**CTS Sample Paper #2**

This is only a sample paper. We are not providing you with all the questions - just some questions to give you a general idea of the test pattern.

SECTION I - 8 questions based on series.

1. These questions involve interchange of letters in a word at particular locations and also interchanging letters adjacent to those particular locations.Certain other conditions may also be given
For eg.
Let the word be ABBAABA
If we apply 25 on this, it means we have to interchange the letters at positions 2 and 5, also we have to change the letters adjacent to positions 2 and 5 i.e.from A to B and B to A.
A B B A A B after Step 1 i.e interchange of 2 and 5 becomes AABABB
Now change adjacent elements of 2 and 5...finally answer becomes
Ans: B A A B B A

Questions 1-5 are based on the pattern with changed numbers as described above

Questions 6-8 are of the following type

To get AAABBD from BBBAAA what number should be applied:-
a) 25
b) 34
c) 25 & 34
d) none

SECTION II

1. Given the following functions
(1) f(n a b c ) = ac if n=1
(2) f(n a b c) = f( n-1 a c b) + f( 1 a b c) + f( n-1 b a c ) if n > 1

Then what is the value f( 2 a b c ) = ?

Ans: f( 2 a c b ) = ab + ac + bc.

2. Similar question on functions.

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3. [ Based on the function in the first question] For the function f( 4 a b c ) the number of terms is...?
Hint f( 4 a b c ) = f( 3 a c b ) + f( 1 a b c ) + f( 3 b a c ) etc.


4. What is the value of the function f( 5 a b c ) = ?


SECTION III

Permutations and Combinations.
8 Questions.

1. r = number of flags;n = number of poles;
Any number of flags can be accommodated on any single pole.

1) r=5,n=5 The no. of ways the flags can be arranged ?

Questions 2-5 are based on the above pattern


6. r = 5 n = 3 . If first pole has 2 flags, third pole has 1 flag
How many ways can the remaining be arranged?

Questions 7.& 8. are similar to Question 6.


SECTION IV
Question consisting of figures - Pattern-matching type.

Refer R.S Agarwal's book on Analytical Reasoning & TMHs Quantitative ability book by Edgar Thorpe.


SECTION V
In this section first part of compound word is given. Select meaning of the second part from the choice given:
1. Swan
2. Swans
3. Fool
4. Fools
5. Stare
6. Lady

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For all above 4 choices are given.....

Eg. Swan ---> Swansong (compound word)
a) category b) music c) television d) none
Ans: Swansong is compound word. But song is not given as an option. so (b) music is the answer.

**CTS Sample Paper**

This is only a sample paper. We are not providing you with all the questions - just some questions to give you a general idea of the test pattern.

SECTION-1:

Find the next in the sequence:

1. BC CE EG GK ?

a)KN
b)KU
c)KM
d)None

2. AA AB BC CE?

a)EG
b)EH
c)EI
d)None

3. AB EF JK QR ?

a)YZ
b)ZA
c)AB
d)None

4.ACD EGL IKT MOB?

a)QST

b)QSZ
c)QSY
d)None

5.AC CG GO OE?

a)EJ
b)EI
c)EL
d)None

6.AE BH CM DU?

a)EH
b)EZ
c) EB
d)None

7. AD DP PL LV

a)VS
b)VK
c)VI
d)None

8. SE QU EN TI?

a)CN
b)BM
c)AI or AZ
d)None

SECTION-II :

Find the values for the following problem:
f(X)= 2X-1 + f(X-1) if X is not equal to zero and if f(X=0)=0

9. Value of f(5)

a)15

b)24
c)22
d)None

10. Value of f(f(2))

11. Value of f(16)- f(15)

12. Value of f(16)+f(15)-480

13. If f(f(X))=81 then the value of X=?

14. If f(X)=4f(X-1) then the value of X=?

15.If f(X)= f(X-1)+f(X-2) for X>1 then X= ?

16. If f(X)-f(X-1)=f(X-8) for X>5 then X=

SECTION -III :

In the following questions a 'word' is given which may not have any meaning.Find differnet possible words or palindromes for the word as per the question.

For the following find no of distinct words that can be formed.

17. TYGHHTT

a).420
b)1540
c)840
d)None

18. TYGHHTY

19. TYGHHTT

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20. TYGHHTT

21. TYGHASD

22. TYGHHTY

Find the number of possible palindromes for following

23. TYGHHTY

24. TYHHHTYH.

SECTION-IV :

25 to 32 are based on the figures. You have to analyse them and find the odd one out.
Five figures will be given out of which one is not correct.

Refer R.S Agarwal's book on Analytical Reasoning & TMHs Quantitative ability book by
Edgar Thorpe.

SECTION -V :

For following first find out the anagram and then note the corresponding meaning.

33.TABLET
Hint: anagram means first u arrange the letters in correct order like
TABLET===BATTLE . So ans is FIGHT

34.RUGGED

35.GORE.

36.STASSI.

For all above choices are.

a)resentment
b)fight
c)help
d)monster

37. ENFOLD

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38. LAMB

39. RECEDE.

40. PLEASE.

For all the above 4 choices are same

a)cuddle
b)sleeping
c)proclamination
d)ointment.


**Cognizant placement paper**

>> >PAPER
>> >
>> >1. A says " the horse is not black".
>> > B says " the horse is either brown or grey."
>> > c says " the hoese is brown"
>> > At least one is telling truth and atleast one is lying. tell
>> the
>
>> colour
>> >of horse.
>> >
>> >
>> >Answer : grey
>> >
>> >
>> >2. A son and father goes for boating in river upstream . After
>> rowing
>
>> for 1
>> >mile son notices the hat of his fathe falling in the river.
>> After 5
>
>> min. he
>> >tells his father that his hat has fallen. So they turn around
>> and are
>
>> able
>> >to pick the hat at the point from where they began boating
>> after 5

>
>> min.
>> >Tell the speed of river.
>> >
>> >Ans...6 miles/hr
>> >
>> >
>> >3 A+B+C+D=D+E+F+G=G+H+I=17 where each letter represent a
>> number from
>
>> 1 to
>> >9. Find out what does letter D and G represent if letter A=4.
>>
>
>> (8
>> >marks)
>> >
>> >ans. D=5
>> > G=1
>> >
>> >4. Argentina had football team of 22 player of which captain is
>> from
>
>> >Brazilian team and goalki from European team. For remainig
>> palayer
>
>> they
>> >have picked 6 from argentinan and 14 from european. Now for a
>> team of
>
>> 11
>> >they must have goalki and captain so out of 9 now they plan to
>> select
>
>> 3
>> >from argentinian and 6 from European. Find out no. of methods
>> avilable
>
>> for
>> >it (2 marks)
>> >
>> >Ans : 160600( check out for right no. 6C3 * 14C6)
>> >
>> >
>> >5 Three thives were caught stealing sheep, mule and camel.
>> > A says " B had stolen sheep "

>> > C says " B had stolen mule"
>> > B says he had stolen nothing.
>> > the one who had stolen horse is speaking truth. the one who
>> had
>
>> stolen
>> >camel is lying . Tell who had stolen what? (5 marks)
>> >
>> >ans. A- camel
>> > B- mule
>> > C- horse
>> >
>> >6 a group of friends goes for dinner and gets bill of Rs 2400
>> . Two
>
>> of
>> >them says that they have forgotten their purse so remaining
>> make an
>
>> extra
>> >contribution of Rs 100 to pay up the bill. Tell the no. of
>> person in
>
>> that
>> >group. (3 marks)
>> >
>> >
>> >Ans - 8 person
>> >
>> >
>> >7. In acolony there are some families. Each of them have
>> children but
>
>> >different in numbers.Following are conditions
>> > a> no of adult>no of sons>no of daughters>no of families.
>> > b>each sister must have atleast one brother and should have
>> at the
>
>> most
>> >1 sister.
>> > c> no of children in one family exceeds the sum of no of
>> children
>
>> in the
>> >rest families.
>> >

>> > Tell the no of families.(5 marks)
>> >
>> >
>> >ans : 3 families
>> >
>> >8.There are 6 people W,H,M,C,G,F who are murderer , victim ,
>> judge ,
>
>> >police, witness, hangman. There was no eye witness only
>> circumtancial
>
>> >witness. The murderer was sentenced to death.
>> >Read following statement and determine who is who.
>> >
>> >1. M knew both murderer and victim.
>> >2. Judge asked C to discribe murder incident.
>> >3. W was last to see F alive.
>> >4. Police found G at the murder site.
>> >5 H and W never met.
>> >
>> >( 8 marks)
>> >
>> >
>> >
>> >The above mentioned questions are of 37 marks rest I don't
>> remember
>
>> >as they had no of condition. One which mentions about
>> hundustani music
>
>> ,
>> >Gazals ect. is tobe solved through venn diagram. Its of 8
>> marks. and
>
>> >another was grading 5 student which was of 5 marks.


**COGNIZENT TECHNOLOGY SOLUTIONS (CTS)**

SAMPLE PAPER

Section - I

Find the next in the sequence:
1.BC CE EG GK ? a)KN b)KU c)KM d)None

2.AA AB BC CE? a)EG b)EH c)EI d)None
3.AB EF JK QR ? a)YZ b)ZA c)AB d)None
4.ACD EGL IKT MOB? a)QST b)QSZ c)QSY d)None
5.AC CG GO OE? a)EJ b)EI c)EL d)None
6.AE BH CM DU? a)EH b)EZ c)EB d)None
7.AD DP PL LV a)VS b)VK c)VI d)None
8.SE QU EN TI? a)CN b)BM c)AI or AZ d)None

Section - II:

Find the values for the following Problem:
f(X)= 2X-1 + f(X-1) if X is not equal to zero and if f(X=0)=0
9. Value of f(5) a)15 b)24 c)22 d)None
10. Value of f(f(2))
11. Value of f(16)- f(15)
12. Value of f(16)+f(15)-480
13. If f(f(X))=81 then the value of X=?
14. If f(X)=4f(X-1) then the value of X=?
15. If f(X)= f(X-1)+f(X-2) for X>1 then X=?
16. If f(X)-f(X-1)=f(X-8) for X>5 then X=?

Section - III:
In the following questions a 'word' is given which may not have any meaning. Find
different possible words or palindromes for the word as per the question.
17. TYGHHTT a).420 b)1540 c)840 d)None
18. TYGHHTY
19. TYGHHTT
20. TYGHHTT
21. TYGHASD
22. TYGHHTY
Find the number of possible palindromes for the following:
23. TYGHHTY
24. TYHHHTYH

Section - IV:

Question Numbers from 25 to 32 are based on the figures. You have to analyse them and
find the odd one out. Five figures will be given out of which one is NOT correct.
Refer R.S Agarwal's book on "Analytical Reasoning".

SECTION -V:

For following first find out the anagram and then note the corresponding meaning:
33.TABLET a)resentment b)fight c)help d)monster
HINT: "Anagram" means first u arrange the letters in correct order
like TABLET = BATTLE. So the answer is: FIGHT

34.RUGGED a)resentment b)fight c)help d)monster
35.GORE a)resentment b)fight c)help d)monster
36.STASSI a)resentment b)fight c)help d)monster
37.ENFOLD a)cuddle b)sleeping c)proclamation d)ointment
38.LAMB a)cuddle b)sleeping c)proclamation d)ointment
39.RECEDE a)cuddle b)sleeping c)proclamation d)ointment
40.PLEASE a)cuddle b)sleeping c)proclamation d)ointment

Section- v1

1. A says " the horse is not black".
B says " the horse is either brown or grey."
C says " the hoese is brown"
At least one is telling truth and atleast one is lying. tell the colour of horse?
Answer : grey

2.
A son and father goes for boating in river upstream . After rowing for 1 mile son notices the hat of his fathe falling in the river.After 5 min. he tells his father that his hat has fallen. So they turn round and are able to pick the hat at the point from where they began boating after 5min.
Tell the speed of river?
Ans...6 miles/hr

3. A+B+C+D=D+E+F+G=G+H+I=17 where each letter represent a number from 1 to 9. Find out what does letter D and G represent if letter A=4. (8 marks)
Ans. D=5 G=1

4.Argentina had football team of 22 player of which captain is from Brazilian team and goalki from European team. For remainig palayer they have picked 6 from argentinan and 14 from european. Now for a team of 11 they must have goalki and captain so out of 9 now they plan to select 3 from rgentinian and 6 from European. Find out no. of methods avilable for it. (2 marks)
Ans : 160600( check out for right no. 6C3 * 14C6)

5. Three thives were caught stealing sheep, mule and camel.
A says " B had stolen sheep "
C says " B had stolen mule"
B says he had stolen nothing.
The one who had stolen horse is speaking truth. the one who had stolen camel is lying .
Tell who had stolen what? (5 marks)
Ans. A- camel ;B- mule ;C- horse

6.A group of friends goes for dinner and gets bill of Rs 2400 . Two of them says that they

have forgotten their purse so remaining make an extra contribution of Rs 100 to pay up the bill. Tell the no. of person in that group. (3 marks)

Ans - 8 person

7. In acolony there are some families. Each of them have children but different in numbers.Following are conditions:
A) No of adult no of sons no of daughters no of families.
B) Each sister must have atleast one brother and should have at the most 1 sister.
C) No of children in one family exceeds the sum of no of children in the rest families.
Tell the no of families.(5 marks)

Ans : 3 families

8. There are 6 people W,H,M,C,G,F who are murderer , victim , judge , police, witness, hangman. There was no eye witness only circumtancial witness. The murderer was sentenced to death.
Read following statement and determine who is who.

