

11. (a) CTS Test 11

Test Summary

- No. of Sections: 4
- No. of Questions: 82
- Total Duration: 105 min


Section 1 - Quantitative Aptitude

Section Summary

- No. of Questions: 25
- Duration: 25 min

Additional Instructions:

None

Q1.  If $\log_{10}(3)=0.4771$, find the value of $\log_{10}(81)$

- 0.7
- 0.9
- 1.1
- 1.9

Q2. What is the value of x in the expression $\log_{10}(20 * x) = 3$

- 500
- 50
- 2/100
- 30/20
- 3/20

Q3. Find the value of $\log 1 + \log 2 + \log 3$.

- 1
- 2
- 3
- None of these



Q4. Evaluate: $\log_5(17^6)$

-
-
-
-
-

Q5. $117 \times 117 + 83 \times 83 = ?$

- ☐ a) 20698
 - ☐ b) 20578
 - ☐ c) 21698
 - ☐ d) 21268
-
-
-
-

Q6. $\log_3 9 + \log_5 625 + \log_7 343$ is:

-
-
-
-

Q7. Whats the value of $\log_7 (1/49)$

-
-
-

-2

Q8. what is the value of $\log(a+b)/c + \log c/a$. when it is given that b is four times the value of a .

$\log 2$

$\log 3$

$\log 4$

$\log 5$

$\log 10$

Q9. $\log x^2 (81 - 24x) = 1$

$x = -27$ and 3

$x = 27$ and 3

$x = -27$ and -3

$x = -27$ and -3

Q10. What is the value of the following expression: $2 \log_{10} (5) + \log_{10} (4)$?

2

2.5

3

None of these

Q11. If $a^x = b^y$, then:

$\log(a/b) = x/y$

$\log(a) / \log(b) = x/y$

$\log(a) / \log(b) = y/x$

None of these

Q12.

If $\log x (0.1) = -1/3$, then the value of x is:

10

100

1000

1/1000

Q13.

If $\log_8 (x) + \log_8 (1/6) = 1/3$ then the value of x is:

12

16

18

24

Q14.

If $\log x + \log y = \log (x + y)$, then:

$x = y$

$xy=1$

$y = (x-1)/x$

$y = x/(x-1)$

Q15.

If $\log_{10} (7) = a$, then $\log_{10} (1/70)$ is equal to:

$-(1 + a)$

$(1 + a)^{-1}$

$a/10$

$1/10a$

Q16.

If $\log\{(a+b)/3\} = 0.5(\log a + \log b)$, then the correct relation between a and b is:

$a^2+b^2 = 7ab$

$$a^2 - b^2 = 7ab$$

$$(a+b)^2 = 2$$

$$(a+b)/3 = (1/2)(a+b)$$

Q17. The value of $(\log_a n) / (\log_{ab} n)$ is given by:

$$1 + \log_a (b)$$

$$1 + \log_b (a)$$

$$\log_a (b)$$

$$\log_b (a)$$

Q18. The value of $3^{-1/2} \log_3 (9)$ is:

$$3$$

$$1/3$$

$$2/3$$

None of these

Q19. a/b is a fraction where a

$$a/b$$

$$(a+n)/(b+n)$$

both

none

Q20. If a, b, and c are in geometric progression then $\log_a (n)$, $\log_b (n)$ and $\log_c (n)$ are in:

AP

GP

HP

None of these

Q21. Every time x is increased by a given constant number, y doubles and z becomes three times. How will $\log(y)$ and $\log(z)$ behave as x is increased by the same constant number?

Both will grow linearly with different slopes

Both will grow linearly with same slopes

y will grow linearly, while z will not

z will grow linearly, while y will not

Q22. $f(x)$ grows exponentially with x , how will $f(\log(x))$ grow?

Exponentially

Linearly

Quadratically

None of these

Q23. What is the value of $\log_{512}(8)$?

3

$\frac{1}{3}$

-3

$-\frac{1}{3}$

Q24. Let n be the number of different 5 digit numbers, divisible by 4 with the digits 1, 2, 3, 4, 5 and 6, no digit being repeated in the numbers. What is the value of n ?

209

192

196

198

Q25. If $\log_{10}(2) = 0.3010$, what is the number of digits in 2^{64}



19

20

18

None of these

Section 2 - Reasoning Ability

Section Summary

- No. of Questions: 25
- Duration: 25 min

Additional Instructions:

None

Q1. odd man out 1) AFB 2) MRN 3) KPL 4) RXS 5) none of these

AFB

MRN

KPL

RXS

None

Q2. odd man out 1) CEH 2) PRU 3) PRV 4) MOR

CEH

PRU

PRV

MOR

Q3. according to recent study in the local municipal elections the candidate who interacts more with the residents welfare associations and wins their trust will get maximum name recognition in the elections.

Local residents welfare associations are the most important factor in elections in the city.



Maximum name recognition will help a candidate win a higher percentage of votes cast during the election.

residents welfare associations exert a lot of influence over the voting population residing in the city

4) For Maximum name recognition a candidate need not spend a lot of money on posters banners advertising campaigns.

