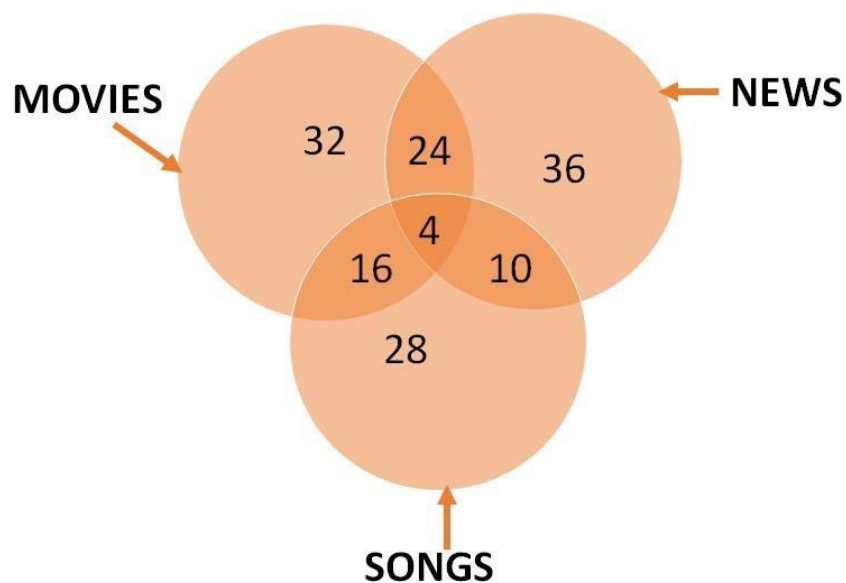
Q1. In each of the five pairs of letter-clusters, the letters in the second term is a rearranged/transformed form of the letters in the first term in a particular pattern. In which two pairs, has the transformation been done the same way?

- 1. WMHSD - DSHWM
- 2. NPKRQ - PRKQN
- 3. HQRWK - HKWQR
- 4. ZIGPM - PTZGM
- 5. BWTKG - GTKBW

- A. 4 and 2
- B. 1 and 5
- C. 2 and 3
- D. 1 and 3

Answer: Option B

Q2. Consider the Venn diagram given below.



The number in the Venn diagram indicates the number of persons/ people watching the TV programmes. The diagram is drawn after surveying 150 persons in a population of 12,000. How many persons/ people can be expected to watch at least two TV programmes?

- A. 4320
- B. 3200
- C. 5232
- D. 5400

Answer: Option A

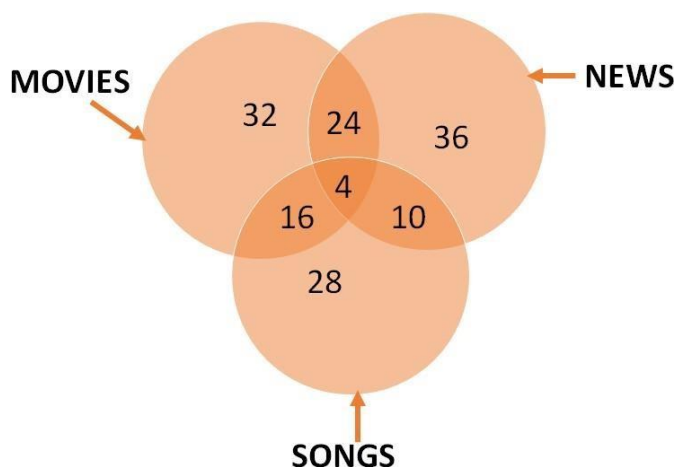
Q3. There are five persons in a family O,P,Q,R and S. They are working as a farmer, a teacher, a lawyer, an engineer and a doctor. P is an unmarried daughter of O and working as a teacher. S is the brother of Q, working as a lawyer. Q is the husband of the only married couple in the family. O is the father of an unmarried daughter and two sons working as a farmer. O's daughter-in-law is a doctor.

Which of the following are male members in the family?

- A. R,O and S
- B. P,Q and S
- C. O,Q and S
- D. O,P and Q

Answer: Option C

Q4. Consider the Venn diagram given below.



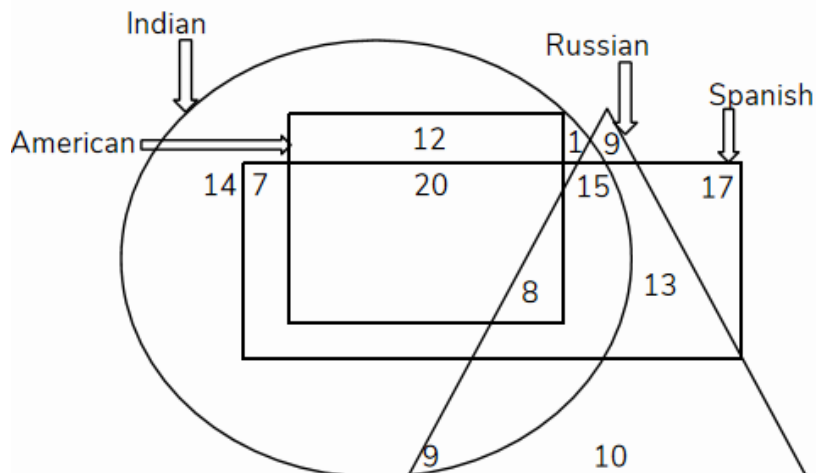
The number in the Venn diagram indicates the number of persons/ people watching the TV programmes. The diagram is drawn after surveying 150 persons in a population of 12,000. How many persons/ people can be expected to watch News only?

- A. 2280
- B. 3200
- C. 4320
- D. 2880

Answer: Option D

Q5. The following diagram shows the people who can speak various languages, the rectangle stands for 'Spanish', the circle stands for 'Indian', the triangle stands for 'Russian', and the square stands for 'American'. The numbers in different segments show the number of persons.

Answer the question on the basis of the information given in the diagram.



How many persons can speak American and Russian languages?

- A. 15
- B. 8
- C. 13
- D. 9

Answer: Option B

Q6. A statement is followed by three courses of action numbered I, II and III. Assuming everything in the statement to be true, decide which of the suggested courses of action (a decision to be taken for follow up/ improvement in regard to the problem) logically follow.

Statement

There is a considerable increase in the number of persons infected by Corona Virus during the last few months through person to person contact and direct contact with respiratory droplets exhaled by the infected person.

Courses of Action

- I. Wear a mask when social distancing is not possible.**
 - II. The Government should give adequate information through mass media regarding corona virus.**
 - III. Health Centres and Facilities should be increased and fully equipped properly for the treatment of patients.**
-
- A. All are implicit**
 - B. Only I is implicit**
-
-
-
-
-
-
-
-
-
-
- C. Both I and II are implicit**
 - D. Only II is implicit**

Answer: Option A

Q7. Given below is a question followed by two statements I and II, each containing some information. Decide which of the statements is/are sufficient to answer the question.

The ratio of fees of two different schools is 2:2.5. What would be the fees of the second school if discounts of 25% and 35% are given on both the schools respectively?

Statements

- I. Discount on the second school fees is Rs.8750/-
 - II. Difference between the discount on the two school fees is Rs.3750/-
-
- A. Both statements I and II together are not sufficient
 - B. Statement I alone is sufficient
 - C. Either Statement I alone or Statement II alone is sufficient
 - D. Statement II alone is sufficient

Answer: Option C

Q8. The following are the criteria for selecting a candidate for the post of Assistant Manager. The candidates must:

- I. Be a graduate in engineering in specialization of Human Resource Management with minimum 55% marks.
- II. Have three years full time experience.
- III. Have secured more than 60% in the interview and at least 70% in the written test.

However, if the candidate fulfills the above criteria expect

In case of the applicant who satisfied all other criteria except -

- (i) At I, above, but has more than five-year experience in relevant field, his/ her case is to be referred to the Management.
- (ii) At II above, but has secured more than 65% in the written test as well as in the interview, his/ her case is to be referred to the General Manager.
- (iii) At II above, but has graduated in Engineering with specialization of Human Resource Management with minimum 65% marks, his/ her case is to be referred to the General Manager.

Amit has completed his BE with 60% marks without HRM specialization but he has been working as an assistant manager in a reputed company for the last six years. He has now secured 65% in the interview and 66% in the written test.

Based on these criteria and the information provided, decide the course of action.

- A. He would be selected
- B. Refer to the HR department
- C. Refer to the General Manager
- D. Refer to the Management

Answer: Option B

Q9. Given below is a question followed by two statements, I and II, each containing some information. Decide which of the statement(s) is/are sufficient to answer the question.

Among six persons P,Q,R,S,T and U how many are teachers?

Statements:

- I. "Q and T are teachers" is true.
- II. "At Least one of P and R is a teacher" is false and S and U's status is same as P and R
- A. Both the statements I and II together are needed
- B. Statement II alone is sufficient

- C. Statement I alone is sufficient
- D. Both the statements I and II together are not sufficient

Answer: Option A

Q10. In a certain code, $P + Q$ means P is the father of Q; $P - Q$ means P is the sister of Q and P / Q means P is the brother of Q.

Which of the following equations shows that A is the uncle of D?

- A. $A - D + C / B$
- B. $A + B / C - D$
- C. $A / B + C - D$
- D. $A - B + C / D$

Answer: Option C

Q11. Given below is a question followed by two statements I and II, each containing some information. Decide which of the statement(s) is/ are sufficient to answer the question.

What is the age of Sumit?

Statements

- I. Sumit is five years younger than Amit, who is double the age of Prateek.
- II. Prateek is 10 years elder than Ravi, whose age is 22 years.

- A. The combination of both the statements I and II are not sufficient.
- B. Statement II alone is sufficient.
- C. Statement I alone is sufficient.
- D. The combination of the both the statements I and II are sufficient

Answer: Option D

Q12. Three statements are followed by four conclusions numbered I,II,III and IV. Assuming the statements to be true, even if they do not conform to real world knowledge,decide which of the conclusion(s) logically follows/follow from the statements.

Statements:

- 1. All clothes are shirts
- 2. All shirts are pants
- 3. All cots are pants

Conclusions:

- I. No cloth is cot
 - II. Some cots are shirts
 - III. Some pants are clothes
 - IV. Some cots are clothes
-
- A. Only either I or IV follow and III follow
 - B. Either II or I follow
 - C. Only II follow
 - D. Only III follow

Answer: Option D

Q13. A statement is followed by two assumptions numbered I and II. Consider the statement and decide which of the given assumption(s) is/are implicit in the statement.

Statement

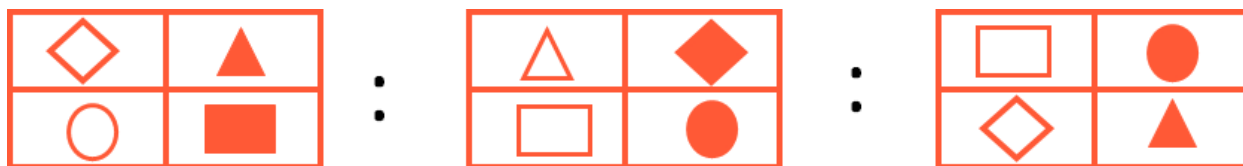
If you have any queries, ask to me Assumptions

- I. You have no questions
- II. I can answer any question
- A. Both I and II are implicit
- B. Only I is implicit
- C. Only II is implicit
- D. Neither I nor II is implicit

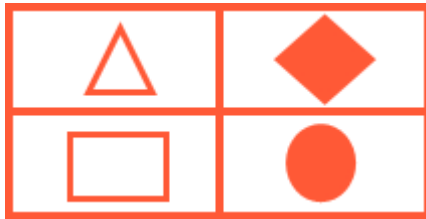
Answer: Option D

Q14. The two figures on the left of the sign '::' are related in a certain way. The same relationship holds good for the second pair of figures on the right of the sign '::' of which one

figure is missing. Find the missing figure from the alternatives?



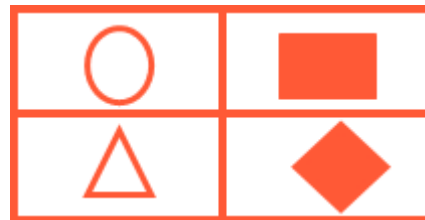
A.