1. M knew both murderer and victim.
2. Judge asked C to discribe murder incident.
3. W was last to see F alive.
4. Police found G at the murder site.
5 H and W never met.
( 8 marks)

## COGNIZENT TECHNOLOGY SOLUTIONS(CTS)

SAMPLE PAPER

There are 60 questions to be answered in 60 minutes
1) In a club there are certain no. of males and females. If 15 females are absent then no. of males will be twice that of females. If 45 males are absent then female strength will be 5 times that of males. Find no. of males actually present.
2) Three men A, B, C plays Cards. If one loses the game he have to give Rs.3. If he wins the game he will gain Rs.6. If A has won 3 Games, B loses Rs.3, C wins Rs.12.What is the total no. of games played?
3) A can swim & cross 50m(the length of swimming pool) in 2 min. B can swim & cross 50m in 2min 15sec. Every time when they meet a bell gong is struck. For 2000m how many bell sounds might be produced?
4) When I was married 10 years ago my wife is the 6th member of the family. Today my father died and a baby born to me. The average age of my family during my marriage is same as today. What is the age of Father when he died?ans:70.

5)There are 9 balls of equal size and same weight(they look similar) except 1. How many weights required to find the dissimilar ball using a weighing balance?

6) Product of Prime no. between 1 to 20?

7) Find out the total numbers between 1 to 999 that are neither divisible by 8 nor by 12?

8) Find out the distinct numbers that can be formed by 2, 3, 7, 6(don't now exactly) that should be divided by 4?

9) Two trains at speed 60 km/hr comes in the opposite direction. At a particular time the distance between the two trains is 18km. A shuttle flies between the trains at the speed of 80 km/hr. At the time the two trains crashes what is the distance traveled by shuttle?

10) There are n urns and m balls. If we put 3 balls in each urn 3 balls will be excess. If we put 4 balls in each urn 1 urn will be excess. Find no. of Urns (or) Balls?

11) Find the area not occupied by circles: Given length =y breadth =x

(Answer: 3x2(1-pie/4))

12) A man gets x/y of Rs.10 and y/x of Rs.10. He returns Rs.20. The Answer choices are
a) He may not lose
b) He may lose
c) He always loses
d) Cannot be Determined

13) Three men A,B,C can complete a work separately in some specified days(may be6,7,8).If they do the work together by alternate days. Then how many days need to complete the work?

14)Four Members A,B,C,D are playing a game .A person losing a game should double the amount of others .B,C,D are losing in order after three games .The amount after 3 games are A&B having 40,D is having 16&C 80. Each questions carry one mark:
a) who started with small amount of money?
Ans)A

15)who started with greatest amount of money?
Ans)B

16)what amount did B have?
Ans)93

Hint: I solved and found the answers to be A->5,B->93

17)There are some houses in a street back to back .And they that house behind 10 was 23. How many houses in the street?
Ans)32

18)There are 1997 doors in a auditorium and as many as people as the no of doors open enter the auditorium .A door was closed and as many as people as no of doors open leave the auditorium . the process was repeated till the no of doors is equal to1.find the total no of peoples enter the auditorium?

19)A batsman average was 15.at last innings he took 23 runs then his average became 16.how much run he should take to make his average 18?

20)Find the number WXYZ divisible by 36?
i)let the digits be5,4,3,6 –not in that order
ii)sum of last two digits is 9
iii) sum of middle two digits is 7
->if one is sufficient then ans as A || if two is sufficient then ans as B||if all are necessary

then ans as C|| if nothing is needed then ans as D


21)X and Y live in a North-South parallel street. X travels 10 km towards North to reach the east-west street . Y travels 6 km towards south to reach the east –west street . X travels now 4km towards east and y travels 8km towards west and they met each other. What is the distance between x and y?

22)The houses are numbered 1,2,3,… and reach the end of the street and backtracks toward s the starting point. The house numbered 10 is opposite to 23. there are even no of houses. Find the total no of houses.

23)A seller has a set of apples out of which he sells one half of it and half an apple to his first customer.then he sells half of the remaining apples and a half apple to his second customer.Then he sells half of the remaining apple and ½ apple to his third customer and so on.This repeats upto 7th customer and no more apples are remaining . Find the total no of apples he had.

24) A hollow cube of size 5cm is taken , with the thickness of 1cm . it is made of smaller cubes of size 1cm . if the outer surface of the cube is painted how many faces of the smaller cubes remain unpainted?

25)if a 36 cm thread is used to wrap a book , lengthwise twice and breadthwise once, what is the size of the book?

26)

the various degrees of the vertices are marked in the dig. Find y.

27)if 4 circles of equal radius are drawn with vertices of a square as the centre , the side of the square being 7 cm, find the area of the circles outside the square?

28)A bus has 40 seats and the passengers agree to share the total bus fare among themselves equally. If the total fair is 80.67 , find the total no of the seats unoccupied.

29) A 4 digit no may consist of the digits 6,2,7,5 where none of the nos are repeated.Find the possible no of combinations divisible by 36?

30) if u r traveling from Mumbai to banglore and return back .To find the speed of the car which of the following r needed.
a)the distance between them.
b)time taken
c)avg speed towards Mumbai and the avg speed towards banglore.
Choices:
1)a only. 2)a and b 3) a,b,c 4)b only 5) c only ( ans not in order)

31)

( Diagram drawn approximate not to scale.)
if all the blocks are squares and the complete fig is also a square and the area of the a is 1 cm2,b=81 cm2what is the area of i?

32) A secret can be told only 2 persons in 5 minutes .the same person tells to 2 more persons and so on . How long will take to tell it to 768 persons ?
a)47.5 min b)50 min c) 500 min d)…. Ans: 47.5 min

33) Three birds cross a point in a same st. line and of that 2 fly in opposite directions. If a triangle is formed with the position of the birds what kind of the triangle will be formed?
a)isosceles b)right angle c)equilateral d)right angle and isosceles.

34)

when the angle a, b, c, d are given find x.

35) One question is given for explaining the working of cornea (in eyes) & the window
ans: drawing analogy
36) m<n, & x<y which of the following is definitely false
a)m-n < x-y b)m+n < x+y
c)&d) Similar options using all 4 variables

37)Four circles are drawn from the corners of a square of area 49 cm2 . Find the area of 4 circles outside the square
(they didn't mention that circles have radius=1/2 side of a square)
ans: intermediate

38)In a pond ecosystem,large fishes and small fishes will be there.If we want to remove small amount of pollutants,small fishes are to be employed.In a food-chain food passes through a number of mouths and en route the mouth of the superfeeder-the eagle.The size of the ecosystem is determined by its population.But this has been proved false.
What can you infer from above?
(4 choices)

39)In Bangalore,during income tax deduction for a single person,the percentage increased by 3% and for middle house-holders,it decreased by 3%.What can you infer?

40)In China,Mao-Tse –Tung was responsible for organizing its people and taking China into success path.It evolved into a great economic power by improved industrial and economical statistics.China prospered in those years,but_____
Which of the following best completes the sentence?(4 choices)

41)A ridge formed over Pacific Ocean was because of the intersection of two volcanoes.But in history it was written that it was not due to those volcanoes.It proves a contradictory to form the view that history will be proved wrong in the future. Inference?

42)In a poultry form because of cloning,a large breed of hens were produced.This increased the production but the maintenance was very difficult because of the large number.This does not mean that cloning is a disaster in the scientific world but it is a tool which in some ways is constructive but in other ways ,it is destructive.Inference?

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SECTION I - 8 questions based on series.

1. These questions involve interchange of letters in a word at particular locations and also interchanging letters adjacent to those particular locations.Certain other conditions may also be given
For eg.
Let the word be ABBAABA
If we apply 25 on this, it means we have to interchange the letters at positions 2 and 5, also we have to change the letters adjacent to positions 2 and 5 i.e.from A to B and B to A.
A B B A A B after Step 1 i.e interchange of 2 and 5 becomes AABABB
Now change adjacent elements of 2 and 5...finally answer becomes
Ans: B A A B B A

Questions 1-5 are based on the pattern with changed numbers as described above
Questions 6-8 are of the following type
To get AAABBD from BBBAAA what number should be applied:-
a) 25
b) 34
c) 25 & 34
d) none

SECTION II

1. Given the following functions
(1) f(n a b c ) = ac if n=1
(2) f(n a b c) = f( n-1 a c b) + f( 1 a b c) + f( n-1 b a c ) if n > 1

Then what is the value f( 2 a b c ) = ?

Ans: f( 2 a c b ) = ab + ac + bc.

2. Similar question on functions.

3. [ Based on the function in the first question] For the function f( 4 a b c ) the number of terms is...?
Hint f( 4 a b c ) = f( 3 a c b ) + f( 1 a b c ) + f( 3 b a c ) etc.

4. What is the value of the function f( 5 a b c ) = ?

SECTION III

Permutations and Combinations.
8 Questions.

1. r = number of flags;n = number of poles;
Any number of flags can be accommodated on any single pole.

1)r=5,n=5 The no. of ways the flags can be arranged ?

Questions 2-5 are based on the above pattern

6. r = 5 n = 3 . If first pole has 2 flags, third pole has 1 flag
How many ways can the remaining be arranged?

Questions 7.& 8. are similar to Question 6.

SECTION IV
Question consisting of figures - Pattern-matching type.
Refer R.S Agarwal's book on Analytical Reasoning & TMHs Quantitative ability book by
Edgar Thorpe.

SECTION V
In this section first part of compound word is given. Select meaning of the second part
from the choice given:
1. Swan
2. Swans
3. Fool
4. Fools
5. Stare
6. Lady

For all above 4 choices are given.....

Eg. Swan ---> Swansong (compound word)
a) category b) music c) television d) none
Ans: Swansong is compound word. But song is not given as an option. so (b) music is the answer.

CTS 2004 – Anna University. June 2, 2004

1)

Diameter of circle is d, Find length of string.(outer string that covers the circle)

Ans: d (pi + 3)

2) Diamond\'s value is proportional to its weight2 .When the diamond broke wts of pieces in ratio 1:2:3;4:5.

Total loss in value is 85,000.What is the value of the diamond twice the wt of the original diamond.

Ans : 450,000

3)Person X join a job at 20 yrs.First 3 years sal =10,000 p.a. Afterwards every year inc of 2,000 per year for 10 year. Then sal become const till retirement. at retirement avg sal is 25,000. ( thro'out career) what age he retires.?
Ans : 50 yrs

4)In an island there r tribals who speak lang of atmost 4 words.Lang consists of 4 alphabets.How many words can be formed in that language? Ans 340

5) It was found that the cause for the malaria was the swamp marsh and so r swamps were drained .Mosquito the real cause for malaria due to lack of breeding grounds (Swamps) also was wiped out. What does this illustrate?

(Ans : (Possible) when many conditions form a result eradication of one cause also eradicates the result)

6)An officer kept files on his table at various times in the order 1,2,3,4,5,6 .Typist can take file from top whenever she has time and type it.What order she cann't type.?

(Ans : 4,5,6,2,3,1)

7)A and B r fighting .B fires 3 times as many missiles as A. Total hits: total misses = 1/7 .B's misses 357.B's hits – A's hits = 66.A's hits?

8)40 shots taken.50p for a hit.10p for a miss.(he have to give).Finally he has Rs.5.How many hits.? Ans 15

9)Find avg of a,b,c,d,e .Given data : avg of any 4 num =avg of any 3 num 2)(a+b)² = 36

Which of the abv are sufficient?