- Q4. the following are the criteria for giving 10% bonus to employees 1.the employees should have worked in his/her post for more than 6 months 2.the employee should have been rated as atleast 7/10 of his/her reporting,manager and 6/10 by his colleagues 3.the employee should be a part of atleast one employee engagement activity conducted in his in the office 5.the employee should have (A) worked in the organization for an year and (b)should have had atleast 1 year of work experience prior to this job However a)employees who fulfill condition except (2)should be given 5% bonus b)employees who fulfil all condition(5)should be given 7% bonus should the given employee be 10% bonus?(the case is presented as on 1.12.2012) the following are the criteria for giving 10% bonus to employees 1.the employees should have worked in his/her post for more than 6 months 2.the employee should have been rated as atleast 7/10 of his/her reporting ,manager and 6/10 by his colleagues 3.the employee should be a part of atleast one employee engagement activity conducted in his in the office 5.the employee should have (A) worked in the organization for an year and (b)should have had atleast 1 year of work experience prior to this job However a)employees who fulfill condition except (2)should be given 5% bonus b)employees who fulfil all condition(5)should be given 7% bonus should the given employee be 10% bonus?(the case is presented as on 1.12.2012) .the following are the criteria for giving 10% bonus to employees 1.the employees should have worked in his/her post for more than 6 months 2.the employee should have been rated as atleast 7/10 of his/her reporting ,manager and 6/10 by his colleagues 3.the employee should be a part of atleast one employee engagement activity conducted in his in the office 5.the employee should have (A) worked in the organization for an year and (b)should have had atleast 1 year of work experience prior to this job However a)employees who fulfill condition except (2)should be given 5% bonus b)employees who fulfil all condition(5)should be given 7% bonus should the given employee be 10% bonus?(the case is presented as on 1.12.2012) saurabhis the incharge of the employee engagement programming conduction in the office and has been active participant in all initiatives.he is at the post of senior hr management ever since he have joined the organization 1.5 years back.previously he was working withauction.com as the hr manager and had a work experience of 1year there.owing to his zeal and exuberance,he was rated by8/10 by his reporting manager and 9/10 by his colleages. He attended thepersonality development programme twice ever since he joined the organization

employee should be given 10%bonus

employee should be given 7% bonus

employee should be given 5% bonus

employee should not be given any bonus

data insufficient

- Q5. a lady runs 18 km towards east and then 24km towards north how far and in which direction is the lady from starting point?

42km north east

42km east

6 km east

30 km north east

- Q6.

the aspects where the film 'bombay' loses out is where commercial film congenially goes away it was too simplistic to address serious issues and failed to translate real life to reel.

The film was successful inspite of its short coming

the film is director aimed at reacting real life on the silver screen

the film was too simplistic for the audiences taste

None of these

Q7. Four working ladies A,B,C,&D are sitting around a table 1.A sits opposite to the cook 2.B sits on the right side of the beautician 3.teacher is on the left side of accountant 4.D sits opposite to C 5.C is to the right of the accountant who is sitting to the left of beautician What is the occupation of C?

Beautician

Teacher

Accountant

Cook

Q8. The given signs signify something and on that basis, assume the given statements to be true and find which of the two conclusions I and II is/are definitely true.
'A"B' means 'A is greater than B'.
'A|B' means 'A is neither smaller than nor equal to B'.
'A/B' means 'A is not smaller than B'.
'A\B' means 'A is neither greater than nor equal to B'.
'A?B' means 'A is neither greater than nor smaller than B'.
Statements:
M?S|Q|P,R/P,T\P Conclusions
I. M|T
II.Q\R

Only conclusion I is true

Only conclusion II is true

Neither conclusion I nor II is true

Both conclusion I and II are true

Q9. Every one of the following questions consists of a related pair of words, followed by five pairs of words. Choose the pair that best represents a similar relationship to the one expressed in the original pair of words. TAILOR : SUIT

scheme : agent

edit : manuscript



revise : writer

mention : opinion

Q10. Reptile is to lizard as flower is to

petal

stem

daisy

alligator

Q11. four working ladies A,B,C,&D are sitting around a table 1.A sits opposite to the cook 2.B sits on the right side of the beautician 3.teacher is on the left side of accountant 4.D sits opposite to C 5.C is to the right of the accountant what is occupation of D?

accountant

beautician

teacher

Cook

Q12. Based on the given passage find out which of the following statements can be inferred from the passage. According to recent study, in the municipal elections, the candidate who interacts more with the Residents Welfare Associations and wins their trust will get the maximum name recognition in the elections.

Local Residents Welfare Associations are the most important factor in elections in the city.

Maximum name recognition will help a candidate with a higher percentage of votes cast during the election.

Resident?s welfare associations exert a lot of influence over the voting population residing in the city.

For maximum name recognition a candidate need not spend a lot of money on posters, banners and advertising campaigns.

Q13. FROM chennai to himachal,the new culture vultures are tearing down acres of indias architectural tresures ancestral owners are often tobbed of with a few hundread rupees for an exquisitety carved door or window which feteches fifty times that much from foregin dealers and yet more from the drawing shop shophisticates of the western countriess the reason for such a shameless rape of indian architectural wealth can perhaps not wrongly be attribuyed to the unfortunate blend of activist disunity and the local indifference.

India provide a rich market for unscrupulous antique dealers



- most indian families have heirlooms which can be sold at high prices to europeans and americans.
- Only indians are not proud of their cultural heritage and are hungry for foreign currency that is easy available in return of artifacts.
- The environment created by the activist disunity and local indifference is the reason for antique dealers to strive in india.

Q14. A+B means A is greater than B
A-B means A is equal to B
A=B means A is less than or equal to B
A*B means A is less than B
A/B means A is not equal to B
statement: M-P,O/N,N*M
Coclusion:
I)M=S
II)N*P

- Only I is true
- Only II is true
- Both are correct
- None of these

Q15. Sushil,a salesperson,was asked by his sales manager to meet one of their high profile clients.Due to to his ill health, the sales manager was unable to take updates from sushil about the meeting.Sushil's phone was also switched off.On which day did sushil meet the client? Statements: I)Ravi,one of the sales manager's colleagues tells him that sushil did not visit the client either on Tuesday or on Thursday. II)Vikash,one of the sales manager's colleague tells him that sushil visited the client two days before Ravi contacted the client which was the day after Monday.

- statement I alone is sufficient to answering the problem question
- statement II alone is sufficient to answering the problem question.
- Both statements put together are sufficient in answering the problem question.
- Both the statements even put together are not sufficient in answering the problem question
- Either of the statement is sufficient in answering the problem question.

Q16. in a certain code language SPECIFY is writen as 1916539625 how is ABOUT written in that code .

- 13162120
- 12162120
- 12152019



12152120

Q17. Find the next number in the series.
2, 3, 6,18,108,?????