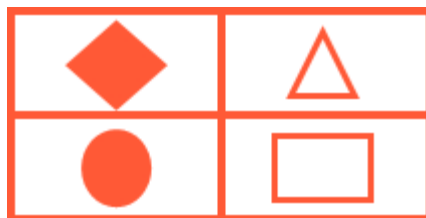
B.



C.



D.



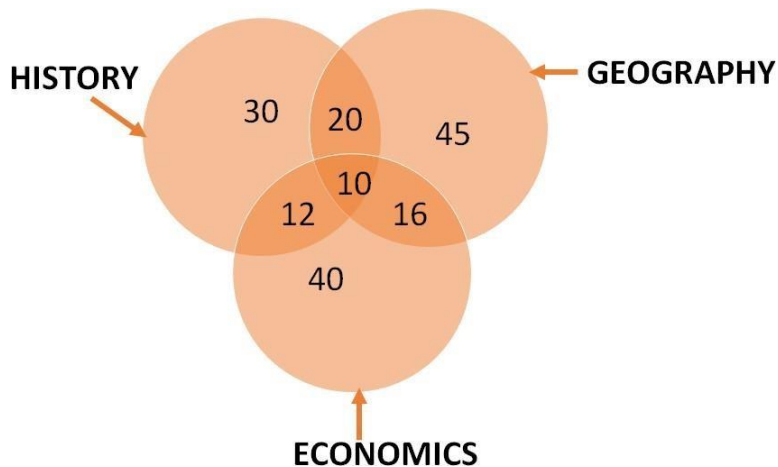
Answer: Option C

Q15. Which is the wrong term in the following series? axc, cve, fsh, jpm, ojw, udw

- A. fsh
- B. udw
- C. ojw
- D. jpm

Answer: Option D

Q16. The diagram given below shows the number of students who got distinction in three subjects out of 320 students. Study the diagram carefully and answer the question.



What is the percentage of students who got distinction only in two subjects?

- A. 48
- B. 25
- C. 10
- D. 15

Answer: Option D

Q17. Two statements are given followed by three conclusions numbered I,II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts,decide which of the conclusion logically follow(s)from the statements.

Statements:

All animals are plants
All plants are shrubs

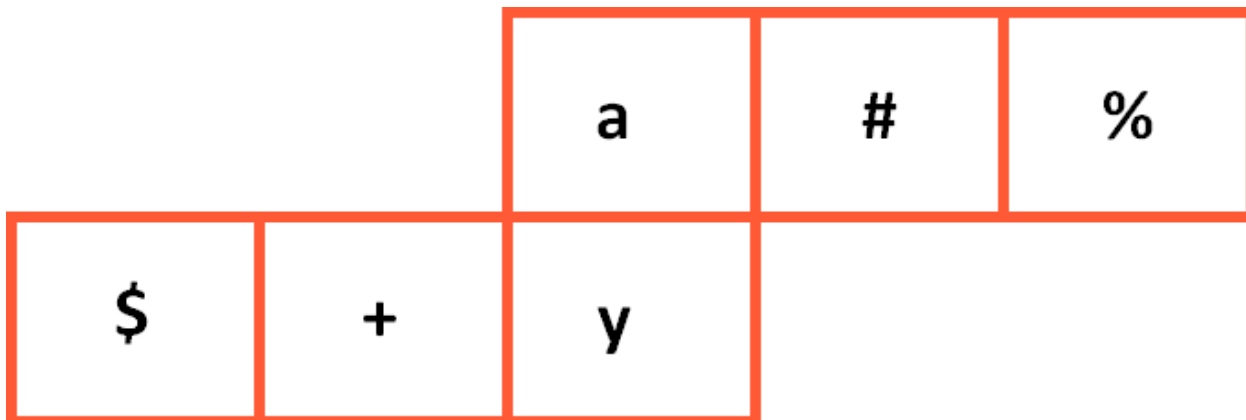
Conclusions:

I. Some shrubs are plants
II. Some animals are not shrubs
III. All animals are shrubs

- A. None of the conclusion follow
- B. Only conclusion I and II follow
- C. Only conclusion I and III follow
- D. Only conclusion II follows

Answer: Option C

Q18. A cube is made by folding the given sheet. In the cube so formed, which letter/symbol will be on the opposite face to the face having the symbol '%'?





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- A. Y
- B. a
- C. +
- D. \$

Answer: Option B

Q19. There is a certain code, $a+b$ means a is the wife of b ; $a \times b$ means a is the brother of b and a/b means a is the son of b . If $T/Z \times U/W$, then which of the following is true?

- A. W is the wife of Z
- B. U is the aunt of T
- C. U is the uncle of T
- D. T is the daughter of Z

Answer: Option C

Q20. The following are the criteria for selecting a candidate for the post of Assistant Manager.

The candidates must:

- (i) Be a graduate in engineering in specialization of Human Resource Management with minimum 55% marks.
- (ii) Have three years full time experience.
- (iii) Have secured more than 60% in the interview and at least 70% in the written test.

However, if the candidate fulfills the above criteria except

In case of the applicant who satisfies all other criteria except --

- a. At (i) above, but has more than five years experience in relevant field, his/ her case to be referred to the Management.
- b. At (ii) above, but has secured more than 65% in the written test as well as in the interview, his/ her case to be referred to the HR department.
- c. At (iii) above, but has graduate in Engineering with specialization of Human Resource Management with minimum 65% marks, his/ her case to be referred to the General Manager.

Naveen has completed his graduation in engineering with specialization of Human Resource Management with minimum 66% marks. For the last four years, he has been working as an assistant manager in a reputed organization. He has now secured 55% in the interview and 56% in the written test.

Based on the criteria and the information provided, decide the course of action.

- A. Refer to the HR department
- B. He would be selected
- C. Refer to the General Manager
- D. Refer to the Management

Answer: Option C

Q21 to Q22. There are five persons in a family A,B,C,D and E. In which, one is working as a doctor; one is a lawyer and one is an engineer. Both A and D are unmarried ladies, who are not working. None of the ladies is working as a doctor and a lawyer in the family. E is the husband of the only one married couple in the family. B is the brother of C and neither a lawyer nor an engineer.

Q21. Who is the lawyer?

- A. B
- B. A
- C. E
- D. D

Answer: Option C

Q22. Who is the doctor in the family?

- A. A
- B. E
- C. D
- D. B

Answer: Option D

Q23. There are five persons in a family O,P,Q,R and S. They are working as a farmer, a teacher, a lawyer, an engineer and a doctor. P is an unmarried daughter of O and working as a teacher. S is the brother of Q, working as a lawyer. Q is the husband of the only married couple in the family. O is the father of an unmarried daughter and two sons working as a farmer. O's daughter-in-law is a doctor.

Who is an engineer in the family?

- A. S
- B. Q
- C. P
- D. O

Answer: Option A

Q24. A statement is followed by two assumptions numbered I and II. Consider the statement and decide which of the given

assumption(s) is/ are implicit in the statement.

Statement

If he is a hard worker, he will succeed in life.

Assumptions

- I. To succeed, he must be a hard worker.
 - II. He will succeed in life.
-
- A. Only I is implicit
 - B. None of I and II are implicit
 - C. Only II is implicit
 - D. Both I and II are implicit

Answer: Option A

Programming Logic

Q1. Select the best suitable answer for the below functions.

- 1. sizeof()
 - 2. strlen
-
- A. sizeof() - Returns size of string including null characters strlen() - Returns size of string excluding null characters
 - B. sizeof() - Returns size of string including null characters strlen() - Returns size of string including null characters
 - C. sizeof() - Returns size of string excluding null characters strlen() - Returns size of string excluding null, character
 - D. sizeof() - Returns size of string excluding null characters strlen() - Returns size of string including null characters

Answer: Option A

Q2. The data modelling phase consists of which of the following?

- A. Creation of evaluation tool
- B. Creation of big data analysis model
- C. Creation of infographics
- D. Creation of the logical data model.

Answer: Option D

Q3. Which of the following is NOT a logical operator?

- A. !
- B. &&
- C. ||

D. &

Answer: Option D

Q4. In a Singly Circular Linked List, how many address fields are there?

- A. 1+1
- B. 2+1
- C. 1
- D. 2

Answer: Option C

Q5. What will be the output of the below code?

```
1 public class Main
2 {
3     int x = 10;
4     public static void main(String [] args)
5     {
6         try
7         {
8             Main t1 = new Main();
9             System.out.println(t1.x);
10        }
11        catch(Exception e)
12        {
13            System.out.println("Exception Caught");
14            return;
15        }
16    }
17    static
18    {
19        int x = 20;
20        System.out.println(x+" ");
21    }
22 }
```

Enter your answer ONLY as NUMERAL in the box.

Answer:

20

10

Q6. What will be the output of the given program?

```
1 void main()  
2 {  
3     char a[10][10] = {"kellos", "hellos", "fellos"};  
4     printf("%s", a[1]);  
5 }
```

- A. Compile time error
- B. ellos hellos fellos
- C. ellos

D. hellos

Answer: Option D

Q7. When we compose a binary tree through the given preorder sequence, what will be left child of 6? (Note: Consider 4 as root node)

4, 2, 1, 3, 6, 5, 7

- A. 1
- B. 5
- C. 7
- D. 3

Answer: Option B

Q8. What will be the output of the following program?

```
1 public class Main
2 {
3     public static void main(String[] args)
4     {
5         try
6         {
7             int[] arr = {10,25,2,6,8,9,7,32};
8             for(int i=0; i<arr.length; i++)
9             {
10                System.out.print(arr[i+1]);
11            }
12        }
13        catch(Exception e)
14        {
15            System.out.println("Inside Exception");
16        }
17    }
18 }
```



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Answer: 252689732Inside Exception



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Q9. Based on below infix and postfix expressions, identify the Prefix expression. Infix expression: $P-Q-(R+S)/(W-X)*Y+Z$

Postfix Expression: $PQRS+*WX-Y*/Z+$

- A. $-P/*Q+RS+*-WXYZ$
- B. $-P/*Q+RS+*W-XYZ$
- C. $P-/*Q+R+S*WXYZ-$
- D. $P-/*+RS+Q*-WXYZ-$

All the answer options are wrong.

Correct Answer: $-P-Q+/*RS*-WXYZ$. Best similar answer can be option A

Q10. What will be the output?

```
1 class car
2 {
3     public void Show()
4     {
5         System.out.println("Brand is not defined yet");
6     }
7 }
8 class mercedes extends car
9 {
10     public void Show()
11     {
12         System.out.println("It's mercedes");
13     }
14 }
15 class Benz extends mercedes
16 {
17 }
18 public class Main
19 {
20     public static void main(String[] args)
21     {
22         car obj=new Benz();
23         obj.Show();
24     }
25 }
```

- A. It's mercedes
- B. Run Time Error
- C. Compile Time Error
- D. Brand is not defined yet

Answer: Option A

Coding:

Q1. We want to estimate the cost of painting a property. Interior wall painting cost is Rs.18 per square feet and exterior wall painting cost is Rs.12 per square feet. Take input as

1. Number of Interior walls
2. Number of Exterior walls
3. Surface Area of each interior wall in units of square feet
4. Surface Area of each exterior wall in units of square feet

If a user enters zero as the number of walls then skip Surface area values as User may don't want to paint that wall. Calculate and display the total cost of painting the property.

Example 1:

6

3

12.3

15.2

12.3

15.2

12.3

15.2

10.10

10.10

10.00

Total estimated Cost:1847.4 INR

Note: Follow in input and output format as given in above example.