10)What is the difference in times btwn clk 1 & clk2.

1) both show same time 6 hrs back 2 ) 1 clk gains 1 min an hr,clk2 gains 2 min an hour. Like abv….

11)A takes 9 strides to B's 7 strides. A stride = 1meter.B stride =1.2m B gets the start of 24m.What dist should A travel to overtake B?

12) Tortoise gets 100 m head start. Hare is 10 times faster as tort. What is the dist traveled by hare to catch up tort.?

13)4 weights r weighed in pairs. Weights of pairs are determined as 103,105,106,106,107,109 What is the min wt?
Ans 51

14) Constant cost = 300
and 1.75 / copy. How many copies should he sell at 7.75 /copy to make a profit.

15)

Find the perimeter ? ANs 28

16) 20 members avg =10.5. 3 memb of 11.5,12.5,13.5 left and 3 memb of 10.5,12.5,14.5 joined along with a teacher of 21 yr.Now avg = ….Ans 11.

17)


Find the area of shaded. Radius of circle = 1cm…..Arcs r drawn with center at circumference.

18)

Find the area of the shaded portion?

19) Solid cube of 6 * 6 * 6. This cube is cut into to 216 small cubes.(1 * 1 * 1).the big cube is painted in all its faces. Then how many of cubes are painted at least 2 sides. (Ans 56)

20) A Bacteria is doubling at every 4 min. After 40 min 1024 bact. Then 256 when>…..? Ans : 32 min

21) A bag contains 3 balls of 11 different colors each. Find the min no of chances to find at least 3 balls of same color?

Ans : 23

22) If $x^2 < 4$ then $100/x$ is….? Ans : $100/x > 50$ & $100/x < -50$.

23) If [x] is the int less than x and |x| is the abs val of x.Then max of [x]/|x| is Ans d)none

24) A work in 12 days b in 15 days. Find the no of days if they work on alternate days. Ans 13 ¼

25) A,B,C r positive int.Out of them 2 r odd. Then $5^2a + ( b-5)3 (c-3)^2 = ?$ Ans : always odd.

26) A squarer side is 5cm.If a square of side 10cm is hinged @ the center of the prev square. when they r rotated common area to both squares (Ans : Does not change)

27) $3p^2 + pq + 5q^2$ is even. If

a) If p is odd, q is odd
b) If p is even, q is odd
c) If p is odd ,p is even
d) Atleast one of p and q is odd.

Choices are given. Ans : 4) None of these

28) A lady has to feed a dog for the one week from Monday to Sunday .She has food types M,N,O,P,Q,R,S .

MNOP ? protein enriched RS -? vitamin enriched. Vitamin enriched cannot be fed on consecutive days.

Conditions given : M should be fed before S.
M should be fed before Q.
R Should be fed before S.
Before N and Q there should be four types.

Based on this 3 ?s are asked.All r easy to answer…

29) A man bought at the cost of 5 plums a rupee and 2 oranges a rupee.He sells 10 plums and 6 oranges at the selling price of 4 plums a rupee and 3 oranges a rupee.What is his gain or loss? Ans loss of 50p.

30) Out of 32 books the cost of 10 books is Rs. 50 each and he got a profit of 4%. He sells 15 books at a profit of 3.8461% on the selling price of Rs 70. The remaining cost is 576. The remaining books are sold at Rs 74. What is his total profit.

31) Two solutions have milk & water in the ratio 7:5 and 6:11.Find the proportion in which these two solutions should

Be mixed so that the resulting solution has 1 part milk and 2 parts water?

a)35:3 b)21:36 c)not possible Ans :c

Further ?s are from reading comprehension.(verbal reasoning) All are easy to answer if u read carefully.

Interview

Depending on ur interest area(Operating systems,networks,DBMS,software engineering) choose the questions given below and prepare for it.
these are some cts ques. asked in interview

[1] What are the current trends and areas of focus in
IT.
[2] What is a Micro-Kernel architecture.
[3] Describe the memory management policies in Unix.
How is paging implemented? How page faults are
handled?
[4] What is the CPU-scheduling policy in Unix? - Round
robin scheduling with multilevel queues.
[5] Describe the Sliding window protocol. What is it's
advantage over stop-and-wait?
[6] Diff between compilers and interpreters. Some
fundaes about how to link code in different files.

personal:

1. Tell us about yourself, your background.

2. What does your father do currently.

3. Your performance in schooling, B.E.

4. Your points.

5. Aren't you going for higher studies abroad? Why?
6. What qualities do you have that make you a person
suitable for going into the IT industry .

7. What do your friends opine about you.

8. When do you think you will complete and be able to
join.

9. How can you assure that you will join by that time.

10. Anything you want to know about us.

11. Significant achievements in life.

( may be paper publications etc. )

more questions:

->Why paging is used ?

->Which is the best page replacement algo and Why ?

->WHat is software life cycle ?

->How much time is spent usually in each phases and
why ?

->What is testing ?

->Which are the different types of testing ?

->Which are the different phases in Software life
cycle (asked again)

->Why is analysis and testing phases very important ?

->Why networks are layered ? What is the advantage of
that ?

->How many layers are there in OSI ? Why is it called
OSI model ?

->network topologies ?

->Which are the different network toplogies ?

->an example of bus type network.

->What is the Bandwidth of ethernet ?

->Explain the advantage and disadvantage of ethernet ?

->Which is the protocol used in ethernet. (CSMA/CD)
Why is it called so ?

->What is the advantage of Ring network ?

->Compare it with ethernet.

->What is inheritance, encapsulation etc.

->If there are too many page faults what is the
problem?

->To ensure one pgm. doesnt corrupt other pgm. in a
Multi-pgm. enviornment

what you should do?

->Which one you will use to implement critical
section? Binary Semaphore

-> Which one is not needed for Multi-pgm. enviornment?

options are: virtual memory,security,time sharing,none
of the above.

->Which one is not done by Data link layer ? bit
stuffing, LRC,CRC,parity check

-> Which one is not related to Data link layer?

-> Which one is not suitable for client-server
application? tcp/ip,message passing,rpc,none of the
above.

->Term stickily bit is related to a)kernel
b)undeletable file c) d)none

->semaphore variable is different from ordinary
variable by ?

-> Where semaphore is used?

-> what is Test and set lock?

-> what is critical section and metods for mutual exclusion?

-> what is internal fragmentation ,external fragmentation,compaction?

-> what is page fault?How the os finds a page fault has really occured?(protction bits:
valid bit, invalid bit)

->producer-consumer problem ,reader- writer problem

ABOUT LINUX

->if u say ur favourite pass-time is chatting then u'll be asked
how a "CHAT" application works.

->if u say I "search" a lot in the web using google u'll be asked how a search engine
works
(need not say in detail just say it briefly)

->how internet works(for eg; when u type www.yahoo.com what actually happens how
the yahoo page is loaded?

-> Operator overloading ,virtual functions(write programs)

1.like what is data model types of data model
2.what is RDBMS.
3.what is normalization,functional
dependency,1NF,2NF,3NF,BCNF.
4. what is oops.
5.what is the difference between c++ and c;
6.properties of oops.
7.inhetence,sequence diagram.
8.XML,ASP,
9.what is an operating system.
10.what is multitasking.what is timesharing.
11.what is memeory management.
12.what is virtual paging.
13.about your salabus.

13.what is microprocessor,about 8085 etc.
14.intoduce your self.
15.about your hobbies.
16.if not related to computer branch then some very
small puzzel and
some techenical question
related with the branch.


1>normalization
2>data model
a.record base
b.logical base
c.object base
3>what is a parent key
4>time complexcity of different sorting algos
5>what is o.s
6>semaphore
7>describe view mechanism
8>joining(outer,lossless!)
9>functional dependency
10>ffd
11>ddl,dml,dcl
12>three tier structure
13>vertical ,horizontal projection
14>explain rdbms,ddbms
15>fixed fomat data model
16>name the technology used to connect a dbms to front end
17>how will u design a dbms

what is data dictionary,dba,about normalization etc.
why it is called relational.
-------

Technical:

what is o.s?
what is a deadlock?
what is a semaphore?
difference between semaphore & monitor?

what is sdlc(software development life cycle)?


what is a linklist,stack,queue?
write a program to reverse a linklist?

what is dba?
difference between primary,foreign,candidate&super key?
different type of databases?
what is normalsation?explain them?

four division in cobol?
significance of 01,77,88,66 level?

function of compiler?
difference between object file & exe file?

difference between c &c++?
difference between sql&c++?

1. You must do R.S.Aggarwal and Shakuntala Devi before writing the
Test. Mostly questions were on this pattern only.

2. You must try to solve the previous q papers of INFY.

3. Attempt only those questions which u thnk u r sure....i mean dead
sure..coz accuracy matters in this company.

4. Cut off is very low for Pune Centre. i thnk it wll b near round
15. So ur attempt shud b less.(only dead sure)

i remember some of the questions..

1. Shakuntala Devis question of 5(4+1 spare) tyres..20,000 kms..how
much distance wll they cover..
ans: 16,000

2. 1/7 th is subtracted from 1/4 th of number thn 13 is added ...like
this..wht is the number..(easy one)

3. Then some questions from coding decoding. like if A is interpretd
as .. and X is ._ then TAXI wll b interpreted as.... 4 questions like
this

4. Then simple reasoning questions from GRE's Analitical Portion.

5. You must practice GRE"S Analitical Section questions plus critical
reasoning questions..like A,B,C,D,E are brothers....and P and R are
wifes THN u have to point relations ...these questions are very easy

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but u shud practice once...

others are also easy but practice is must ...

must read all the questions ...last page questions are easy..

English portion is not tough

i)
Series Transformation
1) If 102101->210212 then 112112->?
a)
b)
c)
d)

2) if 102101-> 200111 then 112112->?
Again there r 4 choices.

3) If 102101->101201 then 112112->?
Again there r 4 choices.

Tips:The 1st one all change 0->1, 1->2, 2->1
The 2nd on alternate do not change
The 3rd it is just reverse of the original string

_____

ii)

Target=127: Brick=24,17,13: Operation available= +,/,*,-
Again there r 4 choices.For ex choice b)20,6,7

Tips:Answer is b one bcos 20*6+7=127.Hence it is the answer
Q:1)U HAVE TO MAKE A TARGET =102; THE ANSWER FROM THE OPTION IS
(6,17,2,1)
2)TARGET=41;FIVE NO.S WERE GIVEN;25 22 16 5 1 U CAN USE THE NO.S
ONLY ONCE&CAN PERFORM OPERATION +,MULTIPLY,-,/,()ONCE;
OPTIONS WERE;
A)25 22 16 5 B)25 22 16 1 C)25 22 5 1 D)25 16 5 1)
4 SUCH QUESTINS ARE THERE.

2)87
3)146

4)127
THERE ARE SOME FIGURATIVE QUESTION;SEE FROM COMPETITION
MASTER,I CANT REMEBER THE FIGURE.4 QUESTIONS ARE THERE

iii)

Cryptic Sentence. Form word
A sentence is there .a cryptical clue is hidden in the sentence. Find out answer from the
opticn.
1)a friend in rome
a)aerodrome b)palindine c)palindrome d)condome
ans:palindrome

2)Rowed them across
a)crosswiz b)acropolis c)acroword d)crossword
Ans:crossword/crossover

3)cuticle cutting the filly glass
a)cubicle b)uphilly c)cutglass d)cutlass
Ans:cutlass

4)hat jumps upward in a water closet
a)watch b)witch
ans:watch/whatever

Tips:The 1st oneJumble out the word SHORE to get the word HORSE and then get the
adjective
of the word HORSE as TROJAN
The 2nd one lips->slip->freudian/french

iv)

Anagram noun form the correesponding adjectives

There re options.
Q:some nouns are jumbled on ,you have to rearrange, look for a suitable adjective:
Make a phrase then.
1)shore
a)aegean b)Indian c)trojan d)Spartan
ans:trojan

2)sire
a)dutch b)rome c)herculean d)mercurial
ans:mercurial

3)ourcage
a)english b)rome c)dutch d)Spartan
ans:Spartan

4)lips
Again there r 4 choices.
Ans:freudian/french

---

v)

Jigsaw puzzle as given in the book by Edgar Thorpe, of TMH Publications

---

vi)

FUNCTIONS same as CTS_BLACK\fun

---

vii)

x , y -> strings of G st there is at least one G in x and y

xoxy valid
xoy->xoxy invalid
Find valid & invalid strings

---

viii)there were a couple of ( seven to be
precise)figures ( tetris type if u remember that game)
given in the main theme. The 10 questions that
followed showed patterns which were formed due to
combination of the 7basic figs. NOTE: the intersecting
part of the combined fig. always gets subtracted from
the total combination

Hello Shivesh
CTS paper was of diff pattern this time and there were
ateast 5 different sets of question papers given to
students. Of the type i recvd, as i told there wer
10x4 questions for 60 mins.
section:

4) last section( thats bcoz i remeber it well)
had meaningful words whose anagrams are nouns and
we hav to choose the best adjective from the list to
describe this noun:
ex: shore ( word given)
choices: a) roman b) spanish c) trojan d)....

ans: c) trojan
shore is anagram(jumbled form of) 'horse' and
trojan-horse is the best match

3) there were a couple of ( seven to be
precise)figures ( tetris type if u remember that game)
given in the main theme. The 10 questions that
followed showed patterns which were formed due to
combination of the 7basic figs. NOTE: the intersecting
part of the combined fig. always gets subtracted from
the total combination

2) This section had the funda of xOy where x and y
represented strings of Gs . The test was to find the
valid or invalid patterns with ref. to the rules

1) L=list of objects
ex:L={a,b,c,d} where a,b,c,d are objects
P(L) was a function( dont remembr xatly)
M(L) was another function defined etc
in the following questions P(x) etc were given to be
found out.
Note : this may take considerable amnt of time. so
take intelligent guesses

Section 1 : Functions.