54

1002

216

1944

Q18. S1: sameer was not been coming since last week S6:since his plasterwill be removed after 30 days P:Doctors have advertised him complete bed rest for15 days Q: He had six fractures and was rushed to the hospital R:He met with a serious accident a few days ago S: I think he would be on leave for this whole month

RQPS

PSQR

SPRQ

QPRS

Q19. Choose the correct answer.
From the given choices select the odd one out.

DFE

PRQ

MPN

SUT

Q20. Choose the correct answer.
From the given choices select the odd one out.

BAK

DCM

HGQ



MNW

Q21. Choose the correct answer.
If North-West becomes East and North-East becomes South and so on, then what does East become?

South-West

North-East

North-West

South-East

Q22. Choose the right answer.
From the given anagrams, select the odd one out.

OLIVE

APPLE

LITCHI

EGG

Q23. Choose the right answer.
From the given anagrams, select the odd one out.

EGK

BEN

CGP

AEU

Q24. Select the right option from the given alternatives.
Introducing a woman, a man said,?Her husband is the only son of my father?. How is the woman related to the man?

Sister

Mother-in-law

Daughter

Wife



Q25. Choose the right answer.
Radha is the only daughter of Rakesh's father-in-law's wife. How is Radha related to Rakesh?

Daughter

Sister

Cousin

Wife

Section 3 - Verbal Ability

Section Summary

- No. of Questions: 25
- Duration: 25 min

Additional Instructions:

None

Q1. Based on the given passage find out which of the statement can be inferred from the passage 8. Excessive amount of mercury in drinking water associated with certain type of industrial pollution have been shown to cause Hobson`s Disease. Island L has an economy based entirely on subsistence-level agriculture. Modern industry of any kind is unknown. The inhabitants of island L have unusually high incidence of Hobson`s Disease.

Mercury in drinking water is actually perfectly safe

Mercury in drinking water must have sources other than industrial pollution.

Hobson`s Disease must have caused by some other source than mercury in drinking water.

both options A and B

both options C and B

Q2. JAUNTY(opposite)

A.Youthful

B.Ruddy

C.Strong

D.Unravellled

E.Sedate



Q3. The company encourages its managers to interact regularly, without preset agenda, to discuss issues concerning the company and the society. This idea has been borrowed from the ancient Indian concept of religious congregation, called satsang. Designations are forgotten during these meetings; hence, it is not uncommon in these meetings to find a management trainee questioning the Managing Director on some corporate policy or his knowledge of customers

- The company is concerned about its reputation with its employees
- The company believes in fostering the spirit of dialogue without degenerating it into a positioning based debate
- The company had some inter-personnel problems in the past due to which it felt the need for these corporate satsangs
- (d)All of the above

Q4. Read the passage and answer the questions given below Since the late 1970s when the technology for sex determination first came into being, sex selective abortion has unleashed a saga of horror. Experts are calling it "sanitised barbarism". Demographic trends indicate India is fast heading towards a million female foetuses aborted each year. Although foetal sex determination and sex selection is a criminal offence in India, the practice is rampant. Private clinics with ultrasound machines are doing brisk business. Everywhere, people are paying to know the sex of an unborn child. And paying more to abort the female child. The technology has even reached remote areas through mobile clinics. Dr. PuSneet Bedi, obstetrician and specialist in foetal medicine, says these days he hardly sees a family with two daughters. People are getting sex determination done even for the first child, he says. If the 1991 Census showed that two districts had a child sex ratio (number of girls per thousand boys) less than 850; by 2001 it was 51 districts. Child rights activist Dr. Sabu George says foeticide is the most extreme form of violence against women. "Today a girl is several times more likely to be eliminated before birth than die of various causes in the first year. Nature intended the womb to be a safe space. Today, doctors have made it the most unsafe space for the female child," he says. He believes that doctors must be held responsible ? "They have aggressively promoted the misuse of technology and legitimised foeticide." Researchers and scholars use hard-hitting analogy to emphasise the extent of the problem. Dr. Satish Agnihotri, senior IAS officer and scholar who has done extensive research on the issue, calls the technology "a weapon of mass destruction". Dr. Bedi refers to it as genocide: "More than 6 million killed in 20 years. That's the number of Jews killed in the Holocaust." Akhila Sivadas, Centre for Advocacy and Research, Delhi, feels that the PCPNDT Act (Pre-Conception and Pre-Natal Diagnostic Techniques ? Regulation and Prevention of Misuse) is very well conceived and easy to use. The need of the hour is the legal literacy to ensure the law is implemented. ?The demand and supply debate has been going on for some time. Doctors say there is a social demand and they are fulfilling it. They argue that social attitudes must change. However, in this case supply fuels demand. Technology will have to be regulated. Technology in the hands of greedy, vested interests cannot be neutral. There is a law to prevent misuse and we must be able to use it,? she says. On the ?Demand? side, experts such as Dr. Agnihotri argue that women?s participation in workforce, having disposable incomes and making a contribution to the larger society will make a difference to how women are seen. Youth icons and role models such as Sania Mirza are making an impact, he says. Others feel there needs to be widespread visible contempt and anger in society against this ?Genocide?- ?the kind we saw against the Nithari killings,? says Dr Bedi. ?Today nobody can say that female foeticide is not their problem.? Time we all did our bit to help save the girl child. Time?s running out. 2. Select the correct answer option based on the passage. What does the word ?sanitised? imply in the first paragraph of the passage?

- Unforgivable
- Legitimate
- Free from dirt
- None of these

Q5. S1: Once upon a time an ant lived on the bank of river. P : The dove saw the ant struggling in water in a helpless condition. Q : All its efforts to come up is failed. R : One day it suddenly slipped in to water. S : A dove lived in the tree on the bank not far from the spot. S6: She was touched. The Proper sequence should be:

- RQSP
- QRPS



SRPQ

PQRS

Q6. Read the sentence to find out whether there is any grammatical error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer. Ignore the error of punctuation if any. (A) Everyone need to understand (B) that is important to (C) respect one's parents.