Solution in C:

```
1 #include<stdio.h>
2 int main()
3 {
4     int ni,ne,i=0;
5     float int_p=18,ext_p=12,fcost=0.0,temp;
6     scanf("%d %d",&ni,&ne);
7     for(i=0;i<ni;i++)
8     {
9         scanf("%f",&temp);
10        fcost+= int_p*temp;
11    }
12    for(i=0;i<ne;i++)
13    {
14        scanf("%f",&temp);
15        fcost+= ext_p*temp;
16    }
17    printf("Total estimated Cost : %.1f INR",fcost);
18    return 0;
19 }
```

Solution in C++:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int interior,exterior,interior_cost=18,exterior_cost=12;
6     float face,fcost=0.0;
7     cin>>interior>>exterior;
8     for(int i=0;i<interior;i++)
9     {
10         cin>>face;
11         fcost+=interior_cost*face;
12     }
13     for(int i=0;i<exterior;i++)
14     {
15         cin>>face;
16         fcost+=exterior_cost*face;
17     }
18     printf("Total estimated Cost :%.1f INR",fcost);
19 }
```

Solution in Java:

```
1 import java.util.Scanner;
2 class Main
3 {
4     public static void main(String args[])
5     {
6         int interior,exterior,interior_cost=18,exterior_cost=12;
7         double face,fcost=0.0;
8         Scanner sc = new Scanner(System.in);
9         interior = sc.nextInt();
10        exterior = sc.nextInt();
11        for(int i=0;i<interior;i++)
12        {
13            face = sc.nextDouble();
14            fcost+=interior_cost*face;
15        }
16        for(int i=0;i<exterior;i++)
17        {
18            face = sc.nextDouble();
19            fcost+=exterior_cost*face;
20        }
21        System.out.printf("Total estimated Cost :%.1f INR",fcost);
22        sc.close();
23    }
24 }
```

Solution in Python:

```
1 fpi=18;fpe=12;cost=0;
2 ni=int(input())
3 ne=int(input())
4 if(ni<0 or ne<0 ):
5     print("INVALID INPUT")
6 elif(ni==0 and ne==0):
7     print("Total estimated Cost : 0.0 INR")
8 else:
9     for i in range(ni):
10         temp=float(input())
11         cost+= fpi*temp
12     for i in range(ne):
13         temp=float(input())
14         cost+= fpe*temp
15     print("Total estimated Cost : %.1f INR"%cost)
```

Q2. A City Bus is a Ring Route Bus which runs in circular fashion. That is, the Bus once started at Source Bus Stop, halts at each Bus Stop in its Route and at the end it reaches to Source Bus stop again. If there are n number of Stops and if bus starts at Bus Stop number 1, then after nth Bus Stop, the next stop in the Route will be Bus Stop number 1 always. If there are n stops, there will be n paths. One path connects 2 stops. Distances (in meters) for all paths in Ring Route is given in array Path[] as below. Path = [800, 600, 750, 900, 1400, 1200, 1100, 1500] Fare is determined based on the distance covered from source to destination stop as Distance d between Input Source and Destination Stops can be measured by looking at values in array Path[] and fare can be calculated as per following criteria: - If d = 1000 meters, then fare= 5 INR - (When calculating fare for other distances, the calculated fare containing any fraction value should be ceiled. For example, for distance 900, when fare initially calculated is 4.5 which must be ceiled to 5) Path is circular in function. Value at each index indicate distance till current stop from previous one.

And each index positions can be mapped with values at same index in Busstops[] array, which is a string array holding abbreviation of names for all stops as

"THANERAILWAYSTN"= "TH", "GAONDEVI"="GA", "ICEFACTROY"="IC")
"HARINIWASCIRCLE"="HA", "TEENHATHNAKA"="TE", "LUISWADI"="LU",
"NITINCOMPANYJUNCTION"="NI", "CADBURRYJUNCTION"="CA"

Given, n=8, where n is number of total Bus Stops. Bus Stops =["TH", "GA", "IC", "HA", "TE", "LU", "NI", "CA"). Write a code with function getFare(String Source, String Destination) which takes Input as source and destination stops(in the format containing first 2 characters of Name of the Busstop) and calculate and return travel fare.

Example 1:Input

Values

ca

Ca

Output Values

INVALID INPUT



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Example 2:Input

Values NI HA

Output Values



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23.0 INR



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Note: Input and Output should be in format given in example.
Input should not be case sensitive and output should be in the format <FLOAT> INR.



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Solution in C:

```
1 #include<stdio.h>
2 #include<string.h>
3 #include<math.h>
4 int main() {
5
6     char s[3],d[3];
7     scanf("%s%s",s,d);
8     char arrs[8][3] = {"TH" , "GA", "IC" , "HA" , "TE", "LU" , "NI","CA"};
9     float arr[8]={800,600,750,900,1400,1200,1100,1500};
10    float res=0;
11    int st ,ed;
12    for(int i=0;i<8;i++)
13    {
14        if(strcmp(s,arrs[i])==0)
15            st=i;
16        if(strcmp(d,arrs[i])==0)
17            ed=i;
18    }
19    if(st==ed)
20    {
21        printf("INVALID INPUT");
22        return 0;
23    }
24    else
25    {
26        int i=st+1;
27        while(i!=ed+1)
28        {
29            res += arr[i];
30            i=(i+1)%8;
31        }
32        res = (float) res / 200;
33        printf("%.1f INR",ceil(res));
34        return 0;
35    }
36 }
```

Solution in C++:

```
1 #include<bits/stdc++.h>
2 using namespace std;
3 int main()
4 {
5     string s , d;
6     cin>>s>>d;
7     string arrs[8] = {"TH" , "GA" , "IC" , "HA" , "TE" , "LU" , "NI" , "CA"};
8     float arr[8]={800,600,750,900,1400,1200,1100,1500};
9     float res=0;
10    int st ,ed;
11    for(int i=0;i<8;i++)
12    {
13        if(s==arrs[i])
14            st=i;
15        if(d==arrs[i])
16            ed=i;
17    }
18    if(st==ed)
19    {
20        cout<<" INVALID INPUT";
21        return 0;
22    }
23    else
24    {
25        int i=st+1;
26        while(i!=ed+1)
27        {
28            res += arr[i];
29            i=(i+1)%8;
30        }
31        res = (float) res / 200;
32        printf("%.1f INR",ceil(res));
33        return 0;
34    }
35 }
```

Solution in Java:

```
1 import java.util.*;
2 class Main {
3     public static void main (String[] args) {
4         Scanner sc=new Scanner(System.in);
5         String s , d;
6         s=sc.nextLine();
7         d=sc.nextLine();
8         int n=8;
9         String arrs[] =new String[] {"TH" , "GA" , "IC" , "HA" , "TE" , "LU" , "NI" , "CA"};
10        float arr[]=new float[] {800,600,750,900,1400,1200,1100,1500};
11        float res=0;
12        int st=0,ed=0;
13        for(int i=0;i<8;i++){
14            if(s.equals(arrs[i])){
15                st=i;
16            }
17            if(d.equals(arrs[i])){
18                ed=i;
19            }
20        }
21        if(st==ed)
22        {
23            System.out.println(" INVALID INPUT");
24            System.exit(0);
25        }
26        else
27        {
28            int i=st+1;
29            while(i!=ed+1)
30            {
31                res += arr[i];
32                i=(i+1)%8;
33            }
34            res = (float) res / 200;
35            System.out.printf("%.1f INR",Math.ceil(res));
36        }
37    }
38 }
```

Solution in Python: This document details the Slot Analysis as well as Answers to