Q: 1 - 8

Certain functions were given & based upon the
rules & the choices had to be made based on recursion.
This is time consuming, but u can do it.
Try to do it at the end. start from the last section.

L(x) is a function defined. functions can be defined as
L(x)=(a,b,ab) or (a,b,(a,b),(a,(b,b)),a,(b,b))....
two functions were given A(x) & B(x) like

if l(x)=(a,b,c) then A(x)=(a) & B(x)=(b,c)
i.e., A(x) contains the first element of the function only.
& B(x) contains the remaining, except the first element.
then the other two functions were defined as
C(x) = * if L(x) = ()
A(x) if L(x) = () & B(x) != ()
C(B(x)) otherwise
D(x) = * if L(x) = ()
** if B(x) = ()
A(x) if L(x) != () & B(x) != ()
D(D(x)) otherwise

now the Questions are,

1 : if L(x) = (a,b,(a,b)) then C(x) is ?
(a): a (b): b (c): c (d): none
2 : if L(x) = (a,b,(a,b)) then find D(x)
same options as above
3 : if L(x) = (a,b,(a,b),(b,(b))) find C(x)
4 : ------------~~~~~~~~~----------- find D(x)
5 : if L(x) = (a,(a,b),(a,b,(a,(b))),b) then find c(x)
6 : ------------~~~~~~~~~----------- find D(x)
7 : if L(x) = (a,b,(a,b)) then find C(D(x))
8 : ------------~~~~~~~~~----------- find D(C(x))


Section 2 : Word series
Q's : 9 - 16

This is one of the easiest section. Try to do it at first.
if S is a string then p,q,r form the substrings of S.
for eg, if S=aaababc & p=aa q=ab r=bc
then on applying p->q on S is that ababaabc
only the first occurance of S has to be substituted.
if there is no substring of p,q,r on s then it should not be
substituted.

If S=aabbcc, R=ab, Q=bc. Now we define an operator R&#61672; Q when
operated on S, R is replaced by Q, provided Q is a subset of S,
otherwise R will be unchanged. Given a set S= ………., when R&#61672; Q, P&#61=
672; R, Q
&#61672; P operated successively on S, what will be new S? There will be 4 =

: if s=aaababc & p= aa q=ab r=bc then applying p->q, q->r & r->p will
give,
(a): aaababc (b): abaabbc (c): abcbaac (d): none of the

a,b,c

10: if s=aaababc & p= aa q=ab r=bc then applying q->r & r->p will
give,

11: if s=abababc & p= aa q=ab r=bc then applying p->q, q->r & r->p will
give,

12: if s=abababc & p= aa q=ab r=bc then applying q->r & r->p will
give,

13: if s=aabc & p=aa q=ab r=ac then applying p->q(2) q->r(2) r->p
will
give,

(2) means applying the same thing twice.

14: similiar type of prob.

15: if s=abbabc p=ab q=bb r=bc then to get s=abbabc which one should be
applied.

(a): p->q,q->r,r->p

16: if s=abbabc p=ab q=bb r=bc then to get s=bbbcbabc which one should
be
applied.

Let us consider a set of strings such as S=aabcab. We
now consider two
more sets P and Q which also contain strings. An operation
P->Q is defined in
such a manner that if P is a subset of S, then P is to be
replaced by Q. In
the following questions, you are given various sets of
strings on which you
have to perform certain operations as defined above. Choose
the correct
alternative as your answer.

(the below are some ques from old ques papers)

21. Let S=abcabc, P=bc, Q=bb and R=ba. Then P->Q, Q->R, R-
>P changes S to
(A) ............ (B) abcabc (C) ............
(D) none of A,B,C

22. Let S=aabbcc, P=ab, Q=bc and R=cc. Then P->Q, Q->R, R-
>P changes S to
(A) ababab (B) ............ (C) ............
(D) none of A,B,C

23. Let S=bcacbc, P=ac, Q=ca and R=ba. Then P->Q, Q->R, P-
>R changes S to
(A) ............ (B) ............ (C) bcbabc
(D) none of A,B,C

24. Let S=caabcb, P=aa, Q=ca and R=bcb. Then P->Q, P->R, R-
>Q changes S to

(A) ............ (B) ............ (C) ............
(D) none of A,B,C

Section 3 : numerical series
Q's : 17 - 24

This is little bit tough. proper guesses should be made.
find these probs in r.s.aggarval's verbal & non verbal reasoning.

17: 2,20,80,100, ??
(a): 121, (b): 116 (c): (d):none
18: 10,16,2146,2218, ??

like these other series were given.

section 3 : series (from other booklet)
transformations

17: 1 1 0 2 2 1 1 ---> 0 0 1 0 0 2 2
1 0 1 1 0 0 1 ---> 2 1 2 2 1 1 2
then
2 2 1 1 0 1 1 ---> ????
ans may be 0 0 2 2 1 2 2

18: 1 1 0 0 2 2 ---> 2 2 0 0 1 1
1 0 1 1 2 1 ---> 1 2 1 1 0 1

Section 4 : figures

19:
^ ^ ^
| -> <- | -> |
^ : ^ :: ^ : ?
| -> <- | <- |

ans is :

^

| <-
^

| ->

all probems are very easy.(see cts_old\cts13 file)
some are mirror images, some r rotated clockwise/anti


Section 5 : Verbal
if u have a very good vocab. then this section is managable.
two words together forming a compound words were given.
the q's contained the second part of the compound word.
the first word of the compuond word had to be guessed.
then its meaning had to be matched with the choices.

if the word is "body"
then its meaning of its first part is..
its really tough to guess..
the words were however very simple
some words which i can remember are, head, god,
(see old papers)
like
block head
main stream
star dust
Eg: OLD PAPERS
(1) -(head)- (a) purpose (b) man (c)obstacle
(d)(ans:c for blockhead)
>(2) (dust)- (a) container(b)celestial body
(c)groom(d)(ans: c for star dust)
>(3) (stream )-(a) mountain (b) straight (c) (d)
(ans:a)
>(4) (crash)- (a) course (b) stock3 anagram
>first find the anagram of the given word & then
>choose the meaning of the anagram from the options.
>1. latter ->rattle 2..spread 3.risque
4.dangled(ansjogged)…




1. A says " the horse is not black".
   B says " the horse is either brown or grey."
   C says " the hoese is brown"
   At least one is telling truth and atleast one is lying. Tell the colour of horse.

Ans: Grey

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2. A son and father go for boating in river upstream. After rowing for 1 mile son notices the hat of his father's hat is falling in the river. After 5 min., he tells his father that his hat has fallen. So, they turn around and are able to pick the hat at the point from where they began boating after 5 min. Tell the speed of river.

Ans: 6 miles/hr

3 A+B+C+D=D+E+F+G=G+H+I=17 where each letter represent a number from 1 to 9. Find out what does letter D and G represent if letter A= 4.(8marks)< /FONT>

Ans:D= 5 G=1

4. Argentina had football team of 22 player of which captain is from Brazilian team and goalkeeper from European team. For remainig players, they have picked 6 from argentinan and 14 from european. Now for a team of 11 they must have goalkeeper and captain so out of 9 now, they plan to select 3 from argentinian and 6 from European. Find out no. of  possibilities available for it. (2 marks)

Ans: 160600 (ie  6C3 * 14C6)

5. Three thives were caught stealing sheep, mule and camel. A says " B had stolen sheep " C says " B had stolen mule" B says he had stolen nothing. the one who had stolen horse is speaking truth. the one who had stolen camel is lying . Tell who had stolen what? (5 marks)

Ans: A- camel B- mule C- horse

6. A group of friends goes for dinner and gets bill of Rs 2400 . Two of them says that they have forgotten their purse so remaining make an extra contribution of Rs 100 to pay up the bill. Tell the number of
person in that group. (3 marks)

Ans: 8 persons

7. In a colony, there are some families. Each of them have children but different in numbers.

  Following are conditions:
  a)  Number of adults =  Number of sons = Number of daughters =  Number of families.
  b) Each sister must have atleast one brother and should have at the most 1 sister.
  c) Number of children in one family exceeds the sum of no of children in the rest families.

  Tell the number of families.(5 marks)

Ans: 3 families

8. There are 6 people W,H,M,C,G,F who are murderer , victim , judge , police, witness, hangman. There was no eye-witness only circumtancial witness. The murderer was sentenced to death. Read following statement and determine who is who.    ( 8 marks)

  1. M knew both murderer and victim.
  2. Judge asked C to discribe murder incident.
  3. W was last to see F alive.
  4. Police found G at the murder site.
  5. H and W never met.

## COGNIZENT PAPER

1. A says " the horse is not black".
B says " the horse is either brown or grey."
C says " the hoese is brown"
At least one is telling truth and atleast one is lying. tell the colour of horse?
Answer : grey

2.
A son and father goes for boating in river upstream . After rowing for 1 mile son notices the hat of his fathe falling in the river.After 5 min. he tells his father that his hat has fallen. So they turn round and are able to pick the hat at the point from where they began boating after 5min.
Tell the speed of river?
Ans...6 miles/hr

3. A+B+C+D=D+E+F+G=G+H+I=17 where each letter represent a number from 1 to 9. Find out what does letter D and G represent if letter A=4. (8 marks)
Ans. D=5 G=1

4. Argentina had football team of 22 player of which captain is from Brazilian team and goalki from European team. For remainig palayer they have picked 6 from argentinan and 14 from european. Now for a team of 11 they must have goalki and captain so out of 9 now they plan to select 3 from rgentinian and 6 from European. Find out no. of methods avilable for it. (2 marks)
Ans : 160600( check out for right no. 6C3 * 14C6)

5. Three thives were caught stealing sheep, mule and camel.
A says " B had stolen sheep "
C says " B had stolen mule"
B says he had stolen nothing.
The one who had stolen horse is speaking truth. the one who had stolen camel is lying .
Tell who had stolen what? (5 marks)
Ans. A- camel ;B- mule ;C- horse

6.A group of friends goes for dinner and gets bill of Rs 2400 . Two of them says that they have forgotten their purse so remaining make an extra contribution of Rs 100 to pay up the bill. Tell the no. of person in that group. (3 marks)
Ans - 8 person

7. In acolony there are some families. Each of them have children but different in numbers.Following are conditions:
A) No of adult no of sons no of daughters no of families.
B) Each sister must have atleast one brother and should have at the most 1 sister.
C) No of children in one family exceeds the sum of no of children in the rest families.
Tell the no of families.(5 marks)
Ans : 3 families

8.There are 6 people W,H,M,C,G,F who are murderer , victim , judge , police, witness, hangman. There was no eye witness only circumtancial witness. The murderer was sentenced to death.
Read following statement and determine who is who.
1 . M knew both murderer and victim.
2. Judge asked C to discribe murder incident.
3. W was last to see F alive.
4. Police found G at the murder site.
5 H and W never met.
( 8 marks)

The above mentioned questions are of 37 marks rest I don't rememberas they had no of condition. One which mentions about hundustani music Gazals ect. is tobe solved through venn diagram. Its of 8
marks. and another was grading 5 student which was of 5 marks.
***************************************************************
**These are some of the important ques..that are asked
frequently
->Why paging is used ?