A

B

C

NO ERROR

Q7. Avert

A. Defend

B. Attack

C. Resign

D. Surrender

Q8. Besides lead, there are other heavy metals such as mercury ,which are found frequently in fish, that are spewed into the air from a coal -fired power plants . How can this line to be worded differently?

Beside lead, mercury is another heavy metal which is found frequently in discarded fish cooked in coal-fired power plants.

Beside lead, Fish contain mercury which is heavy metal ejected in the air from power plant using coal

Fish contains mercury which is released in the air as industrial waste and which is also a heavy metal like lead

Mercury released in the air as industrial waste in another heavy metal like lead, found in fish

Q9. Which of the two people mentioned in the passage suggest similar solution to the problem?

Dr. Agnihotri and Dr. George

Dr. Bedi and Dr. Agnihotri



Dr. George and Dr. Bedi

Dr. George and Miss. Sivadas

Q10. In the questions below, each passage consist of six sentences. The first and sixth sentences are given in the beginning. The middle four sentences in each have been removed and jumbled up. These are labeled as P, Q, R and S. Find out the proper order for the four sentences. S1: I keep on flapping my big ears all day. P : They also fear that I will flip them all away. Q : But children wonder why I flap them so. R : I flap them so to make sure they are safely there on either side of my head. S : But I know what I am doing. S6: Am I not a smart, intelligent elephant? The Proper sequence should be:

A. SRQP

B. QPSR

C. QPRS

D. PSRQ

Q11. Find the correct alternative for the italicized phrase. Its best to attribute his bad mood on tiredness and just forget it.

a) Attribute his bad mood to tiredness

b) Contribute his bad mood on tiredness

c) Attribute his bad mood with tiredness

d) No change

Q12. Read the passage and answer the questions given below Since the late 1970s when the technology for sex determination first came into being, sex selective abortion has unleashed a saga of horror. Experts are calling it "sanitised barbarism". Demographic trends indicate India is fast heading towards a million female foetuses aborted each year. Although foetal sex determination and sex selection is a criminal offence in India, the practice is rampant. Private clinics with ultrasound machines are doing brisk business. Everywhere, people are paying to know the sex of an unborn child. And paying more to abort the female child. The technology has even reached remote areas through mobile clinics. Dr. PuSneet Bedi, obstetrician and specialist in foetal medicine, says these days he hardly sees a family with two daughters. People are getting sex determination done even for the first child, he says. If the 1991 Census showed that two districts had a child sex ratio (number of girls per thousand boys) less than 850; by 2001 it was 51 districts. Child rights activist Dr. Sabu George says foeticide is the most extreme form of violence against women. "Today a girl is several times more likely to be eliminated before birth than die of various causes in the first year. Nature intended the womb to be a safe space. Today, doctors have made it the most unsafe space for the female child," he says. He believes that doctors must be held responsible ? "They have aggressively promoted the misuse of technology and legitimised foeticide." Researchers and scholars use hard-hitting analogy to emphasise the extent of the problem. Dr. Satish Agnihotri, senior IAS officer and scholar who has done extensive research on the issue, calls the technology "a weapon of mass destruction". Dr. Bedi refers to it as genocide: "More than 6 million killed in 20 years. That's the number of Jews killed in the Holocaust." Akhila Sivadas, Centre for Advocacy and Research, Delhi, feels that the PCPNDT Act (Pre-Conception and Pre-Natal Diagnostic Techniques ? Regulation and Prevention of Misuse) is very well conceived and easy to use. The need of the hour is the legal literacy to ensure the law is implemented. ?The demand and supply debate has been going on for some time. Doctors say there is a social demand and they are fulfilling it. They argue that social attitudes must change. However, in this case supply fuels demand. Technology will have to be regulated. Technology in the hands of greedy, vested interests cannot be neutral. There is a law to prevent misuse and we must be able to use it,? she says. On the ?Demand? side, experts such as Dr. Agnihotri argue that women?s participation in workforce, having disposable incomes and making a contribution to the larger society will make a difference to how women are seen. Youth icons and role models such as Sania Mirza are making an impact, he says. Others feel there needs to be widespread visible contempt and anger in society against this ?Genocide?- ?the kind we saw against the Nithari killings,? says Dr Bedi. ?Today nobody can say that female foeticide is not their problem.? Time we all did our bit to help save the girl child. Time?s running out. What is the Doctors explanation for foeticide?

They think it is legitimate



- They do it because people demand it
- The technology is available and there is no harm using it
- None of these

Q13. Select the word or phrase which best express the MEANING of the given word: OUTLIVE

- SURVIVE
- OUTSTAY
- BANISH
- OUTSPEND

Q14. Choose the word which best fits to highlighted word) : MUSTY

- a) Stale
- b) Necessary
- c) Indifferent
- d) Nonchalant
- e) Vivid

Q15. Select the opposite : ALTRUISM

- CONSERVATIVE
- REPUGNANT
- COMBATIVENESS
- SELFISHNESS

Q16. Read the passage and answer the questions
Environmental toxins which can affect children are frighteningly commonplace. Besides lead, there are other heavy metals such as mercury, which is found frequently in fish, that are spewed into the air from coal-fired power plants, says Maureen Swanson, MPA, director of the Healthy Children Project at the Learning Disabilities Association of America. Mercury exposure can impair children's memory, attention, and language abilities and interfere with fine motor and visual spatial skills. A recent study of school districts in Texas showed significantly higher levels of autism in areas with elevated levels of mercury in the environment. "Researchers are finding harmful effects at lower and lower levels of exposure," says Swanson. "They're now telling us that they don't know if there's a level of mercury that's safe." Unfortunately, some of these chemicals make good flame retardants and have been widely used in everything from upholstery to televisions to children's clothing. Studies have found them in high levels in household dust as well as in breast milk. Two categories of these flame retardants have been banned in Europe and are starting to be banned in different states in the United States. The number of toxins in our environment that can affect children may seem overwhelming at times. On at least some fronts, however, there is progress in making the world a cleaner place for kids and just possibly, reducing

the number of learning disabilities and neurological problems. With a number of efforts to clean up the environment stalled at the federal level, many state governments are starting to lead the way. And rather than tackle one chemical at a time, at least eight states are considering plans for comprehensive chemical reform bills, which would take toxic chemicals off the market. On at least some fronts, however, there is progress in making the world a cleaner place for kids and just possibly, reducing the number of learning disabilities and neurological problems. What ?front? is being referred to?