```

1 def face(s,d):
2     path=[800,600,750,900,1400,1200,1100,1500]
3     stop=['TH','GA','IC','HA','TE','LU','NI','CA']
4     sum=0
5     res=0
6     if(s==d):
7         return "INVALID INPUT"
8     else:
9         s=s.upper()
10        d=d.upper()
11        mini=min(stop.index(s),stop.index(d))
12        maxi=max(stop.index(s),stop.index(d))
13
14        for i in range(mini,maxi+1):
15            sum=sum+path[i]
16
17        res=(sum/1000)*5
18        res=str(res)
19        return res+' INR'
20 s=input()
21 d=input()
22 print(face(s,d))

```

Questions that students recollected post their TCS NQT(Slot 1) on 27th October 2020

Disclaimer:

1. The questions showcased in this document have been recreated through memory, thanks to test- takers who recalled the questions post their test.
2. The question repetition between slots is very miniscule.
3. Please use this document as an indicative preparation tool, rather than an exact replica of questions that appeared or can appear in the TCS NQT.

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TCS NQT Online Test Pattern

The pattern that was followed for the TCS NQT was as follows.

Section Order	Section	# Qs	Duration (minutes)
1	Numerical Ability	26	40
2	Verbal Ability	24	30
3	Reasoning Ability	30	50
4	Programming Logic	10	15
5	Coding	2	45

Syllabus

The following was the syllabus which was tested in the slot.

Numerical ability:

- Data Interpretation
- Statistics
- Time and Work
- Mensuration
- Number System
- Time, Speed and Distance
- Ratio and Proportions
- Linear Equations
- Simple Interest and Compound Interest
- Percentages
- Profit and Loss
- Simplification – Fractions and BODMAS
- Surds and Indices
- Partnerships

Verbal Ability:

- Reading Comprehension
- Passage Completion - Missing words (Cloze passage)
- Passage Completion - Missing sentences
- Error spotting
 - Prepositions
 - Tenses
- Sentence Completion
 - Prepositions
 - Vocabulary
 - Tenses
- Knowledge of Formal/Informal language
- Sentence improvement
- Parajumbles
- Knowledge of spelling



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Reasoning Ability:

- Attention to detail
- Unboxing a cube
- Data Arrangements
- Cuts and unfolds



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- Venn diagrams
- Blood relations
- Data Interpretation
- Visual reasoning
- Syllogisms
- Statements and Assumptions
- Rule based decision making
- Decision tables

Programming MCQ's:

- Operators
- Looping statements
- Control statements
- Arrays
- Strings
- Functions
- Object Oriented Programming (OOPS)
- Standard Template Libraries (STL)
- Object Modeling
- Compiler Design
- Threading
- Data Structures: Linked List, Stack, Queue, Trees and Graphs
- Recursion
- Pseudocoding
- Algorithms
- Basic Software Development Cycle
- Collections in JAVA
- Data types
- Pointers
- Abstract class in JAVA
- Files in C
- Software Testing – SDLC
- Input/Output
- Hashing
- Polymorphism
- Pre-defined functions



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- Searching

Coding:

- Fundamentals of Programming - Conditional and looping statements, Arrays, Strings.



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Slot Analysis

- The assessment platform used was TCS iON.
- As already revealed during the DRC and by FACE Prep, both intra-sectional and inter-sectional navigation were not possible.
- Every question was mandatory, and only upon completing a question would you be able to go to the next question.
- Revisiting of answers already submitted is not possible.
- There was no negative marking.
- All test-takers within the slot got the same questions.
- The test was **NOT Adaptive**, for a lot of other websites incorrectly communicated this to students. FACE Prep accurately pointed out that the test was not adaptive – just that the test had no intra-sectional and inter-sectional navigation.
- There was **100% repetition of topics, as accurately predicted by FACE Prep**.
- There was the presence of an on-screen calculator, which candidates could use.
- As clearly pointed out in the test instructions by TCS, if one had to do rough work, it must be visible clearly in the webcam that one is doing rough work and not performing any malpractice. This has also been **accurately pointed out by FACE Prep** earlier.
- There were two Fill in the Blanks type questions in the programming MCQs section.
- As opposed to what was predicted earlier, **an error log is generated in the compiler** in the event of Compilation error. It mentions what error and where the error is (line number)
- Most students have been complaining about the Coding Compiler not working properly on Python. What doesn't work is the tab key for indentation. Instead, please use the space bar. Several students have been able to use this tactic to compile successfully.
- While attempting the Coding questions, the preferred language can be changed in the middle, but typed code will be erased and cannot be retrieved.
- It is possible to move back and forth between the coding questions but the typed code will be erased if not submitted earlier.
- Coding questions are logic-wise very simple. But they take time to type. Students to please plan their time in the Coding section to type quickly.

Questions with Answers:

Numerical Ability

Q1. A sells an article to B at a profit of 15%. B then sells it to C, making a profit of 20%. If C paid Rs. 690 What is the original price of the article?

- A. 700
- B. 500
- C. 575
- D. 690



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Answer: Option B



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Q2. If the area of the base of a right circular cone is 9856 cm^2 and its height is 33 cm, what is the curved surface area of the cone?

- A. 12420 cm^2
- B. 21040 cm^2
- C. 11440 cm^2
- D. 12000 cm^2

Answer: Option C

Q3. A motorbike starts at the speed of 60 kmph with its speed increasing by 12 kmph every three hours. In how many hours will it cover 480 km?

- A. 8 hours
- B. 6 hours, 30 minutes
- C. 7 hours
- D. 6 hours

Answer: Option C

Q4. The difference between the simple interest and the compound interest calculated annually on a certain amount at the rate of 20% per annum for 2 years is Rs. 248.20. What is the amount?

- A. 6205
- B. 6002
- C. 6022.5
- D. 6202.5

Answer: Option A

Q5. If a perimeter of a rectangle is 82 cm and its diagonal is 29 cm long, what is the area of the rectangle?

- A. 400 cm^2
- B. 420 cm^2
- C. 441 cm^2
- D. 900 cm^2



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Answer: Option B



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Q6. The mean of the following data is _____

Class	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	3	6	7	6	3	5

- A. 25
- B. 5
- C. 30
- D. 35

Answer: Option C

Q7. A, B and C enter into a partnership by investing in the ratio of 4 : 3 : 5. After six months, B invests another Rs. 2,64,000 and C invests Rs. 5,40,000 at the end of two years also invests. At the end of the three years, profits are shared in the ratio 3 : 5 : 6. What is the initial investment of A?

- A. Rs. 3,00,000
- B. Rs. 1,80,000
- C. Rs. 2,70,000
- D. Rs. 2,40,000

Answer: Option D

Q8. If a and b represent the frequencies of the modal class and median class respectively of the data, the value of $3a + 4b$ is ____

class	0-10	10-20	20-30	30-40	40-50
frequency	12	14	10	17	7

- A. 98
- B. 90
- C. 27
- D. 91

Answer: Option D

Q9. $\frac{1}{6x} : \frac{1}{x} :: \frac{1}{x} : \frac{1}{2.16}$, the value of x is -
If

A. 1.6

- B. 6
- C. 2.6
- D. 3.6

Answer: Option D

Q10. Two cars A and B, which are 280 km apart, start travelling at the same time. If they travel in opposite directions, they meet after 2 hours. IF they travel in the same direction, A meets B after 14 hours. What is the speed of car B?

- A. 50 kmph
- B. 80 kmph
- C. 60 kmph
- D. 70 kmph

Answer: Option C

Q11. The value $\frac{7.6 \times 3.8 \times 15.28 \times 1.8 \times 5.4 \times 16.2}{(7.6)^2 + (5.4)^2 - 41.04} + \sqrt{\frac{3343}{512}}$ lies between

- A. 16 and 17
- B. 12 and 13
- C. 13 and 14
- D. 15 and 16

Answer: Option C

Q12. The salary in rupees of 10 employees in a company per day is 50, 55, 60, 65, 70, 72, 75, 80, 84, 89.

What is the standard deviation of the above data?

- A. 11.143
- B. 11.747



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- C. 11.983
- D. 11.517

Answer: Option C

Q13. A sum was lent at simple interest at a certain rate for 6 years. Had it been lent at 3% higher, it would have fetched Rs. 540 more. What was the sum?



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A. Rs. 3200



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- B. Rs. 3300
- C. Rs. 3000
- D. Rs. 2750

Answer: Option C

Q14. If a number is divided by 7, the remainder is 4. What will be the remainder when the square of the same number is divided by 7?

- A. 2
- B. 4
- C. 6
- D. 3

Answer: Option A

Q15. A sales representative's commission is 6% on all sales up to Rs. 15000 and 5% on all sales exceeding this. He remits Rs. 47350 to his company after deducting his commission. What were the total sales?

- A. Rs. 50000
- B. Rs. 49000
- C. Rs. 50500
- D. Rs. 47500

Answer: Option A

Q16. A and B undertake a piece of work for Rs. 720. A alone can do it in 12 days while B alone can do it in 16 days. If they get C to help them and finish the work in 6 days, what should be C's share of the money earned?

- A. Rs. 80
- B. Rs. 360
- C. Rs. 90
- D. Rs. 270

Answer: Option C

Q17. The mean of 29 observations is 33 on adding one more observation. The new mean becomes 34. What is the value of the 30th observation?

A. 55

- B. 63
- C. 68
- D. 34

Answer: Option B

Q18. If $\sqrt[3]{\frac{4913}{4096}} = 1 + \frac{a}{16}$, what is the value of a?

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

Answer: Option C

Q19. 10% of the voters did not cast their votes in an election between two candidates. 20% of the votes were found invalid. The winning candidate got 60% of the valid votes and won by a majority of 2,880 votes. What is the total number of voters who cast their vote?

- A. 18,000
- B. 25,000
- C. 20,000
- D. 24,000

Answer: Option A

Q20. Consider the following pie chart and table. What is the population of village A, if the population of illiterates in village C is 2019 is 11250.

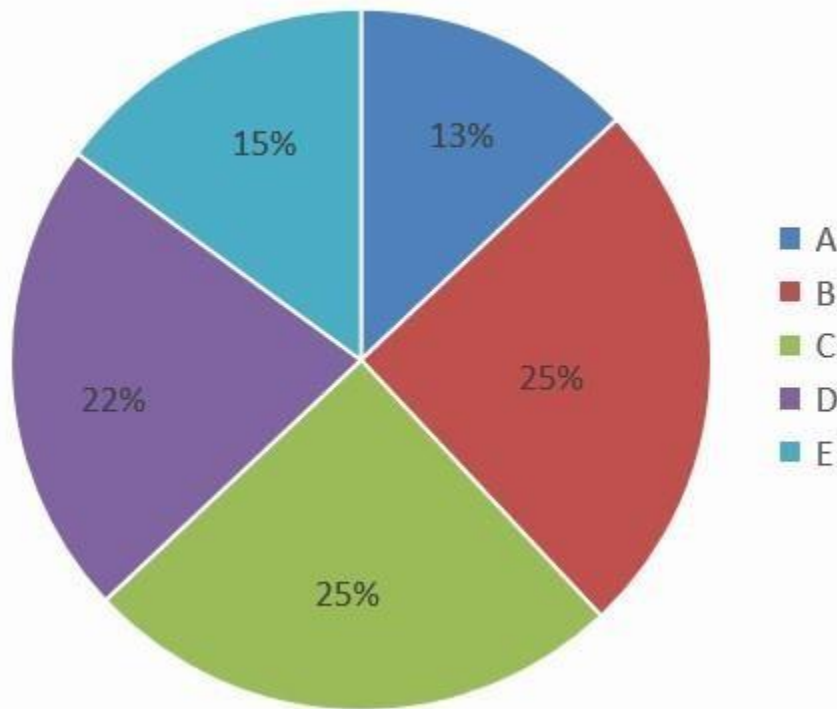


Figure 1 Proportion of the population of 5 villages in 2019

Table - 1	
Village	% illiterate s
A	40
B	48
C	45
D	35
E	30

- A. 25000
- B. 13000
- C. 15000
- D. 22000



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Answer: Option B



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- Q21.** If $\sqrt{2} = 1.414$ and $\sqrt{3} = 1.732$ the value $\frac{1}{3\sqrt{2}-2\sqrt{3}}$?
- of A. 1.2803
 B. 1.75
 C. 1.2813
 D. 1.2843

Answer: Option A

- Q22.** A can do a piece of work in 72 days. He worked at it for 8 days and then B alone finishes the remaining work in 48 days. In how many days will A and B finish the work by working together?
- A. $30\frac{1}{7}$ days
 B. $30\frac{5}{7}$ days
 C. $30\frac{1}{7}$ days
 D. $30\frac{2}{7}$ days

Answer: Option A

Q23. The following table gives the expenditure of a company (in lakhs or rupees per annum) over the given years

Expenditure/Year	Salary	Transport	Bonus	Taxes	Advertisement
2015	250	105	4	80	2.1
2016	198.7	72.70	4.25	75.75	13.3
2017	270	110	4.5	85	3.5
2018	318	108	93.7	158.2	22.1

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2019	325	120	5	75	4.3
------	-----	-----	---	----	-----

What percent of the total expenditure in 2018 is the total expenditure on all these items in 2016?

- A. 52.4%
- B. 56.2%
- C. 50.7%

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D. 52.1%

Answer: OptionD

Q24. In a competitive exam, 5 marks are awarded for every correct answer and for every wrong answer, 2 marks are deducted. Sathwik and 32 marks in this examination. If 4 marks has been awarded for each correct answer and 1 mark had been deducted for each incorrect answer, Sathwik would have scored 34 marks. If Sathwik attempted all the questions, how many questions were there in the test?

- A. 20
- B. 14
- C. 12
- D. 26

Answer: OptionD

Q25. If a dealer makes a profit of 20% by selling an article for Rs. 18, by how much should he increase his selling price in order to make a profit of 30%?

- A. Rs. 1.5
- B. Rs. 3.5
- C. Rs. 4.5
- D. Rs. 2.5

Answer: OptionA

Verbal Ability

Q1. Read the passage carefully. Then select the words/ options listed A to D which best fill in the blanks.

Indian-Americans are among the best-educated and economically successful US immigrant groups and share the ideology and political___of most middle-class professionals in that country. The most recent Asian American Voter Survey confirms what previous studies have shown. Even when___to other Asian American groups, such as Chinese and Koreans, Indian- Americans are the most likely to support the



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Democratic Party and its candidates. Just 16% of them identified themselves as Republicans.

Options:

Blank



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1:

A. viewpoint



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- B. habit
- C. job
- D. casualty

Blank 2:

- A. caused
- B. groups
- C. compared
- D. asked

- A. AC
- B. BA
- C. BD
- D. CB

Answer: Option A

Q2. to Q4. Read the passage and answer the questions:

There are many methods to search for extraterrestrial life. One is to listen for orderly, seemingly deliberate radio signals that could possibly be from sentient and technologically-able life-forms in our Milky Way or beyond. A second method is to search for planets that could harbour life as we know it. Over 4,000 `exo-planets' have been discovered around other stars several of which are in the 'Goldilocks zone.' That is, at a distance from their host star that is not too close/hot nor too far/cold but just right to allow water to exist in liquid form and, therefore, harbour life of a familiar kind. Then there is in situ investigation, i.e., spacecraft landing on the planets (such as Curiosity-Rover to Mars). Robotic instruments on these crewless landers sample the planet's atmosphere and surface material for evidence of life-nurturers like water, for "biosignatures" or chemical compounds that can't be generated by astrophysical or geo-chemical processes and, therefore, must be generated by life-forms, and, of course, for life-forms themselves.

A fourth method, that ties in with the second, is to search for molecules of volatile "biosignatures" that float around in the planetary atmospheres, using telescopes. When these molecules are back-lit, even by the feeble light from the heated planetary surface, they absorb some of this light at specific wavelengths that are dependent on their make-up, amounting to a fingerprint stamped on the light. Phosphine is a molecule with a phosphorus atom bonded to three hydrogen atoms, a well-known toxic fumigant. It is



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very hard to make by natural processes, except under exceptionally high pressures and temperatures, in, for example, the core of Jupiter. However, living microorganisms in oxygen-less environments on earth are also



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known to generate phosphine, and it is, therefore, a clear, though relatively neglected biosignature.

Q2. Who according to the author, is able to transmit radio signals through space?

- A. Intelligent life forms on other planets who are technologically advanced.
- B. Conspiracy theorists living on other planets
- C. Cranks who work out of Area 51 in the U.S.
- D. Mystical saints who live in the Himalayas and are proficient in teleportation and radio signals.

Answer: Option A

Q3. Which qualities do NOT exist in the Goldilocks Zone?

- A. They are at the right distance from their Sun, so that life forms do not burn up and die.
- B. They have adequate heat and cold, so that they can have snow and sand