->Which is the best page replacement algo and Why ?

->WHat is software life cycle ?

->How much time is spent usually in each phases and why ?

->What is testing ?

->Which are the different types of testing ?

->Which are the different phases in Software life cycle (asked again)

->Why is analysis and testing phases very important ?

->Why networks are layered ? What is the advantage of that ?

->How many layers are there in OSI ? Why is it called OSI model ?

->network topologies ?

->Which are the different network toplogies ?

->an example of bus type network.

->What is the Bandwidth of ethernet ?

->Explain the advantage and disadvantage of ethernet ?

->Which is the protocol used in ethernet. (CSMA/CD) Why is it called so ?

->What is the advantage of Ring network ?

->Compare it with ethernet.

->What is inheritance, encapsulation etc.

->If there are too many page faults what is the problem?

->To ensure one pgm. doesnt corrupt other pgm. in a Multi-pgm. enviornment

what you should do?

->Which one you will use to implement critical section? Binary Semaphore

-> Which one is not needed for Multi-pgm. enviornment?

options are: virtual memory,security,time sharing,none of the above.

->Which one is not done by Data link layer ? bit stuffing, LRC,CRC,parity check

-> Which one is not related to Data link layer?

-> Which one is not suitable for client-server application? tcp/ip,message
passing,rpc,none of the above.

->Term stickily bit is related to a)kernel b)undeletable file c) d)none

->semaphore variable is different from ordinary variable by ?

->unix system is

a)multi processing

b)multi processing ,multiuser

c)multi processing ,multiuser,multitasking

d)multiuser,multitasking

->x.25 protocol encapsulates the follwing layers

a)network

b)datalink

c)physical

d)all of the above

e)none of the above

->TCP/IP can work on

a)ethernet

b)tokenring

c)a&b

d)none

->a node has the ip address 138.50.10.7 and 138.50.10.9.But it is

transmitting data from node1 to node2only. The reason may be

a)a node cannot have more than one address

b)class A should have second octet different

c)classB " " " " "

d)a,b,c

->the OSI layer from bottom to top

->for an application which exceeds 64k the memory model should be

a)medium

b)huge

c)large

d)none

->the condition required for dead lock in unix sustem is

->set-user-id is related to (in unix)

->bourne shell has

a)history record

b)

c)

d)
->wrong statement about c++

a)code removably

b)encapsulation of data and code

c)program easy maintenance

d)program runs faster
->which is true
a)bridge connects dissimiler LAN and protocol insensitive

b)router " " " " "

c)gateway " " " " "

d)none of the above

->const char *

char * const

What is the differnce between the above tow?.

->In Unix inter process communication take place using?.

->About i-node numbers

->Max relaxable permisssion value with out giving write permission to others?.

->About ln(linking)

->Linking across directories?.

->process id for kernell process

->very first process created by kernell

->function to repaint a window immediately?.

->Function entry for DLL in win3.1

->win 3.1 is a

->win 3.1 supports which type of multi tasking?.

->Message displayed when a window is destroyed

->About fork()?

->About send message and post message

->Message to limit the size of window

->System call executable binary file intoa process

->About GDI object?.

->API used to hide window

->Initialize contents of a dialog?.

C SKILL SET


->How do you write a program which produces its own source code as its output?
->How can I find the day of the week given the date?

->Why doesn't C have nested functions?
->What is the most efficient way to count the number of bits which are set in a value?
->How can I convert integers to binary or hexadecimal?
->How can I call a function, given its name as a string?
->How do I access command-line arguments?
->How can I return multiple values from a function?
->How can I invoke another program from within a C program?
->How can I access memory located at a certain address?
->How can I allocate arrays or structures bigger than 64K?
->How can I find out how much memory is available?
->How can I read a directory in a C program?
->How can I increase the allowable number of simultaneously open files?
->What's wrong with the call "fopen("c:\newdir\file.dat", "r")"?


C & UNIX


19. What does chmod 654 stand for.

Ans : _rw_r_xr__
20. Which of following is used for back-up files?
(a) compress (b) Tar (c) make (d) all the above Ans : b
21 what does find command do ? Ans : search a file

22. what does " calloc" do?

Ans : A memory allocation and initialising to zero.
23 what does exit() do?
Ans : come out of executing programme.
24. what is the value of 'i'?

i=strlen("Blue")+strlen("People")/strlen("Red")-st
rlen("green")

Ans : 1
25. i=2
printf("%old %old %old %old ",i, i++,i--,i++);
Ans : check the answer.
26. Using pointer, changing A to B and B to A is Swapping the function
using two address and one temperory variable. a,b are address, t is
temporary variable. How function look like?
Ans : swap(int *, int *, int )
27. In 'o' how are the arguments passed?
ans : by value.
28. Find the prototype of sine function.

Ans : extern double sin(double)
29. Scope of a global variable which is declared as static?
ans : File
30. ASCII problem
i=..
ans : 6
31 .
32. what is the o/p
printf(" Hello \o is the world ");
Ans : Hello is the world.
33. Clarifying the concept addresses used over array ; ie changing
the address of a base element produces what error?
34. child process -- fork
child shell -- sh
35. Answer are lex 7 yacc & man read these things in UNIX
36. What is
int *p(char (*s)[])
Ans : p is a function which is returning a pointer to integer

## Cognizant Technology Solutions (CTS)

This is only a sample paper. We are not providing you with all the questions - just some
questions to give you a general idea of the test pattern.

SECTION I - 8 questions based on series.

1. These questions involve interchange of letters in a word at particular locations and also
interchanging letters adjacent to those particular locations.Certain other conditions may
also be given
For eg.
Let the word be ABBAABA
If we apply 25 on this, it means we have to interchange the letters at positions 2 and 5,
also we have to change the letters adjacent to positions 2 and 5 i.e.from A to B and B to
A.
A B B A A B after Step 1 i.e interchange of 2 and 5 becomes AABABB
Now change adjacent elements of 2 and 5...finally answer becomes
Ans: B A A B B A

Questions 1-5 are based on the pattern with changed numbers as described above

Questions 6-8 are of the following type

To get AAABBD from BBBAAA what number should be applied:-
a) 25
b) 34
c) 25 & 34
d) none

## SECTION II

1. Given the following functions
(1) f(n a b c ) = ac if n=1
(2) f(n a b c) = f( n-1 a c b) + f( 1 a b c) + f( n-1 b a c ) if n > 1

Then what is the value f( 2 a b c ) = ?

Ans: f( 2 a c b ) = ab + ac + bc.

2. Similar question on functions.

3. [ Based on the function in the first question] For the function f( 4 a b c ) the number of terms is...?
Hint f( 4 a b c ) = f( 3 a c b ) + f( 1 a b c ) + f( 3 b a c ) etc.

4. What is the value of the function f( 5 a b c ) = ?

## SECTION III

Permutations and Combinations.
8 Questions.

1. r = number of flags;n = number of poles;
Any number of flags can be accommodated on any single pole.

1)r=5,n=5 The no. of ways the flags can be arranged ?

Questions 2-5 are based on the above pattern

6. r = 5 n = 3 . If first pole has 2 flags, third pole has 1 flag
How many ways can the remaining be arranged?

Questions 7.& 8. are similar to Question 6.

SECTION IV
Question consisting of figures - Pattern-matching type.

Refer R.S Agarwal's book on Analytical Reasoning & TMHs Quantitative ability book by
Edgar Thorpe.

SECTION V
In this section first part of compound word is given. Select meaning of the second part
from the choice given:
1. Swan
2. Swans
3. Fool
4. Fools
5. Stare
6. Lady
For all above 4 choices are given.....

Eg. Swan ---> Swansong (compound word)
a) category b) music c) television d) none
Ans: Swansong is compound word. But song is not given as an option. so (b) music is the
answer.

**Cognizant Technology Solutions**

Analogies

1. slur : speech : : smudge :?
Ans. writing

2. epaulet : shoulder : : ring :?
Ans.finger

3. vernacular : place : : fingerprint : ?
Ans.identical

Opposites

Q. corpulent
Ans: emaciated

Q. officious
Ans: pragmate

Q. dextrous
Ans: clumsy

The following sentences are broken into 4 sections- A, B, C, D
Choose the part which has a mistake
Mark (E) if you find no mistake.

Q.A)psychologists point out that B)there are human processes C)which does not involve
D) the use of words

Ans. (C) which does not involve (do)

Q.A)jack ordered for B)two plates of chicken C)and a glass D)of water

Ans. (A)jack ordered for

The following is a group of questions is based on a passage or a set of conditions for each
question.
Select the best answer choice given.

(i). If it is fobidden by law if the object of agreement is the doing of an act,
that is forbidden by law the agreement is void.

(ii). If it is of the nature that,it would defeat the provision of any law
is the agreement is void.if the object of agreement is such that thing got
directly forbidden by law it would defeat the provision of statuary law.

(iii). If the object of agreement is fraddulent it is void.

(iv). An object of agreement is void if it involves or implies to the personnal property of
another.

(v). An object of agreement is void where the constant regards as ignored.

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(vi). An object of agreement is void where the constant regards is as opposed to public policy.


Q. An algorithm follws a six step process za,zb,zc,zd,ze,zf, it is governed by the following

(i) zd should follow ze
(ii) the first may be za,zd or zf
(iii) zb and zc have to be performed after zd
(iv) zc must be immediately after zb


Q. If za is the first set zd must be

a) 3rd
b) 5th
c) 2nd
d) 4th



Q. If zb must follow za then za can be

a) third or fourth
b) first or second
c) can not be third
d) fouth or fifth
e) none


Q. If ze is third term the number of different operations possible are


The following questions are based on the given statements
Ravi plants six seperate saplings -- x,y,z,w,u,v in rows no 1 to 6 ,according to the follwing conditions
He must plant x before y and u
He must plant y and w
The third has to be z

Q. Which of the following is acceptable

a) xuywzv
b) xvzyuw

c) zuyxwv
d) zvxuwy
e) wyzuvx

Q. Which of the following is true

a) z before v
b) z before x
c) w before u
d) y before u
e) x before w

Q. If he plants v first, then which can be planted second

a) x
b) y
c) z
d) w
e) u

Q. Which of the following describes a correct combination of sapling and row?

a) x,3
b) y,6
c) z,1
d) w,2
e) u,6

Q. If he plants b 6th which would be planted first and second

a) x and w
b) x and y
c) y and x
d) w and z
e) w and u

Q. If he plants w before u and after v he should plant w at

a) first
b) second
c) fourth
d) fifth
e) sixth

Q. At a certain moment a watch shows 2 min lag although it is running fast.
If it showed a 3 min lag at that moment, but also gains by 1/2 min more a day than its current speed
it would show the true time one day sooner than it usually does.
How many mins does the watch gain per day.

a).2
b).5
c).6
d).4
e).75

Q. In 400m race A gives B a start of 7 sec and beats him by 24 sec.
In another race A beats B by 10 sec.the speeds are in the ratio

a)8:7
b)7:6
c)10:8
d)6:8
e)12:10

Q. 3x+4y=10
x3 + y3=6
What is the minimum value of 3x+11y=?

Q. There are 600 tennis players
4% wear wrist band on one wrist
Of the remaining, 25% wear wrist bands on both hands
How many players don't wear a wrist band?

Ans. 432

Q. Three types of tea the a,b,c costs Rs. 95/kg,100/kg and70/kg respectively.
How many kgs of each should be blended to produce 100 kg of mixture worth Rs.90/kg,
given that the quntities of band c are equal

a)70,15,15
b)50,25,25
c)60,20,20
d)40,30,30

Ans. (b)

Q. Two distinct no's are taken from 1,2,3,4......28
Find the probability that their sum is less than 13

**Cognizant Apti Question paper (Colour: Yellow)**

There are other three colours also. We received only yellow Question papers.