Efforts of Healthy Children Project at the Learning Disabilities Association of America

B) Banning of flame retardants in Europe and various states of America

C) More and more states are joining the 2 states in Europe and various states in America that have already banned harmful chemicals

D) Proposed bill resulting in a blanket ban on all harmful chemicals

Q17. He worked really hard and thus _____ to be promoted.

A. Warranted

B. Deserve

C. Deserves

D. Merit

Q18. Nothing _____ convinced her to cancel her trip to goa.

WAS GOING TO

COULD HAVE

COULD

WILL HAVE

Q19. Today the inaugural day of the pub, the drinks were served free of cost.

Was

Been

Is

Being

Q20. Rohit brushed quickly past an elderly woman waiting on the platform ahead of him to get onto the metro. He wanted to be su
get a seat to read his Economic Times. As the train rolled out of the station, he lifted his head from the newspaper and stared at the

man directly across from him. A tsunami - of antipathy met over him. Rohit knew this man, knew him all too well. Their eyes locked. As the train readied full speed, the ruckus of speeding wheels against the winding rails and a wildly gyrating subway car filled Rohit's ears. To this frenetic beat Rohit effortlessly listed in his head all the reasons this man, whose eyes he stared coldly into, was an anathema to him. He had climbed the upper echelons of his firm using an imperious manner with his subordinates, always making sure everyone knew he was the boss. Despite his impoverished upbringing, he had become ostentatious. Flush with cash from the lucrative deals he had made, he had purchased a yacht and a home in Mumbai. He used neither. But, oh, how he liked to say he had them. Meanwhile, Rohit knew, this man's parents were on the verge of being evicted from their run-down tenement apartment in Allahabad. What bothered Rohit most about this man was that he never even attempted to make amends for his evil ways. Could this man change? Rohit did not know. He could try though. The train screeched to Rohit's stop. He gave the man one last hard look. "See you around," he mumbled to himself. And he knew he would, because Rohit had been glaring at his own reflection in the glass in the metro. It would take years of hard work and therapy, but Rohit would one day notice this man again on the train and marvel at what a kinder person he had become. which statement makes most sense from what is said in the paragraph?

Rohit has few friends

Rohit knows himself well

Rohit has had a difficult life

Rohit is incapable of change

Q21. A)The teacher whom we met yesterday (B) is highly qualified and (C) with very good reputation.

a) (A)

b) (B)

c) (C)

d) No error

Q22. Rohit brushed quickly past an elderly woman waiting on the platform ahead of him to get onto the metro. He wanted to be sure to get a seat to read his Economic Times. As the train rolled out of the station, he lifted his head from the newspaper and stared at the man directly across from him. A tsunami - of antipathy met over him. Rohit knew this man, knew him all too well. Their eyes locked. As the train readied full speed, the ruckus of speeding wheels against the winding rails and a wildly gyrating subway car filled Rohit's ears. To this frenetic beat Rohit effortlessly listed in his head all the reasons this man, whose eyes he stared coldly into, was an anathema to him. He had climbed the upper echelons of his firm using an imperious manner with his subordinates, always making sure everyone knew he was the boss. Despite his impoverished upbringing, he had become ostentatious. Flush with cash from the lucrative deals he had made, he had purchased a yacht and a home in Mumbai. He used neither. But, oh, how he liked to say he had them. Meanwhile, Rohit knew, this man's parents were on the verge of being evicted from their run-down tenement apartment in Allahabad. What bothered Rohit most about this man was that he never even attempted to make amends for his evil ways. Could this man change? Rohit did not know. He could try though. The train screeched to Rohit's stop. He gave the man one last hard look. "See you around," he mumbled to himself. And he knew he would, because Rohit had been glaring at his own reflection in the glass in the metro. It would take years of hard work and therapy, but Rohit would one day notice this man again on the train and marvel at what a kinder person he had become. what was the biggest reason (stated or implied) for Rohit disliking the man in the metro?

The man was known to be extremely rude and domineering especially with his subordinates

The man was remorseless and had not made any effort to reform himself for the better

The man did not bother to take care of his parents who were on the verge of being evicted from their humble dwelling



The man did not have respect for things or money and while people did not have a place to stay, he had bought a flat which he did not even use

Q23. As soon as I turn the ignition key, the engine caught fire.

A. I turn an ignition key

B. I turned the ignition key

C. I was turning the ignition key

D. No change

Q24. Advent (opposite)