- C. Their Sun or Host Star does not exist
- D. The temperature of their atmosphere is just right for vapour to liquefy into water and harbour life.

Answer: Option C

Q4. Which option is closest in meaning to 'exo-planet'?

- A. An extraordinary planet moving around Jupiter.
- B. A new planet that was discovered recently.
- C. The exodus of planets from the solar system that is likely to destroy the universe.
- D. A planet which is outside the Earth's solar system.

Answer: Option D

Q5. to Q.8 Read the passage and answer the questions:

Today, silent reading is the norm. The majority of us bottle the words in our heads as if sitting in the hushed confines of a library. Reading out loud is largely reserved for bedtime stories and performances.

New research, however, suggests that we may be missing out by reading only with



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the voices inside our minds. The ancient art of reading aloud has a number of benefits for adults, from helping improve our memories and understand complex texts, to strengthening emotional bonds between people. And far from being a rare or bygone activity, it is still surprisingly



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common in modern life. Many of us intuitively use it as a convenient tool for making sense of the written word, and are just not aware of it.

Colin MacLeod, a psychologist at the University of Waterloo in Canada, has made an extensive research on impact of reading aloud on memory. He and his collaborators have shown that people consistently remember words and texts better if they read them aloud than if they read them silently. This memory-boosting effect of reading aloud is particularly strong in children, but is beneficial for older people too.

Q5. Which of the following is a by-product of reading silently?

- A. Having conflicts with people
- B. Developing verbal ability
- C. Having a prodigious intellect
- D. Having poor recall

Answer: Option D

Q6. With reference to the passage above, which option is closest in meaning to the following sentence segment-

“Bottle the words in our heads as if sitting in an imaginary library”?

- A. To manage to hold one’s tongue especially when one is angry.
- B. To magically be able to stop talking once and for all
- C. To behave like a head Marathon and ask everyone to maintain silence
- D. To visualize one is sitting in a public library and reading a booksilently

Answer: Option D

Q7. Which of the following statements is TRUE?

- A. Reading aloud scrambles signals in our brain.
- B. Reading aloud is not as good as reading silently.
- C. Reading aloud makes one establish better relationships with people
- D. Reading aloud makes it difficult to understand difficult texts.

Answer: Option C

Q8. Which option is the closest in meaning to the word: *intuitively*



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- A. Naturally
- B. Truthfully
- C. Magically



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D. Systematically

Answer: Option A

Q9. One part of the sentence below may contain an error. Identify the part. If there is no error, choose 'No error'.

Since sunrise to sunset / my grandmother would sit by her wheel, / spinning and reciting prayers.

- A. my grandmother would sit by her wheel.
- B. Since sunrise to sunset
- C. No error
- D. spinning and reciting prayers.

Answer: Option B

Q10. Choose the most appropriate word to complete this sentence correctly:

The psychic made many _____ about the future, but none of them came to pass.

- A. mutterings
- B. savings
- C. sooth-sayings
- D. predictions

Answer: Option C

Q11. Complete the following sentence by filling in the blanks (1 and 2) with the right word from the list given below:

One very old method used in the investigation of past climatic conditions 1. _the measurement of water levels in ancient lakes. In temperature regions, there are enough lakes for correlations between them to give us a 2. _____ picture.

- | | | | | |
|-----------|------|------|-------------|-------------|
| Blank 1: | C. 1 | D. 1 | A. involves | B. involve |
| Blank 2: | D | B | A. constant | B. reliable |
| A. 1A, 2B | ' | ' | | |
| B. 1C, 2A | 2 | 2 | | |
| | C | D | | |



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C. involving
C. safe

D
·
w
a
s
i
n
v
o
l
v
i
n
g
D. secur
e

Answer: Option A



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Q12. For the four-sentence (S1 to S4) paragraph below, sentences S1 and S4 are given. From the options P, Q and R choose the appropriate sentences for S2 and S3 respectively.

S1. London, like the rest of the UK, is committed to becoming net-zero carbon by 2050. S2.

S3

S4. And exactly how different would the urban environment look if it were net-zero?

Options:

P. But how does London, a city choked with traffic and packed full of carbon-emitting processes and structures - from fossil fuel-generated energy to steel skyscrapers -- reach such a goal?

Q. That means greenhouse gas (GHG) emissions would be dramatically slashed and any remaining emissions offset, neutralising environmental impact and slowing climate change.

R. UK became net-zero carbon 20 years ago and is the biggest proponent of reversing climate change and saving the planet.

- A. QP
- B. RQ
- C. RP
- D. PR

Answer: Option A

Q13. The following sentence can be revised into one better sentence. Choose the sentence that is the best revision:

I was at the fair. I got lost. I got scared.

- A. I got lost at the fair and was scared.
- B. I went to fair and got scared as I was lost
- C. I am scared after I am lost at the fair
- D. I am lost at the fair so I am too scared

Answer: Option A

Q14. Fill in the blanks with the most appropriate set of words from the options given below. What did the painter do _____ himself from failing?

When he felt the ladder _____ he grabbed the gutter to save himself from failing



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- A. to save/ beginning to slip
- B. for saving/ began to slip
- C. To save/ begin to slip
- D. to save/ began slipping



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Answer: Option B

Q15. Choose the word which is misspelt:

- A. Artistic
- B. Simplefy
- C. Anachronistic
- D. Metamorphosis

Answer: Option B

Q16. One part of the sentence below may contain an error. Identify the part

He could not figure/ out why the/ neighbourhood had get/ such a bad reputation

- A. out why the
- B. such a bad reputation
- C. neighbourhood had get
- D. He could not figure

Answer: Option C

Q17. One sentence has been removed from the text below. Read the text and then match the missing sentence to fill up the blank.

People play all kinds of roles in our lives; there are the foundational relationships we have with our nearest and dearest, then there those close friends and sweethearts with whom we like to share as much as possible _____. These people might not seem all that important generally, but there is subject to change, especially now as the powerful Full Moon in Aries illuminates your 11th House of special groups and global communications.

- A. The planets and stars have powerful effect on our personalities.
- B. Our school teachers play one of the key roles in our lives.
- C. Our connections today are quite superficial, certainly nothing like the deep friendships we enjoyed with our school friends.
- D. Then there are all the people “out there,” all the people you ‘sort of’ know, or have connected with over one form of social media or another.



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Answer: Option D



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Reasoning Ability

Q1. Which is the wrong term in the following

series? cze, etg, hoj, lkm, qls, wfy

- A. lkm
- B. qls
- C. hoj
- D. wfy

Answer: Option A

Q2. Seven friends A,B,C,D,E,F and G play one of the seven musical instruments viz, the guitar, flute, dholak, congo, piano, drums and violin. E does not play the congo. A, E and G do not play the violin, flute and guitar. F plays the piano. D plays the drums. Who plays the guitar?

- A. Either A or E
- B. C
- C. B
- D. Either B or C

Answer: Option D

Q3. Six friends P, Q, R, S, T and U are in a group.

1. Q and R are shorter than U but heavier than P
2. S is heavier than Q and taller than R
3. T is shorter than S but taller than U
4. U is heavier than S
5. P is shorter than T but taller

than U Who is tallest in the

group?



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- A. P
- B. Q
- C. R
- D. S



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Answer: Option D

Q4. In a certain code, $P+Q$ means P is the husband of Q; $P-Q$ means P is the daughter of Q and P/Q means P is wife of Q

If $A+B-C/D$, then which of the following is true?

- A. C is the mother of A
- B. D is the mother of B
- C. D is the father of B
- D. A is the brother of D

Answer: Option C

Q5. Below is a question followed by 2 statements, I and II, each containing some information: Among six family members O, P, Q, R, S and T, how many are male in the family?

Statements:

- I. Q is the wife of P and the mother of T. R is the grandmother of O and the mother of P
- II. T is the granddaughter of S. R is the grandmother of O and T.

- A. Both the statements I and II together are not sufficient
- B. Statement II alone is sufficient
- C. Both the statements I and II together are necessary
- D. Statement I alone is sufficient

Answer: Option A

Q6. Statement :

Should all the government departments in the country be handed over to the private sector?

Arguments:

- I. No. The private sector will not be sure to handle the entire government departments which are made for social services
 - II. Yes. Private sector will handle all the departments better than the government.
-
- A. All of I, II and III are strong
 - B. Only argument I is strong

- C. Only argument II is strong
- D. Both I and II are strong

Answer: Option D

Q7. How is Seema related to

Ram? Statements:

- I. Ram has a brother, Mohan. Mohan is the son of Rahul. Seema is Rahul's sister.
- II. Rahul is the father of Ram and brother of Seema.

- A. Either the statement I or II are sufficient
- B. Statement I alone is sufficient
- C. Both the statements I and II together are necessary
- D. Statement II alone is sufficient.

Answer: Option B

Q8. In each of the five pairs of the letter-clusters, the letters in the second term are rearranged/transformed. Find the transformation which is same.

- A. MANSON : AMNOS
- B. PARTY : APRYT
- C. FAULT : AFTLU
- D. LODGE : DOLEG
- E. CARGO : ACOGS

- A. A and C
- B. D and E
- C. C and D
- D. B and C

Answer: Option A

Q9. A statement is followed by two assumptions numbered I and II. Consider the statement



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and decide which of the given assumptions are appropriate.

Statement:



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The workers are protesting against the new incentive policy which has been implemented this year by the management this year

Assumptions:

- I. The workers are not happy with the changes that have been made in the new incentive policy.
 - II. The management has assured the workers for redrafting the policy to avoid further protests
- A. Only II is implicit
 - B. Neither I or II is implicit
 - C. Both I and II are implicit
 - D. Only I is implicit

Answer: Option D

Q10. Seven friends O,P,Q,R,S,T and U are standing in a row.

- 1. Q is the right of U
- 2. P is between T and S
- 3. O is right of Q who is left of S
- 4. U is between Q and R

Who is exactly in the middle of the row?

- A. R
- B. Q
- C. S
- D. O

Answer: Option D

Q11. In a coded form, A#B means A is the paternal grandfather of B; A\$B means A is the son of B and A@B means A is the brother of B.

Which of the following equations show that P is the father of S?



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- A. P#Q@R\$\$
- B. P#Q\$R@S



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- C. P\$Q#R@S
- D. P@Q\$R#S

Answer: Option A

Q12. Six friends A,B,C,D, E, F are standing in a row facing east.

1. C is in between B and D
 2. E is in between D and F
 3. D is right to E and left to C
 4. If A is standing extreme right in the row, who on the extreme left?
-
- A. F
 - B. B
 - C. D
 - D. C

Answer: Option A

Q13. Five persons P, Q, R, S and T are sitting in a row. Who is sitting in the middle?

Statements:

1. P is between R and Q. Q is on the left to P
 2. T is between Q and S
 3. T is on the left of Q but the right of S
-
- A. Statement III alone is sufficient
 - B. Statement II alone is sufficient
 - C. Both statements I and II are together sufficient
 - D. Statement I alone is sufficient

Answer: Option C



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Q14. Statement:

Our city has got the maximum rainfall this year in comparison to the last 10

years. Assumptions:



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- I. The city was facing drought since last 10 years
 - II. Many areas in the city got flooded due to such heavy rainfall
-
- A. Only I is implicit
 - B. Both I and II are implicit
 - C. Neither I nor II is implicit
 - D. Only II is implicit

Answer: Option C

Q15. Statements:

- 1. No poet is singer
- 2. All poets are dancers

Conclusions:

- 1. No singer is dancer
 - 2. No dancer is singer
-
- A. Only I follows
 - B. I and II follows
 - C. Only II follows
 - D. None of the conclusions follow

Answer: Option D

Q16. In a group of six friends P,Q,R,S,T and U of different ages but all have their birthdays on the same date.

The youngest is seventeen years old and the oldest is T of 22 years. U is somewhere between Q and S in age.

P is Older than Q. R is older than S.

If Q is 17 years old, which of the following could be the age of S and R respectively?

- A. 18 and 20



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- B. 19 and 18
- C. 19 and 21
- D. 17 and 20



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Answer: Option C

Q17. The numbers of students studying in six different disciplines of a college are given below. Study the given data and answer the questions that follow.

Number of students in different disciplines			
Disciplines	Total	Boys	Girls
Science	1020	680	340
Social Science	2380	1700	680
Humanities	1700	510	1190
Law	680	408	272
Management	1700	1020	680
Commerce	2040	1190	850
Total	9520	5508	4012

Considering the data for both Social Science Humanities, what is the percentage of girls in total students in these two categories clubbed together?

- A. 41.17%
- B. 42.15%
- C. 46.02%
- D. 45.83%

Answer: Option D

Q18. A statement is followed by three courses of action numbered I, II and III. Assuming everything in the statement to be true, decide which of the suggested courses of action (a decision to be taken for follow up/ improvement in regard to the problem) logically follow. **Statement:**

The number of passengers following through air route has considerably increased in



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the last few years and the current numbers of airports and operational flights are not sufficient to fulfil the increasing demands and to provide better services.

Courses of Action:



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- I. All the passengers should be asked to use other modes of travel in future.
 - II. The Aviation Ministry should further strengthen air infrastructure as the traffic demand is high.
 - III. More staff should be appointed to provide better services to the increasing numbers of passengers at the airports.
- A. Only I and III follow
 - B. Only I and II follow
 - C. Only II and III follows
 - D. Only I follows

Answer: Option C

Programming Logic

Q1. What would be the output of the below snippet?

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int charArr[ ] = {91, 93, 95};
6     cout<<*charArr+1;
7     return 0;
8 }
```