1. If all the 6 are replaced by 9, then the algebraic sum of all the numbers from 1 to 100(both inclusive) varies by Ans: 330

2. The total no. of numbers that are divisible by 2 or 3 between 100 and 200(both inclusive) are Ans:67

3. From a pack of cards Jack, Queen, King & ace are removed. Then the algebraic sum of rest of the cards is Ans:216

4. The average temperature of days from Monday to Wednesday is 37 degree Celsius and that of from Tuesday to Thursday is 34 degrees. The temperature of Thursday is 4/5th of Monday. Then the temperature of Thursday is
Ans: 36 degrees
5. Swetha, Tina, Uma and Vidya are playing a gambling. In this different people lose in different games-in the reverse alphabetical order. The rule is that if one loses she should double the amount of others. At the end of 4th game each of them have same amount of money (Rs.32). Which one of them started with the least amount? (6) Which one of them started with the largest amount of money? (7.) At the end of the 2nd game what is the amount of money with uma?
Ans: Vidya, Swetha, Rs.8
8. A cube of 12 mm is painted on all its side. If it is made up of small cubes of size 3mm. If the big cube is splitted into those small cubes, the number of cubes that remain unpainted is Ans: 8

9. B is 50% faster than A. If A starts at 9 A.M. and B starts at 10 A.M. A travels at a speed of 50 km/hr. If A and B are 300 kms apart, The time when they meet when they travel in opposite direction is Ans:12 noon

10. A graph will be there. Inside the graph sheet there will be a Quadrilateral. We have to count the number of squares in the Quadrilateral.

11. You are having 31kg of rice. You are provided with a 1kg stone for weighing. In how many weights the 31kg of rice can be weighed. Ans: 5

12. A starts at 11:00AM and travels at a speed of 4km/hr. B starts at 1:00PM and travels at 1km/hr for the first 1hr and 2km/hr for the next hr and so on. At what time they will meet each other. Ans: 8:45 pm

13. There are 80 coins, among them one coin weighs less compared to other. You are given a physical balance to weigh. In how many wieghings the odd coin can be found. Ans: 5

14. Dia of the circle 4cm. The shaded part is 1/3 of the square area. What is the side of the square. Ans: root of 3pi

15. A,B,C, can do a work in 8,14,16 days respectively. A does the work for 2 days. B continues from it and finishes till 25% of the remaining work. C finishes the remaining work. How many days would have taken to complete the work Ans: 109/8

16. Raja went to a beauty contest .his wife was eager to know the result he told that the lady wear a yellow sari was winner. Miss. Andhra Pradesh Miss. Utter Pradesh, Miss. Maharashtra, Miss. West Bengal were the participants all the participants sat in a row. The conditions are (A) The woman wore yellow sari won the competition. (B) Miss. West Bengal was neither the runner-up or winner.(C) Miss. West Bengal was not at either ends.(D) Miss. Maharastra wore the white sari.(E) The women wore white sari and yellow sari sat at extreme ends.(F) The runner-up and winner did not sit together. [This was the passage given and the questions were easy]

17. The ratio of white balls and black balls is 1:2. If 9 gray balls is added it becomes 2:4:3. Then what is number of black balls. Ans:12

18. There are 10 coins. 6 coins showing head. And 4 showing tail. Each coin was randomly flipped (not tossed) seven times successively.after flipping the coins are 5 heads 4 tails one is hided the hided coin will have what . Ans :Head

19. Two cars are 500 cm apart. each is moving forward for 100 cm at a velocity of 50 cm/s and receding back for 50 cm at 25 cm/s at what time they will collide with each other. Ans : 14sec

20. People near the sea shore are leading a healthy life as they eat fish.but people at other part of the city are also healthy. Inference.

21. It is found from research that if u r a drunken then u have a less chance for chronic heart diseases. Inference.

22. A-B+c>A+B-C i) B is +ve, ii) B is –ve when it will hold true. Ans B<C

23. i) C.P is Rs 120 and profit is 30%

ii) C.P is Rs 210 and profit is 20%
we can find the S.P by using
**i)only ii)only both i &ii neither i&ii

24. How will u find distance between Nagpur and Mumbai?
I took one hour more when I travel at 80 km/hr than at 90 km/hr.

25. 100 coins were collected by four persons each collected more than 10 each collected a different number each was an even number find what is the max possible no of coins, two more questions based on the same passage. Ans 64

26. A car travels from B at a speed of 20 km/hr. The bus travel starts from A at a time of 6 A.M. There is a bus for every half an hour interval. The car starts at 12 noon. Each bus travels at a speed of 25 km/hr. Distance between A and B is 100 km. During its journey , The number of buses that the car encounter is Ans: 17

27. The ratio of the ages of the father and the son is 5:3, After 10 years it will be in the ratio 3:2. What will be their ages. Ans: 60,40
28. There was a Island. In that Island there was Rubys and Emeralds. Those were available in plenty. 0.3 kg of ruby is 4 lakhs and 0.4 kg of emeralds is 5 lakhs. Jayanth is buying 12 kg of Ruby and emerald. Choices will be given . Jayanth has to carry both ruby and emerald to the maximum profit.
29. Varun buys 8 books,10 pens and 2 pencils and Babu buys 6 books, 5pens and 5 pencils. Babu pays 50% more than Varun. What is the amount Varun spends in buying pencils.
30. Prakash and Revathi rent a fancy shop. Prakash imposes the following restrictions on Revathi for buying clips,stickers and lip sticks. The number of clips is twice the no. of stickers. The no. of lipsticks should be more than the sum of clips and stickers. Cost of clip is 1 rupee. Cost of lipstick is twice the clips. Cost of 1 lipstick is the cost of four stickers. Then What is the amount that Prakash spents for Revathi. Answer choices will be given.
31. There are three departments having students 64,58,24 .In an exam they have to be seated in rooms such that each room has equal number of students and each room has students of one type only (No mixing of departments .Find the minimum number rooms required . Ans : 73
32. A cube of side 12 cm was painted on all sides .Find the number of unpainted cubes when the cube was divided into cubes of side 3cm Ans :8


**Cognizant Questions 28th May 2004**


There are 60 questions to be answered in 60 minutes

In a club there are certain no. of males and females. If 15 females are absent then no. of males will be twice that of females. If 45 males are absent then female strength will be 5 times that of males. Find no. of males actually present. Ans : Males 80,Females 175

Three men A, B, C plays Cards. If one loses the game he have to give Rs.3. If he wins the game he will gain Rs.6. If A has won 3 Games, B loses Rs.3, C wins Rs.12.What is the total no. of games played? Ans :

A can swim & cross 50m(the length of swimming pool) in 2 min. B can swim & cross 50m in 2min 15sec. Every time when they meet a bell gong is struck. For 2000m how many bell sounds might be produced? Ans : 37

When I was married 10 years ago my wife is the 6th member of the family. Today my father died and a baby born to me. The average age of my family during my marriage is same as today. What is the age of Father when he died? Ans : 60

There are 9 balls of equal size and same weight(they look similar) except 1. How may weighs required to find the dissimilar ball using a weighing balance? Ans : 3

Product of Prime no. between 1 to 20? Ans 9699690

Find out the total numbers between 1 to 999 that are neither divisible by 8 nor by 12? Ans :833

Find out the distinct numbers that can be formed by 2, 3, 7, 6(don't now exactly) that should be divided by 4? Ans :8

Two trains at speed 60 km/hr comes in the opposite direction. At a particular time the distance between the two trains is 18km. A shuttle flies between the trains at the speed of 80 km/hr. At the time the two trains crashes what is the distance traveled by shuttle? Ans:12 km

There are n urns and m balls. If we put 3 balls in each urn 3 balls will be excess. If we put 4 balls in each urn 1 urn will be excess. Find no. of Urns (or) Balls?
ANS:7 URNS & 24BALLS.

Find the area not occupied by circles:
Given length =y breadth =x (Answer: $3x2(1-pie/4)$)

A man gets x/y of Rs.10 and y/x of Rs.10. He returns Rs.20. The Answer choices are
a) He may not lose Ans He never losses
b) He may lose
c) He always loses

d) Cannot be Determined

Three men A,B,C can complete a work separately in some specified days(may be8,7,6).
If they do the work together by alternate days. Then how many days need to complete the
work? Ans 7 1/8

14)Four Members A,B,C,D are playing a game .A person losing a game should double
the amount of others .B,C,D are losing in order after three games .The amount after 3
games are A&B having 40,D is having 16&C 80.
Each questions carry one mark:
a) who started with small amount of money?
Ans)A=5
15)who started with greatest amount of money?
Ans)B
16)what amount did B have?
Ans)93
Hint: I solved and found the answers to be A->5,B->93
17)There are some houses in a street back to back .And they that house behind 10 was 23.
How many houses in the street?
Ans)32
18)There are 1997 doors in a auditorium and as many as people as the no of doors open
enter the auditorium .A door was closed and as many as people as no of doors open leave
the auditorium . the process was repeated till the no of doors is equal to1.find the total no
of peoples enter the auditorium?Ans :1996

19)A batsman average was 15.at last innings he took 23 runs then his average became
16.how much run he should take to make his average 18?Ans 39

20)Find the number WXYZ divisible by 36?
i)let the digits be5,4,3,6 -not in that order
ii)sum of last two digits is 9
iii) sum of middle two digits is 7
->if one is sufficient then ans asA || if two is sufficient then ans as B||if all are necessary
then ans as C|| if nothing is needed then ans as D

21)X and Y live in a North-South parallel street. X travels 10 km towards North to reach
the east-west street . Y travels 6 km towards south to reach the east -west street . X
travels now 4km towards east and y travels 8km towards west and they met each other.
What is the distance between x and y? Ans : 20km

22)The houses are numbered 1,2,3,… and reach the end of the street and backtracks
toward s the starting point. The house numbered 10 is opposite to 23. there are even no of
houses. Find the total no of houses.Ans :32

23)A seller has a set of apples out of which he sells one half of it and half an apple to his
first customer.then he sells half of the remaining apples and a half apple to his second

customer.Then he sells half of the remaining apple and ½ apple to his third customer and so on.This repeats upto 7th customer and no more apples are remaining . Find the total no of apples he had. Ans :127 (2 pow n) -1

24) A hollow cube of size 5cm is taken , with the thickness of 1cm . it is made of smaller cubes of size 1cm . if the outer surface of the cube is painted how many faces of the smaller cubes remain unpainted?Ans 438

25)if a 36 cm thread is used to wrap a book , lengthwise twice and breadthwise once, what is the size of the book? Ans 7,4 & 8,2 Area 6

26)
the various degrees of the vertices are marked in the dig. Find y Ans =54

27)if 4 circles of equal radius are drawn with vertices of a square as the centre , the side of the square being 7 cm, find the area of the circles outside the square? Ans 3 pie r pow 2 [461.58]

28)A bus has 40 seats and the passengers agree to share the total bus fare among themselves equally. If the total fair is 80.67 , find the total no of the seats unoccupied.Ans :37

29) A 4 digit no may consist of the digits 6,2,7,5 where none of the nos are repeated.Find the possible no of combinations divisible by 36? Ans :0

30) if u r traveling from Mumbai to banglore and return back .To find the speed of the car which of the following r needed.
a)the distance between them.
b)time taken
c)avg speed towards Mumbai and the avg speed towards banglore.
Choices:
1)a only. 2) Ans a and b 3) a,b,c 4)b only 5)Ans c only ( ans not in order)

31)

( Diagram drawn approximate not to scale.)
if all the blocks are squares and the complete fig is also a square and the area of the a is 1 cm2,b=81 cm2what is the area of i? Ans = 324

32) A secret can be told only 2 persons in 5 minutes .the same person tells to 2 more persons and so on . How long will take to tell it to 768 persons ?
a)47.5 min b)50 min c) 500 min d)…. Ans: 47.5 min ......35min

33) Three birds cross a point in a same st. line and of that 2 fly in opposite directions. If a triangle is formed with the position of the birds what kind of the triangle will be formed?
a) Ans If same speed isosceles b)right angle c)equilateral d)right angle and isosceles.

34)

when the angle a, b, c, d are given find x.

35) One question is given for explaining the working of cornea (in eyes) & the window
Ans: drawing analogy
36) m<n, & x<y which of the following is definitely false
a)m-n < x-y b)m+n < x+y
c)&d) Similar options using all 4 variables Ans : x-m<y-n

37)Four circles are drawn from the corners of a square of area 49 cm2 . Find the area of 4 circles outside the square
(they didn't mention that circles have radius=1/2 side of a square)
Ans: intermediate

38)In a pond ecosystem,large fishes and small fishes will be there.If we want to remove small amount of pollutants,small fishes are to be employed.In a food-chain food passes through a number of mouths and en route the mouth of the superfeeder-the eagle.The size of the ecosystem is determined by its population.But this has been proved false.
What can you infer from above?
(4 choices)

39)In Bangalore,during income tax deduction for a single person,the percentage increased by 3% and for middle house-holders,it decreased by 3%.What can you infer?