a) End

b) Dawn

c) Emergence

d) Flexible

e) Adamant

Q25. Indian government's intention of introducing caste based quotas for the 'Other Backward Classes' in centrally funded institutions of higher learning and the prime minister's suggestion to the private sector to 'voluntarily go in for reservation', has once again sparked off a debate on the merits and demerits of caste-based reservations. Unfortunately, the predictable divide between the votaries of 'social justice' on one hand and those advocating 'merit' on the other seems to have once again camouflaged the real issues. It is necessary to take a holistic and non-partisan view of the issues involved. The hue and cry about 'sacrificing merit' is untenable simply because merit is after all a social construct and it cannot be determined objectively in a historically unjust and unequal context. The idea of competitive merit will be worthy of serious attention only in a broadly egalitarian context. But then, caste is not the only obstacle in the way of an egalitarian order. After all, economic conditions, educational opportunities and discrimination on the basis of gender also contribute to the denial of opportunity to express one's true merit and worth. It is interesting to note that in the ongoing debate, one side refuses to see the socially constructed nature of the notion of merit, while the other side refuses to recognise the multiplicity of the mechanisms of exclusion with equal vehemence. The idea of caste-based reservations is justified by the logic of social justice. This implies the conscious attempt to restructure a given social order in such a way that individuals belonging to the traditionally and structurally marginalised social groups get adequate opportunities to actualise their potential and realise their due share in the resources available. In any society, particularly in one as diverse and complex as the Indian society, this is going to be a gigantic exercise and must not be reduced to just one aspect of state policy. Seen in this light, caste-based reservation has to work in tandem with other policies ensuring the elimination of the structures of social marginalisation and denial of access. It has to be seen as a means of achieving social justice and not an end in itself. By the same logic it must be assessed and audited from time to time like any other social policy and economic strategy. Hence, it is important, to discuss reservation in the holistic context of much required social restructuring and not to convert it into a fetish of 'political correctness'. Admittedly, caste remains a social reality and a mechanism of oppression in Indian society. But can we say that caste is the only mechanism of oppression? Can we say with absolute certainty that poverty amongst the so-called upper castes has been eradicated? Can we say that the regions of Northeast, Jharkhand, Chhattisgarh are on par with the glittering metros of Delhi and Mumbai? Can we say that a pupil from a panchayat school in Bihar is equipped to compete with an alumnus of Doon School on an equal footing, even if both of them belong to the same caste group? One of my students once remarked that he was regularly compelled to swim across a rivulet in order to reach his school, and the rivulet in question did not distinguish between Brahmins and dalits. Incidentally, this young man happens to be a Brahmin by birth! Can we also say that gender plays no role in denial of social opportunities? After all, this society discriminates against girls even before they are born. What to talk of access or opportunities, they're denied birth itself. Such discrimination exists across religious and caste lines. Moreover, the question is: do we want to eliminate caste as a factor of social relations and political processes or do we want to perpetuate it forever? Is it not true that by treating caste as the only medium of oppression and hence by focusing all remedial measures on caste alone, we have only added to the longevity of caste as the determining factor of social identity? Individuals have been virtually turned into the epitomes of the caste of their birth - denying the multiple identities that every individual perforce carries. This also helps the powerful amongst the generally disempowered sections to corner most of the benefits of caste-based reservation. Caste, which in reality is only one of the features of identity at the individual level and the manifestation of an abhorred social order at the social and structural level, has been turned into the essential identity of individual citizens. Such a situation helps only those politicians who are in search of shortcuts to power. It is harmful for the cause of a modern social democracy.

well as to the cause of individuals in need of social justice and related affirmative action.
What is the author most likely to agree with?

- Caste-based reservation is the answer to India?s problems.
- Gender-based reservation is the answer to India?s problems.
- There is no solution to bridge the gap between privileged and under-privileged.
- None of these

Section 4 - Automata Fix

Section Summary

- No. of Questions: 7
- Duration: 30 min

Additional Instructions:

None

Q1. The method **countElement(int arr[],int n)** of class ElementCount is supposed to return the number of elements in the input array arr which are greater than twice the input number n . find the logical error in the function **countElement(int arr[], int n)** and fix it

```
#include<stdio.h>
int countElement(int arr[],int ele,int len)
{
    int count=0;
    for(int i=0;i<len;i++)
    {
        if(arr[i]>ele)
        {
            count++;
        }
    }
    return count;
}
int main()
{
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&arr[i]);
    }
    int val;
    scanf("%d",&val);
    printf("%d",countElement(arr,val,n));
}
```

Sample Input

5
1 2 3 4 5
2

Sample Output

1

Time Limit: 2 ms Memory Limit: 256 kb Code Size: 256 kb

Q2. The function **printcolor(int num)** is supposed to point names of accordind to the given input number num When the values of num equal 1,2,3,4 the function points “red”,“black”,“white”,“green” respectively.for any other values num it should print “No Color” . Find the logical error in the function **printcolor(int num)** and fix it

```
#include<stdio.h>
void printcolor(int num)
```



```
{
    switch(num)
    {
    case 1:
    printf("Red");
    case 2:
    printf("Black");
    case 3 :
    printf("White");
    case 4:
    printf("Green");
    default:
    printf("No color");
    }
    }
int main()
{
    int num;
    scanf("%d",&num);
    printcolor(num);
}
```

Sample Input

Sample Output

5

No color

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q3. The function **maxReplace (int *arr,int len)** is supposed to replace every element of the input array arr of length len,with the maximum element of arr. Complete the function **maxReplace(int* arr,int len)** to get the desired output

```
#include<stdio.h>
int* maxReplace(int *arr, int len)
{
// write code here
}
int main()
{
int size, ind;
scanf("%d",&size);
int arr[size];
for(int i=0;i<size;i++){
scanf("%d",&arr[i]);
}
maxReplace(arr, size);
for(ind = 0; ind < size; ind++)
printf("%d ", arr[ind]);

}
```

Test case 1:
Input :

[2,5,8,11,3],5

Expected return value:

[11,11,11,11,11]

Test case 2:
Input :

[3,2,5,8,9,11,23,45,63],9

Expected return value:

[63,63,63,63,63,63,63,63,63]

Sample Input

Sample Output

5
1 4 5 3 2

5 5 5 5 5



Q4. Find the gcd of two numbers. The entire code is given below with logical errors. Correct it.

```
#include <stdio.h>
int gcd(int a, int b)
{
    if (b == 0)
        return a;
    return gcd(a % b,b%a);
}
int main()
{
    int a,b;
    scanf("%d %d",&a,&b);
    printf("GCD of %d and %d is %d ", a, b, gcd(a, b));
    return 0;
}
```

Sample Input

10 5

Sample Output

GCD of 10 and 5 is 5

Q5. Find the sum of first n natural numbers. Find the logical error in **findSum(int n)** and fix it

```
#include<stdio.h>
int findSum(int n)
{
    int sum = 0;
    for (int x=1; x<=n; x++)
        sum = sum + n;
    return sum;
}
int main()
{
    int n;
    scanf("%d",&n);
    printf("%d",findSum(n));
    return 0;
}
```