Enter your answer as only numerical in the box:

Answer: 92

Q2. The Hashing Technique hash function takes a _____ and returns the _____ value of that key in order to identify the index of an array.

- A. Null, Hash
- B. Hash, Key
- C. Key, Null
- D. Key, Hash

Answer: Option D

Q3. What will be the output of the following program?

```
1 public class Main
2 {
3     public static void Check(int a[],int b[])
4     {
5         if(a.equals(b))
6             System.out.println("equal");
7         else
8             System.out.println("Not equal");
9     }
10    public static void main(String args[])
11    {
12        int a[]= {5,6,7,8};
13        int b[]= {5,6,7,8};
14        Check(a,b);
15    }
16 }
```

Type your answer here:

Answer: Not equal

Q4. We can't overload _____ operator.

- A. .(Dot operator)
- B. [](subscript operator)
- C. ()(parenthesis)
- D. =(assignment operator)

Answer: Option A

Q5. What would be the output of the below code?

```
1 public class Main
2 {
3     final int a=null;
4     public static void main(String [] args)
5     {
6         Main obj = new Main();
7         System.out.print(obj.a);
8     }
9 }
```

- A. NULL
- B. error : variable a wrongly initialized in the default constructor
- C. error: incompatible types <null> cannot be converted to int
- D. 0

Answer: Option C

Q6. Which of the below functions is used to convert double value 8.33 to 9?

- A. ceil()
- B. top()
- C. fabs()
- D. floor()

Answer: Option A

Q7. When we execute the given program what will it print?

```
1 #include<stdio.h>
2 int main()
3 {
4     int x=3;
5     switch(x)
6     {
7         case x+0+0: printf("value remains 3 itslef");
8         case x+0:printf("still value remains 3 itself");
9         case x+2: printf("value will be 5");
10        default: printf("get confused");
11    }
12    getch();
13 }
```

- A. Compile time error
- B. value remains 3 itself
still value remains 3
itself
- C. still value remains 3 itself
- D. value remains 3 itself

Answer: Option A



Coding

Q1. Display sequence of Fibonacci series until the number given by user and count total even numbers and odd numbers in that series except zero.

Fibonacci series should start with 1.

Total count of even numbers should be displayed in the first row and odd numbers should be displayed in the next row.

Number given by user for Fibonacci series should be greater than 5 and less than or equal to 20 otherwise display "INVALID INPUT".

If the number given by the user is space, character or empty display "INVALID OUTPUT".

The text message displayed should be in exact format as it is case sensitive. The text message displayed should be in exact format as it is case sensitive.

In below example 2 is for count of even numbers that is (2,8) and 5 is count of odd numbers that is (1, 1, 3, 5, 13)

Example:

Input:

7

Output:

1 1 2 3 5 8 13

2

5

Solution in C++:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int num, sum = 0, odd = 0, even = 0, i;
6     cin >> num;
7     if(num > 5 && num <= 20)
8     {
9         int num1 = 1;
10        int num2 = 1;
11        for( i = 1; i <= num; ++i)
12        {
13            cout << num1 << " ";
14            if(num1 % 2 == 0)
15                even++;
16            else
17                odd++;
18            sum = num1 + num2;
19            num1 = num2;
20            num2 = sum;
21        }
22    }
23    else
24    {
25        cout << "INVALID INPUT";
26        return 0;
27    }
28    cout << endl << even << endl << odd;
29 }
```

Q2. Consider there are n positive integers representing the total number of Trains



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running between Station $RS[0]$ and $RS[d-1]$. RS is the array containing Railway Stations in order of sequence of stations located one after another. The d represents the total number of stations.



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RS[0] and RS[d-1] are the stations at both ends. There is another array T of size d which is equal to the size of RS. T represents time in minutes between last and current station. Array positions can be mapped for RS and T in such a way that the train will take time T[k] to reach station RS[k] from station RS[k-1].

N trains start at RS[0] at different timestamps represented by float value to indicate hour value before precision point and minute value after precision point. (11.30)

Values of RS and T are given

as - RS[0] = PANVEL T[0] =

0

RS[1] = KHANDESHWAR T[1] = 4

RS[2] = MANSAROVAR

T[2] = 5 RS[3] =

KHARGHAR T[3] = 3 RS[4]

= BELAPUR T[4] = 4 RS[5]

= SEAWOOD T[5] = 5

RS[6] = NERUL T[6] = 3

Trains is set of values representing starting times (in float) for n number of trains running from Panvel to Nerul, given as follows

Trains = [7.30, 8.2, 12.45, 13.30, 14.44, 15.50, 9.15, 10.20, 23.59, 17.33, 19.20]

Count the number of trains which are yet to arrive for the current day at the station where the user is present at a particular time.

Write code to return count of trains left for the day at station name and time entered by the user.

Note: The time is represented in 24 Hour Fashion and assume that all trains start at station RS[0].

Example 1:

Input Values



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Enter current time(hour.min)

float 11.20



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['PANVEL', 'KHANDESHWAR', 'MANSAROVAR', 'KHARGHAR', 'BELAPUR',
'SEAWOOD', 'NERUL']

At which station you are right now? (Choose from
above) Kharghar

Output

values 11



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Solution in C++:

```
1 #include<bits/stdc++.h>
2 using namespace std;
3 int main()
4 {
5     float cur_time,total_journey_time=0;;
6     string cur_place;
7     cout<<"Enter current time(hour.min) float"<<endl;
8     cin>>cur_time;
9     cout<<"[PANVEL, KHANDESHWAR, MANSAROVAR, KHARGHAR, BELAPUR, SEAWOOD, NERUL] "
10    cout<<"At which station you are right now? (Choose from above)"<<endl;
11    cin>>cur_place;
12    float start_time[]={7.30, 8.2, 12.45, 13.30, 14.44, 15.50, 9.15, 10.20,
13                        23.59, 17.33, 19.20};
14    float journey_time[]={0,4,5,3,4,5,3};
15    string place[]={"PANVEL", "KHANDESHWAR", "MANSAROVAR",
16                  "KHARGHAR", "BELAPUR", "SEAWOOD", "NERUL"};
17    transform(cur_place.begin(),cur_place.end(),cur_place.begin(), ::toupper);
18    int station_number=-1;
19    for(int i=0;i<7;i++)
20    {
21        if(place[i]==cur_place)
22            station_number=i;
23    }
24    for(int i=0;i<=station_number;i++)
25        total_journey_time+=journey_time[i];
26    int total_train=0;
27    for(int i=0;i<11;i++)
28    {
29        if((total_journey_time+start_time[i]) >= cur_time)
30            total_train++;
31    }
32    if(station_number!=-1)
33        cout<<total_train;
34    else
35        cout<<"INVALID INPUT";
36 }
```

This document details the Slot Analysis as well as Answers to Questions that students recollected post their TCS NQT(Slot 2) on 27th October 2020

Disclaimer:

1. The questions showcased in this document have been recreated through memory, thanks to test-takers who recalled the questions post their test.
2. The question repetition between slots is very miniscule.
3. Please use this document as an indicative preparation tool, rather than an exact replica of questions that appeared or can appear in the TCS NQT.

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TCS NQT Online Test Pattern

The pattern that was followed for the TCS NQT was as follows.

Section Order	Section	# Qs	Duration (minutes)
1	Numerical Ability	26	40

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2	Verbal Ability	24	30
3	Reasoning Ability	30	50
4	Programming Logic	10	15
5	Coding	2	45

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Syllabus

The following was the syllabus which was tested in the slot.

Numerical ability:

- Data Interpretation
- Statistics
- Time and Work
- Mensuration
- Number System
- Time, Speed and Distance
- Ratio and Proportions
- Linear Equations
- Simple Interest and Compound Interest
- Percentages
- Profit and Loss
- Simplification – Fractions and BODMAS
- Surds and Indices

Verbal Ability:

- Reading Comprehension
- Passage Completion - Missing words (Cloze passage)
- Passage Completion - Missing sentences
- Error spotting
 - Prepositions
- Sentence Completion
 - Prepositions
 - Tenses
- Knowledge of Formal/Informal language
- Sentence improvement
- Parajumbles
- Knowledge of spelling

Reasoning Ability:

- Attention to detail
- Unboxing a cube



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- Data Arrangements
- Cuts and unfolds
- Venn diagrams
- Blood relations
- Data Interpretation



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- Visual reasoning
- Syllogisms
- Statements and Assumptions
- Rule based decision making
- Decision tables
- Number series
- Analogy

Programming MCQ's:

- Operators
- Looping statements
- Control statements
- Arrays
- Strings
- Functions
- Object Oriented Programming (OOPS)
- Standard Template Libraries (STL)
- Object Modeling
- Compiler Design
- Threading
- Data Structures: Linked List, Stack, Queue, Trees and Graphs
- Recursion
- Pseudocoding
- Algorithms
- Basic Software Development Cycle
- Collections in JAVA
- Input/Output
- Constructor and Destructor
- Memory allocation
- Macros
- Containers
- Software Development life cycle

Coding:



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- Fundamentals of Programming - Conditional and looping statements, Arrays, Strings.



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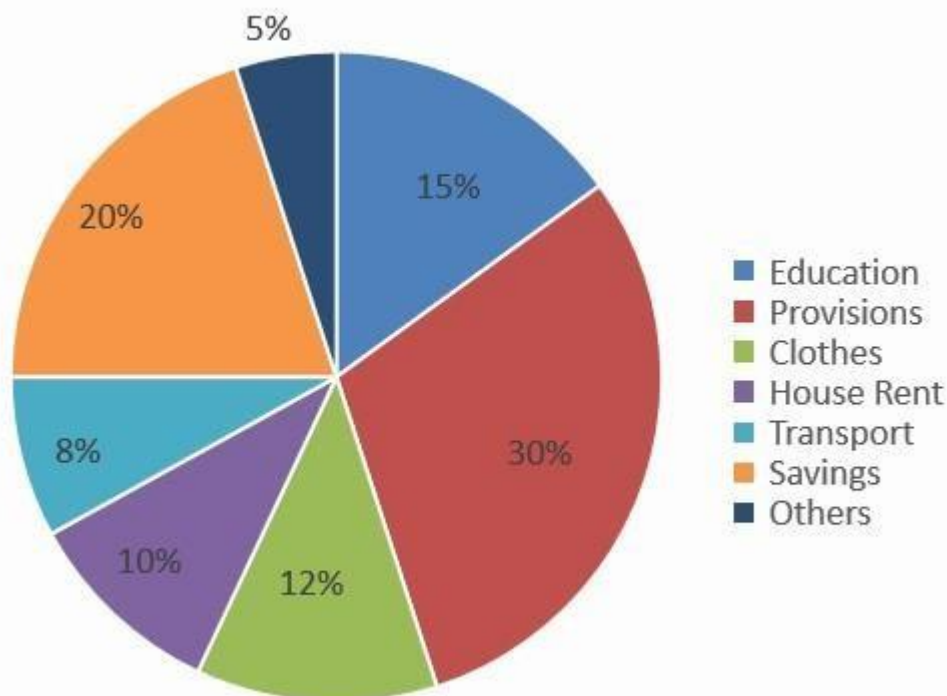
Slot Analysis

- The assessment platform used was TCS iON.
- As already revealed during the DRC and by FACE Prep, both intra-sectional and inter-sectional navigation were not possible.
- Every question was mandatory, and only upon completing a question would you be able to go to the next question.
- Revisiting of answers already submitted is not possible.
- There was no negative marking.
- All test-takers within the slot got the same questions.
- The test was **NOT Adaptive**, for a lot of other websites incorrectly communicated this to students. FACE Prep accurately pointed out that the test was not adaptive – just that the test had no intra-sectional and inter-sectional navigation.
- There was **100% repetition of topics, as accurately predicted by FACE Prep**.
- There was the presence of an on-screen calculator, which candidates could use.
- As clearly pointed out in the test instructions by TCS, if one had to do rough work, it must be visible clearly in the webcam that one is doing rough work and not performing any malpractice. This has also been **accurately pointed out by FACE Prep** earlier.
- There were two Fill in the Blanks type questions in the programming MCQs section.
- As opposed to what was predicted earlier, **an error log is generated in the compiler** in the event of Compilation error. It mentions what error and where the error is (line number)
- Most students have been complaining about the Coding Compiler not working properly on Python. What doesn't work is the tab key for indentation. Instead, please use the space bar. Several students have been able to use this tactic to compile successfully.
- While attempting the Coding questions, the preferred language can be changed in the middle, but typed code will be erased and cannot be retrieved.
- It is possible to move back and forth between the coding questions but the typed code will be erased if not submitted earlier.
- Coding questions are logic-wise very simple. But they take time to type. Students to please plan their time in the Coding section to type quickly.

Questions with Answers:

Numerical Ability

Q1. The following pie chart shows the expenditure in percentage on various items and savings of a family during a month.



What is the monthly expenditure on education if the monthly expenditure on clothes is 2400?

- A. Rs. 3500
- B. Rs. 3000
- C. Rs. 6000
- D. Rs. 4000

Answer: Option B

Q2. A can finish a work in 16 days and B can finish the same work in 20 days. After A had worked for 4 days, B also joined with A to finish the remaining work. In how many days will the remaining work be finished?

Answer: Option C

- A. $8 \frac{1}{9}$ days
- B. $6 \frac{2}{3}$ days
- C. $8 \frac{8}{9}$ days
- D. $6 \frac{1}{3}$ days

Answer: Option B

Q3. If mean of 29 observations is 33 and on adding one more observation the mean becomes

34. What is the value of the 30th observation?

- A. 68
- B. 34
- C. 55
- D. 63

Answer: Option D

Q4. The following table gives the percentage distribution of the population of four states A, B, C and D based on the poverty line and on gender.

State	% of population below poverty line	Proportion of Male and Female	
		Below Poverty Line	Above Poverty Line
		M:F	M:F
A	40	3:4	4:5
B	35	5:7	3:5
C	28	1:2	3:4
D	40	4:7	4:3

If state A's female population of the below poverty line is 2,00,000, what is the total population of state A?

- A. 800000

Answer: Option C

- B. 925000
- C. 875000
- D. 920000

Answer: Option C

Q5. Raju lends Rs. 3000 to Bharath and a certain sum to Charan at the same time at 6% per annum simple interest. If after 5 years, Raju altogether receives Rs. 1650 as the interest from Bharath and Charan, what is the sum lent to Charan?

- A. Rs. 2500
- B. Rs. 2750
- C. Rs. 3250
- D. Rs. 3300

Answer: Option A

Q6. If $\frac{\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}} = a + b\sqrt{15}$, what is the value of $2a + 3b$?

- A. 5
- B. 11
- C. 8
- D. 10

Answer: Option D

Q7. 80 kg of an alloy X is mixed with 50 Kg of an alloy Y. If alloy X has lead and copper in the ratio 3:7 and alloy Y has lead and copper in the ratio 7:3, what is the amount of lead in the new alloy?

- A. 59 kg
- B. 35 kg
- C. 24 kg
- D. 56 kg

Answer: Option A

Q8. What is the standard deviation of the data given below? 10, 28, 13, 18, 29, 30, 22, 23, 25, and 32.

- A. 7.7
- B. 7.0
- C. 49.0
- D. 6.2

Ans: C

Q21. The perimeter of a rectangle plot is 36 m. If the length is increased by 6m and the breadth is decreased by 3m, the area of the plot remains the same, what is the length of

the plot?

- A. 8 m
- B. 6 m
- C. 10 m
- D. 12 m

Answer: Option C

Q22. The population of a town is 1,21,000. If it increases at the rate of 10% per annum, what is the difference between the population 3 years hence and that of 2 years ago?

- A. 61251
- B. 61055
- C. 61051
- D. 62041

Answer: Option C

Verbal Ability

Q1. Fill in the blanks with most appropriate set of words from the options given below:

What did the painter do _____ himself from falling?

When he felt the ladder, _____ he grabbed the gutter to save himself from falling

- A. To save/beginning to slip
- B. To save/began slipping
- C. To save/begin to slip
- D. For saving/began to slip

Answer: Option D

Q2. Choose the appropriate option to complete the sentence:

_____, but could not get it to start this morning

- A. I have the car serviced yesterday
- B. I having the car serviced yesterday
- C. I got the car serviced yesterday



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D. I get the car serviced yesterday

Answer: Option C

Q3. One part of the sentence below may contain an error. Identify the part He realized he had to undergo an MRI test but was too frighten

- A. but was too frighten
- B. an MRI test
- C. had to undergo
- D. He realized he

Answer: Option A

Q4. Experts suggest that it may take the development of multiple vaccines to begin the process of protecting the world's population from COVID-19. Most of the current vaccine front-runners require two (1)___ that could possibly be administered annually. No vaccine is 100 percent effective, and once a vaccine is approved, there are still many (2)

to overcome before a shot can be made widely available.

Blank 1. A. coses B. bouts

C. spells D. circles Bank 2.

A.

tracks B. jumps C. hurdles D.

snags

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



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Answer: Option D

Q5. Choose the appropriate option to complete the sentence:

The General could not _____ his soldiers to march forward, _____ the lure of extra money and food.

- A. Tell, nonetheless
- B. Persuade, despite
- C. Ask, hopefully
- D. Force, though

Answer: Option B

Q6. The following three sentences can be revised into one better sentence. Choose the sentence that is the best version:

He told us he had read Milton. He had read it in a prose translation, when he was fourteen.

- A. He told us he had read Milton in a prose translation when he was fourteen.
- B. He was fourteen when Milton's prose translation he had read.
- C. When he read Milton prose translation, he told us he was fourteen.
- D. He has read Milton at fourteen in a prose translation

Answer: Option A

Q7. For the four sentences (s1 to s4) paragraph below, sentences s1 and s4 are given. From the options P, Q, R choose the appropriate sentences for s2 and s3 respectively.

S1. India's rural districts, home to nearly 74% of the Indian population, accounted for 65% of all Covid-19 tests conducted in August, and 55% of new cases reported that month.

S2.

S3.

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S4. This is the first time that the district level data on testing from across the country was made public.

Options;

P. The government will start distributing wheat and ragi through the public distribution system in October.

Q. The government this week released in Parliament data on the number of Covid-19 tests conducted in each of India's 734 districts in August.

R. Urban districts, on the other hand, are home to 14% of the population and accounted for nearly 22% of all the tests conducted in August, with 28% of the cases reported that month coming from them.

- A. RQ
- B. PQ
- C. PR
- D. QR

Answer: Option A

Q8. Two sentences have been removed from the text below. Read the text and then match the missing sentences to fill up the blanks. You will need to choose 2 options out of 4 -P,Q,R,S - provided:

Options:

Dias, who knew farming intimately, came up with the ambitious goal of planting 1 million jackfruit trees across Sri Lanka.

_____1

_____. He visited villages to distribute the jackfruit seedlings and mailed seeds to far flung corners of the country.

_____2_____. Today, Dias is considered a nation hero, and like most Sri Lankan children, I first learned about Dias in a school textbook. His jackfruit campaign also helped establish food security in Sri Lanka during World War II, while nearby places such as Bengal and Vietnam experienced horrific famines in the 1940s.

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Options:

P. The English rulers planned to kill Dias by poisoning him

Q. A planter by trade, Dias imported jackfruit seeds from Malaysia and gathered healthy seeds for germination

R. My parents had a nickname for me but I was too

embarrassed to use it S. Over time, Dias' campaign

paved the way for too many successful jackfruit

plantations across the country and earned him the heroic nickname of Kos Mama or Uncle Jack.

A. RP

B. QP

C. QS

D. SR

Answer: Option C

Q9. One part of the sentence below may contain

an error. Identify the part. The reign of the king

was clearly coming to an end.

A. the king

B. was clearly coming

C. the reign of

D. to an end

Answer: Option C

Q10. Complete the following sentence by filling in the blanks (1 and 2) with the right words from the list given below:

Compared with conventional agriculture, organic farming uses fewer pesticides, reduces soil erosion, decreases nitrate leaching into groundwater and surface water, and ____ animal wastes back into the farm. These benefits are ____ by

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higher food costs for consumers and generally lower yields.

1. A. recycling B. recycle C. recycles D. recycled
2. A. B. balanced C. D.
- increased counterbalanced encountered
- A. 1.B, 2.D
- B. 1.C, 2.C
- C. 1.D, 2.B
- D. 1.D, 2.A

Answer: Option B

Q11. For the four-sentence (S1 to S4) paragraph below, sentences S1 and S4 are given. From the options P, Q and R, choose appropriate sentences for S2 and S3 respectively.

S-1: Sleeping all night is great for most of your body -- but not for your joints. S-2:

S-3:

S4: Rheumatologists recommend warming yourself with a heating pad, raising your home thermostat, or doing gentle hand exercises as soon as you wake up. P: Lack of movement during the night can have you waking up as stiff as steel.

Q: Keeping pills by your bed so you can take the morning medications immediately also helps

R. Fortunately, there are ways to combat this problem

- A. PQ
- B. PR
- C. RP
- D. QR

Answer: Option B

Q12. You are going to read a text about glaciers. Some sentences are missing from the text. Choose from the list (A-C) the most appropriate sentence for each gap (1-2) in the text. There is one extra sentence that you do not need to use.

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Since the early 1900s, many glaciers around the world have been rapidly melting.

1

_____. Specifically, since the industrial

revolution, carbon dioxide and other greenhouse gas emissions have raised temperatures, even higher in the poles. _____ 2

_____. Scientists project that if

emissions continue to rise unchecked the Arctic could be ice free in the summer as soon as the year 2040 as ocean and air temperatures continue to rise rapidly.

A. More than a third of remaining glaciers of the world would have melted by 2030.

B. As a result, glaciers are rapidly melting, calving off into the sea and retreating on land.

C. Human activities

are at the root of this phenomenon.

A. (1) C, (2) B

B. (1) C, (2) A

C. (1) A, (2) B

D. (1) B, (2) C

Answer: Option A

Q13. You are going to read a text about Mark Twain. Some sentences are missing from the text. Choose from the list (A-C) the most appropriate sentence for each gap (1-2) in the text. There is one extra sentence that you do not need to use.

When Mark Twain proposed to Olivia Langdon, her father wanted to be sure of his good character. Since they had no friends in common, Twain offered the names of several friends he had made out west. (1) _____ All wrote back condemning Twain as a louse and a freeloader, two predicted that he would fill a drunkard's grave. (2) _____ "Then I'll be your friend myself,"

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Langdon said. "Take the girl. I know you better than they do."

Langdon was right for Twain proved to be a faithful and loving husband to Olivia.

A. Langdon wrote to ask them what they thought of the match.

B. Twain took his pen name from an alert cry used on his steamboat - "by the mark, twain".

C. Twain bitterly remarked that apparently he didn't have any friends.

A. (1)-C, (2)-A

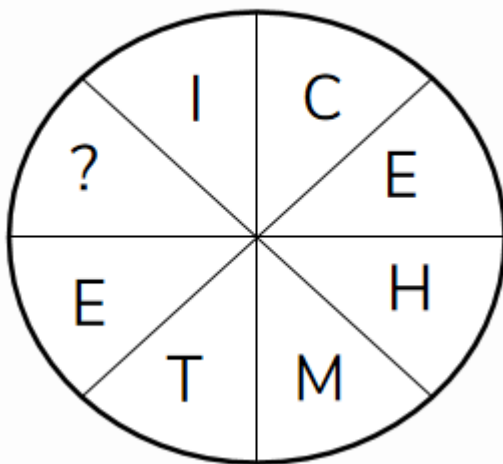
B. (1)-C, (2)-B

C. (1)-B, (2)-A

D. (1)-A, (2)-C

Answer: Option D

Q1. Which letter will come in the place of question mark in the puzzle?



A. P

B. N

C. R

D. U

Answer: Option C



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Q2. Select the correct option based on the following criteria:

- A. If data in statement I alone is sufficient to answer the question.
 - B. If data in statement II alone is sufficient to answer the question.
 - C. If data of both either statement I alone or statement II alone are sufficient to answer the question.
 - D. If data in both statements I & II together are necessary to answer the question.
- I. X is older than Y. Z is younger than W.
II. W is older than Z. X is younger than Z.

Who is younger among W, X and Z?

- A. C
- B. A
- C. B
- D. D

Answer: Option B

Q5 & Q6. Based on the following data, answer the questions:

Amisha wanted to throw a reception party. The expenditure percentage distribution of the party was 30% on Catering, 25% on Decoration, 20% on Music system, 15% on Photography & Videography and 10% on invitations.

The total expenditure was Rs. 1,059,600.

Q5. How much money was spent on photography & videography and invitations together?

- A. Rs. 264,900
- B. Rs. 158,940
- C. Rs. 105,960
- D. Rs. 211,920

Answer: Option A

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Q6. How much money was spent on decoration in the party?

- A. Rs. 264,900
- B. Rs. 27,830
- C. Rs. 42,384
- D. Rs. 158,940

Answer: Option A

Q7. Choose the pair similar to the following MDXF: OBZD

- A. ILPR: KNRT
- B. SGFN : UEHL
- C. CLPQ : MXCF
- D. BMXT: COZW

Answer: Option B

Q8. Study the given information carefully.

For a job selection in a company the following conditions need to be fulfilled. The candidate must:

- i. be at least 23 years and at most 28 years as on 01 December 2020.
- ii. have at least 65% marks in written exam and 40% marks in interview.
- iii. possess a graduation degree with minimum 60% marks.
- iv. have one-year work experience.

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In case a candidate who fulfils all conditions except (iv) but possess 80% marks in graduation then case is to be referred to manager.

In the following question, details of candidates are given. Select the appropriate option accordingly.

Anshika was born on 07 March 1997. She completed her graduation with 75% marks. She has a work experience of 2 years. She scored 70% marks in written exam and 55% marks in interview.

- A. If candidate is to be selected
- B. If data is insufficient to conclude
- C. If candidate is to be rejected
- D. If case is to be referred to manager

Answer: Option A

Q9. Nehal, Iqbal, Ronit, Malini and Harbhajan participate in any one of the five activities i.e. Quiz, Singing, Dance, Debate and Mimicry. Ronit participates in Singing. Harbhajan does not participate in Debate and Mimicry. Malini does not participate in Mimicry. Iqbal participates in Quiz. Who participates in Debate?

- A. Nehal
- B. Cannot be determined.
- C. Malini.
- D. Nehal or Malini.

Answer: Option B

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Q10. Two sentences are followed by two conclusions numbered I, II. Assuming the statements to be true, if they do not conform to real world knowledge, decide which of the conclusion(s) logically follows/follow from the given statements.

Statements:

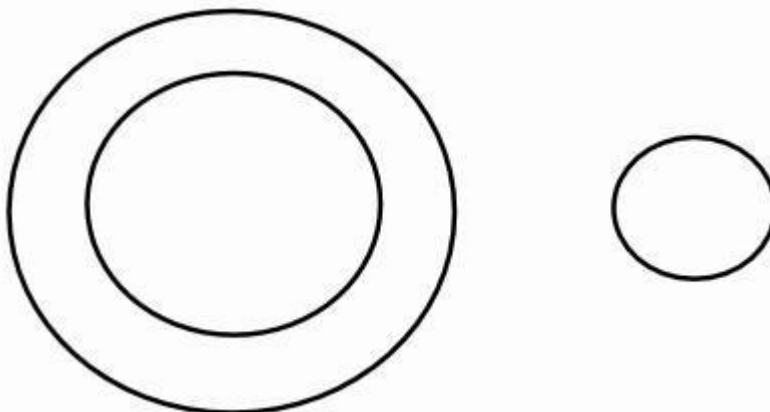
- A. All Cats are Lions.
- B. Some Lions are Tiger.

Conclusions:

- I. Some Tigers are Cats.
- II. Some Lions are Cats.
- A. Neither conclusion I nor II follows.
- B. Both conclusions I & II follow.
- C. Only conclusion II follows
- D. Only conclusion II follows.

Answer: Option D

Q11. Which of the following elements satisfies the Venn diagram?



- A. Quadrilaterals, Square, Triangle
- B. Colour, Plate, Fork

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- C. Doctor, Patient, Nurse
- D. Transport, Bus, Cycle

Answer: Option A

Programming Logic

Q1. What would be the output of below code?

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int num = 5;
6     num = printf("Apple Fruit");
7     printf("%d", num);
8     return 0;
9 }
```