40)In China,Mao-Tse -Tung was responsible for organizing its people and taking China into success path.It evolved into a great economic power by improved industrial and economical statistics.China prospered in those years,but_____
Which of the following best completes the sentence?(4 choices)

41)A ridge formed over Pacific Ocean was because of the intersection of two volcanoes.But in history it was written that it was not due to those volcanoes.It proves a contradictory to form the view that history will be proved wrong in the future.
Inference?

42)In a poultry form because of cloning,a large breed of hens were produced.This increased the production but the maintenance was very difficult because of the large number.This does not mean that cloning is a disaster in the scientific world but it is a tool which in some ways is constructive but in other ways ,it is destructive.Inference?

(The remaining verbal questions are easy and they can be answered by seeing the question carefully)

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**Cognizant 2004**

\* THERE WERE A TOTAL OF 40 QUESTIONS TO BE ANSWERED IN 60 MINUTES.EACH QUESTION CARRIED 1 MARK & 0.25 MARKS WERE DEDUCTED FOR EVERY WRONG ANSWER.(NEGATIVE MARKING)THERE WERE 5 SECTIONS IN ALL, EACH HAVING 8 QUESTIONS.

\* 5 sections
\* 8 questions each (40 q totally)
\* 60 minutes
\* 5 different sets of question papers
\* 1 Mark each
\* 0.25 negative marking

CTS_BLACK
vocabulary,strings,dominoes,functions,coding
(each section 8 ques)

CTS_BROWN
word series,numerical series,functions,figures,verbal
(each section 8 ques)

CTS_VIOLET
functions,strings,bricks,jigsaw puzzle,cryptic clues
(each section 8 ques)

CTS_RED
1. 8 functions
2. 4 cryptic clues ,4 anagrams
3. 4 tetris figures, 4 bricks
4. 8 strings
5. 4 jigsaw puzzles 4 number series

Instructions
1. All answers provided in these sets may not be correct. So Please check.
2. do read old papers. few ques of 2004 came from these old sets

INTERVIEW

\* puzzles
\* technical

BROWN 2004

There were different papers for different sessions.
The paper had 5 sections, 5 * 8 = 40 Q's. totally.

Section 1 : Functions.

Q: 1 - 8

Certain functions were given & based upon the
rules & the choices had to be made based on recursion.
This is time consuming, but u can do it.
Try to do it at the end. start from the last section.

L(x) is a function defined. functions can be defined as
L(x)=(a,b,ab) or (a,b,(a,b),(a,(b,b)),a,(b,b))....
two functions were given A(x) & B(x) like
if l(x)=(a,b,c) then A(x)=(a) & B(x)=(b,c)
i.e., A(x) contains the first element of the function only.
& B(x) contains the remaining, except the first element.
then the other two functions were defined as
C(x) = * if L(x) = ()
A(x) if L(x) = () & B(x) != ()
C(B(x)) otherwise
D(x) = * if L(x) = ()
** if B(x) = ()
A(x) if L(x) != () & B(x) != ()
D(D(x)) otherwise

now the Questions are,

1 : if L(x) = (a,b,(a,b)) then C(x) is ?
(a): a (b): b (c): c (d): none
2 : if L(x) = (a,b,(a,b)) then find D(x)
same options as above
3 : if L(x) = (a,b,(a,b),(b,(b))) find C(x)
4 : ------------~~~~~~~~~~--------- find D(x)
5 : if L(x) = (a,(a,b),(a,b,(a,(b))),b) then find c(x)
6 : ------------~~~~~~~~~~--------- find D(x)
7 : if L(x) = (a,b,(a,b)) then find C(D(x))
8 : ------------~~~~~~~~~~--------- find D(C(x))

Section 2 : Word series

Q's : 9 - 16

This is one of the easiest section. Try to do it at first.
if S is a string then p,q,r form the substrings of S.
for eg, if S=aaababc & p=aa q=ab r=bc
then on applying p->q on S is that ababaabc
only the first occurance of S has to be substituted.
if there is no substring of p,q,r on s then it should not be
substituted.

If S=aabbcc, R=ab, Q=bc. Now we define an operator R&#61672; Q when
operated on S, R is replaced by Q, provided Q is a subset of S,
otherwise R will be unchanged. Given a set S= ………., when R&#61672; Q, P&#61=
672; R, Q
&#61672; P operated successively on S, what will be new S? There will be 4 =

: if s=aaababc & p= aa q=ab r=bc then applying p->q, q->r & r->p will
give,
(a): aaababc (b): abaabbc (c): abcbaac (d): none of the
a,b,c
10: if s=aaababc & p= aa q=ab r=bc then applying q->r & r->p will
give,
11: if s=abababc & p= aa q=ab r=bc then applying p->q, q->r & r->p will
give,
12: if s=abababc & p= aa q=ab r=bc then applying q->r & r->p will
give,
13: if s=aabc & p=aa q=ab r=ac then applying p->q(2) q->r(2) r->p
will
give,
(2) means applying the same thing twice.
14: similiar type of prob.
15: if s=abbabc p=ab q=bb r=bc then to get s=abbabc which one should be
applied.
(a): p->q,q->r,r->p
16: if s=abbabc p=ab q=bb r=bc then to get s=bbbcbabc which one should
be
applied.
Let us consider a set of strings such as S=aabcab. We
now consider two
more sets P and Q which also contain strings. An operation
P->Q is defined in
such a manner that if P is a subset of S, then P is to be
replaced by Q. In
the following questions, you are given various sets of
strings on which you
have to perform certain operations as defined above. Choose

the correct
alternative as your answer.

(the below are some ques from old ques papers)

21. Let S=abcabc, P=bc, Q=bb and R=ba. Then P->Q, Q->R, R->P changes S to
(A) ............ (B) abcabc (C) ............
(D) none of A,B,C
22. Let S=aabbcc, P=ab, Q=bc and R=cc. Then P->Q, Q->R, R->P changes S to
(A) ababab (B) ............ (C) ............
(D) none of A,B,C
23. Let S=bcacbc, P=ac, Q=ca and R=ba. Then P->Q, Q->R, P->R changes S to
(A) ............ (B) ............ (C) bcbabc
(D) none of A,B,C
24. Let S=caabcb, P=aa, Q=ca and R=bcb. Then P->Q, P->R, R->Q changes S to
(A) ............ (B) ............ (C) ............
(D) none of A,B,C

Section 3 : numerical series

Q's : 17 - 24

This is little bit tough. proper guesses should be made.
find these probs in r.s.aggarval's verbal & non verbal reasoning.

17: 2,20,80,100, ??
(a): 121, (b): 116 (c): (d):none
18: 10,16,2146,2218, ??

like these other series were given.

section 3 : series (from other booklet)
transformations

17: 1 1 0 2 2 1 1 ---> 0 0 1 0 0 2 2
1 0 1 1 0 0 1 ---> 2 1 2 2 1 1 2
then
2 2 1 1 0 1 1 ---> ????
ans may be 0 0 2 2 1 2 2

18: 1 1 0 0 2 2 ---> 2 2 0 0 1 1
1 0 1 1 2 1 ---> 1 2 1 1 0 1


Section 4 : figures

19:
^ ^ ^
| -> <- | -> |
^ : ^ :: ^ : ?
| -> <- | <- |

ans is :

^
| <-
^
| ->

all probems are very easy.(see cts_old\cts13 file)
some are mirror images, some r rotated clockwise/anti


Section 5 : Verbal
if u have a very good vocab. then this section is managable.
two words together forming a compound words were given.
the q's contained the second part of the compound word.
the first word of the compuond word had to be guessed.
then its meaning had to be matched with the choices.

if the word is "body"
then its meaning of its first part is..
its really tough to guess..
the words were however very simple
some words which i can remember are, head, god,
(see old papers)
like
block head
main stream
star dust
Eg: OLD PAPERS
(1) -(head)- (a) purpose (b) man (c)obstacle
(d)(ans:c for blockhead)
>(2) (dust)- (a) container(b)celestial body

(c)groom(d)(ans: c for star dust)
>(3) (stream )-(a) mountain (b) straight (c) (d)
(ans:a)
>(4) (crash)- (a) course (b) stock3 anagram
>first find the anagram of the given word & then
>choose the meaning of the anagram from the options.
>1. latter ->rattle 2..spread 3.risque
4.dangled(ansjogged)…

Quest of red set.

i)
Series Transformation
1) If 102101->210212 then 112112->?
a)
b)
c)
d)

2) if 102101-> 200111 then 112112->?
Again there r 4 choices.

3) If 102101->101201 then 112112->?
Again there r 4 choices.

Tips:The 1st one all change 0->1, 1->2, 2->1
The 2nd on alternate do not change
The 3rd it is just reverse of the original string

_____

ii)

Target=127: Brick=24,17,13: Operation available= +,/,*,-
Again there r 4 choices.For ex choice b)20,6,7

Tips:Answer is b one bcos 20*6+7=127.Hence it is the answer
Q:1)U HAVE TO MAKE A TARGET =102; THE ANSWER FROM THE OPTION IS
(6,17,2,1)
2)TARGET=41;FIVE NO.S WERE GIVEN;25 22 16 5 1 U CAN USE THE NO.S
ONLY ONCE&CAN PERFORM OPERATION +,MULTIPLY,-,/,()ONCE;
OPTIONS WERE;
A)25 22 16 5 B)25 22 16 1 C)25 22 5 1 D)25 16 5 1)

4 SUCH QUESTINS ARE THERE.

2)87
3)146
4)127
THERE ARE SOME FIGURATIVE QUESTION;SEE FROM COMPETITION
MASTER,I CANT REMEBER THE FIGURE.4 QUESTIONS ARE THERE

_____

iii)

Cryptic Sentence. Form word
A sentence is there .a cryptical clue is hidden in the sentence. Find out answer from the
opticn.
1)a friend in rome
a)aerodrome b)palindine c)palindrome d)condome
ans:palindrome

2)Rowed them across
a)crosswiz b)acropolis c)acroword d)crossword
Ans:crossword/crossover

3)cuticle cutting the filly glass
a)cubicle b)uphilly c)cutglass d)cutlass
Ans:cutlass

4)hat jumps upward in a water closet
a)watch b)witch
ans:watch/whatever


Tips:The 1st oneJumble out the word SHORE to get the word HORSE and then get the
adjective
of the word HORSE as TROJAN
The 2nd one lips->slip->freudian/french

_____

iv)

Anagram noun form the correesponding adjectives

There re options.
Q:some nouns are jumbled on ,you have to rearrange, look for a suitable adjective:
Make a phrase then.
1)shore
a)aegean b)Indian c)trojan d)Spartan
ans:trojan

2)sire
a)dutch b)rome c)herculean d)mercurial
ans:mercurial

3)ourcage
a)english b)rome c)dutch d)Spartan
ans:Spartan

4)lips
Again there r 4 choices.
Ans:freudian/french

---

v)

Jigsaw puzzle as given in the book by Edgar Thorpe, of TMH Publications

---

vi)

FUNCTIONS same as CTS_BLACK\fun

---

vii)

x , y -> strings of G st there is at least one G in x and y

xoxy valid
xoy->xoxy invalid
Find valid & invalid strings

---

viii)there were a couple of ( seven to be
precise)figures ( tetris type if u remember that game)
given in the main theme. The 10 questions that
followed showed patterns which were formed due to
combination of the 7basic figs. NOTE: the intersecting
part of the combined fig. always gets subtracted from
the total combination

Hello Shivesh
CTS paper was of diff pattern this time and there were

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ateast 5 different sets of question papers given to
students. Of the type i recvd, as i told there wer
10x4 questions for 60 mins.
section:

4) last section( thats bcoz i remeber it well)
had meaningful words whose anagrams are nouns and
we hav to choose the best adjective from the list to
describe this noun:
ex: shore ( word given)
choices: a) roman b) spanish c) trojan d)....

ans: c) trojan
shore is anagram(jumbled form of) 'horse' and
trojan-horse is the best match

3) there were a couple of ( seven to be
precise)figures ( tetris type if u remember that game)
given in the main theme. The 10 questions that
followed showed patterns which were formed due to
combination of the 7basic figs. NOTE: the intersecting
part of the combined fig. always gets subtracted from
the total combination

2) This section had the funda of xOy where x and y
represented strings of Gs . The test was to find the
valid or invalid patterns with ref. to the rules

1) L=list of objects
ex:L={a,b,c,d} where a,b,c,d are objects
P(L) was a function( dont remembr xatly)
M(L) was another function defined etc
in the following questions P(x) etc were given to be
found out.
Note : this may take considerable amnt of time. so
take intelligent guesses

**Cognizant 2004 (PSG and CIT) Yellow color**

1. A starts from a place at 11.00 A.M. and travels at a speed of 4 kmph, B starts at 1.00
P.M. and travels with speeds of 1 kmph for 1 hour, 2 kmph for the next 1 hour, 3 kmph
for the next 1 hour and so on. At what time will B catch up with A?
a) 9.24 b) 9.32 c) 9.48 d) none

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2. The average temperature of Monday to Wednesday was 37C and of Tuesday to Thursday was 34C. If the temperature on Thursday was 4/5 th of that of Monday, the temperature on Thursday was
A) 36.5C b) 36C c) 35.5C d) 34C

3. Swetha and Chaitanya went to a bookshop. Swetha purchased 5 pens, 3 note books and 9 pencils and used up all her money. Chaitanya purchased 6 pens, 6 note books and 18 pencils and paid 50% more than what Swetha paid. What % of Swethas money was spent on pens?
a) 12.5 b} 62.5 c) 75 d) cant be determined.