Sample Input

5

Sample Output

15

Q6. This method **countOccurance (int arr[], int value)** of class occurrence is supposed to return the count of occurrences of a number value in the input array arr. The function compiles successfully but fails to return the desired result due to logical errors. Your task is to debug the program to pass all test cases.

```
#include<stdio.h>
int countOccurences(int arr[],int val,int n)
{
    int count=0;
    for(int i=0;i<n;i++)
    {
        if(arr[i]<val){
            count++;
        }
    }
    return count;
}
int main(){
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)
```




```
{
    scanf("%d ",&arr[i]);
}
int val;
scanf("%d",&val);
printf("%d",countOccurences(arr,val,n));
}
```

Sample Input

Sample Output

5
1 2 2 2 3
2

3

Time Limit: 2 ms Memory Limit: 256 kb Code Size: 256 kb

Q7. calculate the nth amstrong number.
Fill the logic in the provided function **isAmstrong(int x)** with the help of **power(int x,unsigned int y)** and **power(int x,unsigned int y)**

```
#include <stdio.h>
int power(int x, unsigned int y)
{
    if (y == 0)
        return 1;
    if (y % 2 == 0)
        return power(x, y / 2) * power(x, y / 2);
    return x * power(x, y / 2) * power(x, y / 2);
}
int order(int x)
{
    int n = 0;
    while (x) {
        n++;
        x = x / 10;
    }
    return n;
}
int isArmstrong(int x)
{
    // write code here
}
int main()
{
    int x;
    scanf("%d",&x);
    if (isArmstrong(x) == 1)
        printf("True\n");
    else
        printf("False\n");

    return 0;
}
```

Sample Input

Sample Output

153

True

Time Limit: 2 ms Memory Limit: 256 kb Code Size: 256 kb



Answer Key & Solution

Section 1 - Quantitative Aptitude

Q1 1.9

Solution

Q2 50

Solution

Q3 None of these

Solution

Q4 $2 \log_5 (17)$

Solution

Q5 B

Solution

Q6 1

Solution

Q7 -2

Solution

Q8 $\log 5$

Solution

Q9 $x=-27$ and 3

Solution

Q10 2

Solution

Q11 $\log(a) / \log(b) = y/x$

Solution

Q12 1000

Solution

Q13 12

Solution

Q14 $y = x/(x-1)$

Solution

Q15 $-(1 + a)$

Solution

Q16 $a^2+b^2 = 7ab$

Solution

Q17 $1 + \log_a (b)$

Solution

Q18 $1/3$

Solution

Q19 a/b

Solution

Q20 HP

Solution



Q21 Both will grow linearly with different slopes

Solution

Q22 Linearly

Solution

Q23 $\frac{1}{3}$

Solution

Q24 192

Solution

Q25 20

Solution

Section 2 - Reasoning Ability

Q1 RXS

Solution

-

Q2 PRV

Solution

Q22

-

Q3 residents welfare associations exert a lot of influence over the voting population residing in the city

Solution

-

Q4 employee should be given 10%bonus

Solution

NIL

Q5 42km north east

Solution

-

Q6 None of these

Solution

-

Q7 Beautician

Solution

-

Q8 Only conclusion I is true

Solution

Q9 edit : manuscript



| | |
|-----|---|
| | Solution |
| | - |
| Q10 | daisy |
| | Solution |
| | - |
| Q11 | teacher |
| | Solution |
| | - |
| Q12 | Resident?s welfare associations exert a lot of influence over the voting population residing in the city. |
| | Solution |
| | |
| Q13 | The environment created by the activist disunity and local indifference is the reason for antique dealers to thrive in india. |
| | Solution |
| | - |
| Q14 | Only II is true |
| | Solution |
| | - |
| Q15 | statement II alone is sufficient to answering the problem question. |
| | Solution |
| | - |



Q16

12152120

Solution

A=1,B=2,C=3,D=4,E=5,F=6,G=7,H=8,I=9,J=10,K=11,L=12,M=13,N=14,O=15,P=16,Q=17,R=18,S=19,T=20,U=21,V=22,W=23,X=24,Y=25,Z=26

So SPECIFY ==> 19,16,5,3,9,6,25

Therefore ABOUT ==>1,2,15,21,20

So Answer = 12152120

Q17

1944

Solution

Q18

QPRS

Solution

Q19

MPN

Solution

Q20

MNW

Solution

Q21

South-West

Solution

Q22

EGG



Solution

Q23
CGP

Solution

Q24
Wife

Solution

Q25
Wife

Solution

Section 3 - Verbal Ability

Q1
both options A and B

Solution

Q2
E.Sedate

Solution

NIL

Q3
(d)All of the above

Solution



Q4 Legitimate

Solution

no

Q5 RQSP

Solution

Q6 B

Solution

NIL

Q7 A. Defend

Solution

-

Q8 Beside lead, Fish contain mercury which is heavy metal ejected in the air from power plant using coal

Solution

Q9 Dr. George and Miss. Sivadas

Solution

no

Q10 B. QPSR

Solution

| | |
|-----|--|
| | - |
| Q11 | a) Attribute his bad mood to tiredness |
| | Solution |
| | NIL |
| Q12 | They do it because people demand it |
| | Solution |
| | no |
| Q13 | SURVIVE |
| | Solution |
| | NIL |
| Q14 | a) Stale |
| | Solution |
| | NIL |
| Q15 | SELFISHNESS |
| | Solution |
| | NIL |
| Q16 | B) Banning of flame retardants in Europe and various states of America |
| | Solution |
| Q17 | C. Deserves |

| | |
|-----|--|
| | Solution |
| | - |
| Q18 | COULD HAVE |
| | Solution |
| | NIL |
| Q19 | Was |
| | Solution |
| | no |
| Q20 | Rohit knows himself well |
| | Solution |
| | |
| Q21 | c) (C) |
| | Solution |
| | NIL |
| Q22 | The man was remorseless and had not made any effort to reform himself for the better |
| | Solution |
| | |
| Q23 | B.I turned the ignition key |
| | Solution |
| | - |