Type your answer here:

Answer: Apple Fruit11

Q2. Specify the precise answer for Overloading of destructor:

- A. Partially Possible
- B. Possible
- C. Not Possible
- D. None of the given options

Answer: Option C

Q3. Which of the following is not a technique of dynamic memory allocations?

- A. dmalloc()
- B. realloc()
- C. calloc()
- D. malloc()

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Answer: Option A

Q4. When the given code is executed, what will be the output that is printed?

```
1 #include<stdio.h>
2 #define SQUARE(s) s*s
3 int main()
4 {
5     int a = 3;
6     printf("%d", SQUARE(a+2));
7     return 0;
8 }
```

Enter your answer ONLY as a NUMERAL in the box.

Answer: 11

Q5. Match the pairs.

Real Time Usages Terms			Best Suited underlined data structures
	Network data mode	1	Tree
	Relational Database Management	2	Queue
	System	3	Array
		4	Graph

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

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Answer: Option C

Q6. Which of the following statements about constructor is NOT true?

- A. We can define more than one constructor with different signature in same class
- B. We can overload constructor in derived class
- C. Constructor has no return type
- D. Constructor has the same name as the class name

Answer: Option B

Q7. Glass box testing is also known as _____

- A. White Box Testing
- B. Sanity Testing
- C. Black Box Testing
- D. Smoke Testing

Answer: Option A

Q8. Write the output for the below code.

```
1 import java.util.*;  
2 public class Test  
3 {  
4     public static void main(String...a)  
5     {  
6         Map<Integer, String> tempMap = new HashMap<Integer, String>();  
7         tempMap.put(null, "Java");  
8         tempMap.put(1, "Java EE");  
9         tempMap.put(1, "Advanced Java");  
10        System.out.println(tempMap.get(1));  
11    }  
12 }
```

- A. NullPointerException
- B. Error in Main Method
- C. Advanced Java
- D. Java EE

Answer: Option C



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Q9. A bus conductor has a bunch of coins, each coin has a different value. New coins are added at the end of the bunch. Only coins are issued to customers from the top side of the bunch.

Developer X wants to implement this in application by the help of data structure. Which data structure is best suitable for implementation of current logic?

- A. Queue**
- B. Graph**
- C. Stack**
- D. Tree**

Answer: Option A

Q10. What is the full form of ROI in the context of Software development?

- A. Return-on-investment**
- B. Rationality-of-internet**
- C. Reduction-of-investment**
- D. Rate-of-integration**

Answer: Option A

Coding

Q1. Take a single line text message from the user. Separate the vowels from the text. Find the repeating occurrences of vowels from the text message. Display count of which vowel has repeated how many times.

Display a new Text message by removing the vowel characters as output.

Display the output in the exact format shown below in example, after displaying count of characters on next lines display the new text message on next line. "Hll wlcm" is the new text message.

If a text message entered by a user does not contain any vowels then display 0 as output. If a text message entered by a user contains any numeric value then display 0 as output.

If User enters a blank or empty text message, display "INVALID INPUT" as output. Message "INVALID INPUT" is case sensitive. Display it in the exact format given.



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Example 1: Input: Hello welcome Output a:0

e:3

i:0

o:2

u:0

Hll wlcm

Example2:

Input:

Hll wlcm **Output:**

0

Solution in C++:

```
1 #include<iostream>
2 #include<string>
3 using namespace std;
4 int main()
5 {
6     string in,out="";
7     getline(cin,in);
8     int len=in.length();
9     int ascii[128]={0};
10    if(len>0)
11    {
12        for(int i=0;i<len;i++)
13        {
14            if(in[i]=='A' || in[i]=='E' || in[i]=='I'
15               || in[i]=='O' || in[i]=='U' || in[i]=='a'
16               || in[i]=='e' || in[i]=='i' || in[i]=='o'
17               || in[i]=='u')
18            {
19                ascii[in[i]]++;
20            }
21            else
22            {
23                if(in[i]>='0'&&in[i]<='9')
24                {
25                    cout<<"0";
26                    return 0;
27                }
28                else
29                    out+=in[i];
30            }
31        }
32    }
```

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```
32     int outlen=out.length();
33     if(outlen!=len)
34     {
35         cout<<"a:"<<ascii['A']+ascii['a']<<endl;
36         cout<<"e:"<<ascii['E']+ascii['e']<<endl;
37         cout<<"i:"<<ascii['I']+ascii['i']<<endl;
38         cout<<"o:"<<ascii['O']+ascii['o']<<endl;
39         cout<<"u:"<<ascii['U']+ascii['u']<<endl;
40         cout<<out;
41     }
42     else
43     {
44         cout<<"0";
45         return 0;
46     }
47 }
48 else
49     cout<<"INVALID INPUT";
50 }
```

Q2. Indian Premier League IPL Cricket Matches are organized for a few Days. The problem is to prepare a timetable from Day 1 to Day n, where n depends on the number of teams participating. Set A represents the Names of Teams participating. Set A will be input from the user. Do not show an input user message. Directly accept the team names as string values and enter q to stop taking inputs.

Write code to display Pairing of Teams and possible number of matches possible excluding Semi Final and Final.

Note: Minimum 3 Teams are required and maximum limit of Teams is 12.

Example1: Input Values CHENNAI MUMBAI KOLKATA PATNA

Q

Output Values TOTAL MATCHES:6 CHENNAI-VS- MUMBAI CHENNAI- VS-KOLKATA CHENNAI-VS- PATNA MUMBAI- VS-KOLKATA MUMBAI-VS- PATNA KOLKATA- VS-PATNA



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Solution in C++:

```
1 #include<iostream>
2 #include<string>
3 using namespace std;
4 int main()
5 {
6     string s[12],in;
7     int total=0,count=0;
8     cin>>in;
9     while(in!="q" && in!="Q")
10    {
11        if(count==12)
12        {
13            cout<<"Maximum limit of Teams is 12";
14            return 0;
15        }
16        s[count++]=in;
17        cin>>in;
18    }
19    if(count>=3)
20    {
21        int n=count-1;
22        n=(n-1)*n;
23        cout<<"TOTAL MATCHES:"<<n<<endl;
24        for(int i=0;i<count-1;i++)
25        {
26            for(int j=i+1;j<count;j++)
27                cout<<s[i]<<"-VS-"<<s[j]<<endl;
28        }
29    }
30    else
31        cout<<"Minimum 3 Teams are required";
32 }
```

This document details the Slot Analysis as well as Answers to Questions that students



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