Q24 a) End

Solution

NIL

Q25 None of these

Solution

no

Section 4 - Automata Fix

Q1 **Test Case**

Input

Output

10
11 12 13 14 15 16 17 18 19 20
8

4

Weightage - 50

Input

Output

6
12 12 13 14 23
6

6

Weightage - 50

Sample Input

Sample Output

5
1 2 3 4 5
2

1

Solution

Header

```
#include<stdio.h>
int countElement(int arr[],int ele,int len)
{

    int count=0;
    for(int i=0;i<len;i++)
    {
        if(arr[i]>2*ele)
        {
            count++;
        }
    }
}
```

```
    }  
}  
return count;
```

Footer

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

Q2

Test Case

Input

Output

1

Red

Weightage - 25

Input

Output

2

Black

Weightage - 25

Input

Output

3

White

Weightage - 25

Input

Output

4

Green

Weightage - 25

Sample Input

Sample Output

5

No color



Solution

Header

```
#include<stdio.h>
void printcolor(int num)
{

    switch(num)
    {
    case 1:
    printf("Red");
    break;
    case 2:
    printf("Black");
    break;
    case 3 :
    printf("White");
    break;
    case 4:
    printf("Green");
    break;
    default:
    printf("No color");
    break;
    }
```

Footer

```

}
int main()
{
    int num;
    scanf("%d",&num);
    printcolor(num);
}
```

Q3

Test Case

Input

5

1 8 4 6 9

Output

9 9 9 9 9

Weightage - 50

Input

7

34 5 6 3 2 7 9

Output

34 34 34 34 34 34 34

Weightage - 50



Sample Input

5

1 4 5 3 2

Sample Output

5 5 5 5 5

Solution

Header

```
#include<stdio.h>
int* maxReplace(int *arr, int len)
{

    int i, max;
    if(len>0)
    {
        //
        max=arr[0];
        for(i=0;i<len;i++)
        {
            //  int dummy;
            if(max<arr[i])
                max=arr[i];
        }
        //  dummy = 100;
    }
    for(i=0;i<len;i++)
    arr[i]=max;
    return arr;
}
```

Footer

```

}
int main()
{
    int  size, ind;
    scanf("%d",&size);
    int arr[size];
    for(int i=0;i<size;i++){
        scanf("%d",&arr[i]);
    }
    maxReplace(arr, size);
    for(ind = 0; ind < size; ind++)
        printf("%d ", arr[ind]);

}
```

Q4

Test Case

Input

20 4

Output

GCD of 20 and 4 is 4



Weightage - 50

Input

Output

45 9

GCD of 45 and 9 is 9

Weightage - 50

Sample Input

Sample Output

10 5

GCD of 10 and 5 is 5

Solution

Header

```
#include <stdio.h>
// Recursive function to return gcd of a and b
int gcd(int a, int b)
{

#include <stdio.h>
// Recursive function to return gcd of a and b
int gcd(int a, int b)
{
    if (b == 0)
        return a;
    return gcd(b, a % b);
}
// Driver program to test above function
int main()
{
    int a,b;
    scanf("%d %d",&a,&b);
    printf("GCD of %d and %d is %d ", a, b, gcd(a, b));
    return 0;
}
```

Footer

```
}
int main()
{
    int a,b;
    scanf("%d %d",&a,&b);
    printf("GCD of %d and %d is %d ", a, b, gcd(a, b));
    return 0;
}
```



Input

Output

20

210

Weightage - 50

Input

Output

14

105

Weightage - 50

Sample Input

Sample Output

5

15

Solution

Header

```
#include<stdio.h>
int findSum(int n)
{

#include<stdio.h>
int findSum(int n)
{
int sum = 0;
for (int x=1; x<=n; x++)
    sum = sum + x;
return sum;
}
int main()
{
int n;
scanf("%d",&n);
printf("%d",findSum(n));
return 0;
}
```

Footer

```
}
int main()
{
int n;
scanf("%d",&n);
printf("%d",findSum(n));
return 0;
}
```



Test Case

Input

Output

```
10
1 2 9 0 87 87 56 5 78 23
87
```

```
2
```

Weightage - 25

Input

Output

```
5
1 1 1 1 1
9
```

```
0
```

Weightage - 50

Input

Output

```
1
1
1
```

```
1
```

Weightage - 25

Sample Input

Sample Output

```
5
1 2 2 2 3
2
```

```
3
```

Solution

Header

```
#include<stdio.h>
int countOccurences(int arr[],int val,int n)
{

#include<stdio.h>
int countOccurences(int arr[],int val,int n)
{
    int count=0;
    for(int i=0;i<n;i++)
    {
        if(arr[i]==val){
            count++;
        }
    }
    return count;
}
int main(){
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)
    {
```



```
        scanf("%d",&arr[i]);
    }
    int val;
    scanf("%d",&val);
    printf("%d",countOccurences(arr,val,n));
}
```

Footer

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

Q7

Test Case

Input

Output

156

False

Weightage - 50

Input

Output

121

False

Weightage - 25

Input

Output

153

True

Weightage - 25

Sample Input

Sample Output

153

True

Solution



Header

```
#include <stdio.h>

int power(int x, unsigned int y)
{
    if (y == 0)
        return 1;
    if (y % 2 == 0)
        return power(x, y / 2) * power(x, y / 2);
    return x * power(x, y / 2) * power(x, y / 2);
}

int order(int x)
{
    int n = 0;
    while (x) {
        n++;
        x = x / 10;
    }
    return n;
}

int isArmstrong(int x)
{
    int n = order(x);
    int temp = x, sum = 0;
    while (temp) {
        int r = temp % 10;
        sum += power(r, n);
        temp = temp / 10;
    }
    if (sum == x)
        return 1;
    else
        return 0;
}
```

Footer

```
}

int main()
{
    int x;
    scanf("%d",&x);
    if (isArmstrong(x) == 1)
        printf("True\n");
    else
        printf("False\n");

    return 0;
}
```