Directions for Questions 4,5,6. Alex, Bond, Calvin and Dorna collected coins of different countries.
a. They collected 100 altogether b. None collected less than 10
c. Each collected an even no. d. Each collected a different no.

4. Based on the above, we can say that the no. of coins collected by the boy who collected the most could not have exceeded
a) 54 b) 64 c) 58 d) 60

5. If Alex collected 54 coins, we can say (on the basis of information obtained so far) that difference in nos. collected by the boy who collected the most and the boy who collected the 2nd most should be at least
a) 30 b) 34 c) 26 d) 12

6. Alex collected 54 coins. If Calvin collected 2 more than double the no. collected by Dorna, the no. collected by Calvin was
a) 10% b) 30% c) 22% d) 26 %

7. How many nos. are there between 100 and 200 both inclusive and divisible by 2 or 3?
a) 67 b) 68 c) 84 d) 100

8. Find the greatest no. that will divide 964,1238 and 1400 leaving remainder of 41,31 and 51 resp.
a) 58 b) 64 c) 69 d) 71

9. If all 6's get inverted and become 9's , by how much will the sum of all nos. between 1 and 100 both inclusive change?
a) 300 b) 330 c) 333 d) none of these

10. If all the picture cards are removed from a pack of cards, the sum of the values of the remaining is
a) 55 b) 220 c) 54 d) 216
11. What is the min. no. of weighing operations required to measure 31 kg of rice if only one stone of 1 kg is available?

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a) 31 b) 6 c) 5 d) 16

12. The ratio of the no. of white balls in a bag to that of black balls is 1:2. If 9 grey balls are added the ratio of nos. of white, black and grey become 2:4:3. How many black balls were in the bag?
a) 6 b) 9 c) 12 d) 8

13. There are 2 toy cars facing each other at a distance of 500 cm from each other. Each car moves forward by 100 cm at a speed of 50 cm/s and then moves backward by 50 cm at a speed of 25 cm/s. How long will it take for the cars to collide?
a) 12s b) 14s c) 16s d) 13s

14. It takes 8, 12 and 16 days for A,B and C resp. to complete a task. How many days will it take if A works on the job for 2 days then B works on it until 25% of the job is left for C to do, and C completes the work?
a) 10 days b) 14 days c) 13 days d) 12 days

15. A and B run in opposite directions from a pt. P on a circle with different but constant speeds. A runs in clockwise direction. They meet for the first time at a distance of 900 m in clockwise direction from P and for the second time at a distance of 800 m in anticlockwise direction from P. If B is yet to complete one round, the circumference of the circle is
a) 1700m b) 1250m c) 1300m d) 1200m

16. Bird A starts flying from P to Q at 9.00 A.M. and bird B starts flying from Q to P at 10.00 A.M. B is 50% faster than A. What is the time at which they meet if P and Q are 300kms apart and A's speed is 50kmph.
a) 12 noon b) 12.30pm c) 11.30am d) 11.00am

17. There are 6 cities, of which each is connected to every other city. How many different routes can one trace from A to B, such that no city is touched more than once in any one route/
a) 48 b) 60 c) 65 d) 72

18. In a group of 80 coins, exactly one is counterfeit and weighs less than the others. U are provided a scale to weigh to coins. The min. no. of weightings req. to determine the counterfeit coin is
a) 4 b) 1 c) 5 d) none of these

Directions for questions 19 to 23

Mark a if the ans. Can be obtained using 1 and 2 independently
Mark b if the ans. Can be obtained by using only one of the two statements.
Mark c if the ans. Can be obtained by using both statements 1 and 2 but not either of them alone.
Mark d if the ans. Cannot be obtained by using 1 and 2

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19. What is the selling price of product X
1. Profit as a % sales is 10%, cost price is Rs.27
2. Profit as % sales is 20%, cost price is Rs.20

20. Find the perimeter of the rear wheel of a cart?
1. When the cart moves 5m, the rear wheel moves R rotations less than the front wheel.
2. The radius of the rear wheel is 3 times that of front wheel.

21.Is a-b+c>a+b-c. a,b,c are integers.
1. b is negative
2. c is positive

22.What is the distance from mumbai to Nagpur?
1. Driving at 90kmph I reach nagpur I hr earlier than if I were to drive at 80kmph.
2. Driving at 100kmph I covered 40% of the distance in 7 hrs.

23.What is the age of father and the son?
1. The ratio of their ages is 5:3 now and will be 3:2 in 10 years.
2. The sum of their ages now is 80, and 5 years ago the ratio was 9:5.

24. A cube of 12cm sides is painted red on each side. It is cut into cubes of 3cm
side each. How many of the smaller cubes do not have any side painted red?
a) 8 b) 12 c) 16 d) 0

Directions for questions 25 to 28. Kamal Babu came home just after judging a beauty
contest where there were four semi-finalists: Ms.Uttar Pradesh, Ms.Maharashtra,
Ms.Andhra Pradesh and Ms.West Bengal. His wife was very keen on knowing who the
winner was and kamal Babu replied immediately that it was the one wearing the yellow
saree. When his wife asked for more details, he gave the following information:

The four girls were wearing saris of different colors (yellow, red, green, white) and the
runner-up was wearing green.
The four girls were sitting in a row, and Ms.West Bengal was not sitting at either end.
There was only one runner-up and she was sitting next to Ms.Maharashtra.
The girls wearing yellow and white saris occupied the seats at either end.
Ms.West Bengal was neither the winner nor the runner-up.
Ms.Maharashtra was wearing white.
The winner and the runner-up were not sitting next to each other.
The girl wearing the green sari was not Ms.Andhra Pradesh.

Answer the following questions based on the above informtions.

25. Who was wearing the red sari?
a) Ms.Andhra Pradesh b) Ms.West Bengal

c) Ms.Uttar Pradesh d) Cannot be determined

26. Between which two was Ms.West Bengal sitting?
a) Ms.Andhra and Ms.Uttar
b) Ms.Andhra and Ms.Maharashtra
c) Ms.Uttar and Ms.Maharashtra
d) Cannot be determined

27. What was the color of the sari that Ms.Uttar Pradesh was wearing?
a) White b) Green c) Red d) Yellow

28. What was the color if the sari that Ms.Andhra was wearing?
a) White b) Yellow c) Red d) Indeterminate

Directions for questions 29-31. Shweta, Tina, Uma and Vidya were playing a game. The
rule of the game is that the loser doubles the amount of money that each of the other has.
They play four games. A different girl loses each game-in reverse alphabetical order. At
the end of the fourth game, each girl has Rs.32/-.

29. Who started with the lowest amount of money?
a) Shweta b) Tina c) Uma d) Vidya

30. Who started with the highest amount of money?
a) Shweta b) Tina c) Uma d) Vidya

31. How much did Uma have at the end of the second game?
a) Rs.32 b) Rs.72 c) Rs.8 d) Rs.36

Directions for questions 32-33. Abel, Lucky, Bingo are three T.V. channels. A survey
shows that 30%, 20%, and 85% of the people watch Abel, Lucky, and Bingo respectively.
20% of the people watch exactly two of the three channels and 5% watch none.

32. What % of the people watch all three channels?
a) 0 b) 5 c) 10 d) 20

33. If another survey indicates that 20% of the people watch Abel and Bingo, and
16% watch Lucky and Bingo, then what % of the people watch only Lucky?
a) 0 b) 5 c) 10 d) 20

Diections for questions 34-39. A museum curator must group 9 paintings-
F,G,H,I,J,K,L,M,N,O in 12 spaces numbered consecutively from 1-12. The paintings
must be in three groups, each group representing a different a different century. The
groups must be separated from each other by at least one unused wall space. Three of the
paintings are from the 18th century, two from the 19th century, and four from the 20th
century.

Unused wall spaces cannot occur within groups.
G and J are paintings from different centuries.
J, K and L are all paintings from the same century.
Space no. 5 is always empty.
F and M are 18th century paintings.
N is a 19th century painting.

34. If space 4 is to remain empty which of the following is true?
a) Space no. 10 must be empty.
b) The groups of paintings must be hung in chronological order by century.
c) An 18th century painting must be hung in space 3.
d) A 19th century painting must be hung in space 1.

35. If the paintings are hung in reverse chronological order by century, the unused wall spaces could be
a) 1, 5 and 10 b) 1, 6 and 10
c) 4, 7 and 8 d) 5, 8 and 12

36. Which of the following is a space that cannot be occupied by a 19th century painting?
a) Space 1 b) Space 6 c) Space 8 d) Space 11

37. If J hangs in Space 11, which of the following is a possible arrangement for spaces 8 and 9?
a) F in 8 and M in 9 b) K in 8 and G in 9
c) N in 8 and G in 9 d) 8 is unused and H in 9

38. If the 20th century paintings are hung in spaces 1-4 which of the following cannot true?
a) Space 8 is unused b) Space 9 is unused
c) F is hung in space 6 d) N is hung in space 9

39. If the first paintings in numerical order of spaces are F, O, M, N, G which of the following must be true?
a) Either space 1 or space 4 is unused
b) Either space 7 or space 12 is unused
c) H hangs in space 11
d) Two unused spaces separate the 18th and 19th century paintings

40. You have reached Utopia where you find two kinds of precious stones, rubies and emeralds. The worth of a ruby and that of an emerald is Rs.4 lakhs and Rs.5 lakhs respectively while their weights are 0.3 kg and 0.4 kg respectively. You have a bag that can carry maximum of 12 kgs. How many rubies and emeralds would you carry such that their total value is maximized?
a) 20 rubies and 15 emeralds b) 8 rubies and 24 emeralds

c) 0 rubies and 30 emeralds d) None of the above

41. There are 10 coins. 6 coins showing head. And 4 showing tail. Each coin was randomly flipped (not tossed) seven times successively.after flipping the coins are 5 heads 4 tails one is hided the hided coin will have what.

42.People near the sea shore are leading a healthy life as they eat fish.but people at other part of the city are also healthy. Inference.

43. It is found from research that if u r a drunken then u have a less chance for chronic heart diseases. Inference.

44. A car travels from B at a speed of 20 km/hr. The bus travel starts from A at a time of 6 A.M. There is a bus for every half an hour interval. The car starts at 12 noon. Each bus travels at a speed of 25 km/hr. Distance between A and B is 100 km. During its journey , The number of buses that the car encounter is ?

45. Varun buys 8 books,10 pens and 2 pencils and Babu buys 6 books, 5pens and 5 pencils. Babu pays 50% more than Varun. What is the amount Varun spends in buying pencils.

46. Find the number of integers divisible by either 3 and 12 from 1 to 999.

47. choclate – 1 Rs.
Apple – twice the choclate
biscuit - ¼ th of apple
consumption- biscuit = 2* choclate
apple > biscuit + choclate
what can be the amount spent?

ANS: a) 34 b) 16 c) 25 d) none

48-50
A,B and C start from the same point. A starts walking and B and C go in a bike. after sometime B drops C and picks up A likewise it is repeated. Walking speed for A and C is 5kmph. Speed of B's bike
is 20kmph. They reach at the same time which is 100 km away.

48. What is the total time taken?

49. What is the distance walked by A

50. 2nd meeting point

51. The diameter of the circle is 4cm. The area of the shaded portion is 1/3rd area of the square. Find the side of the square

52. In 400m race a gives b a start of 7 sec &amp; beats by 24m.in another race a beats by 10 sec. the speeds are

a)8,7 b)7,6 c) 12,10 d) 10,8

53. A is thrice as good as a workman as B and takes 10 days less to do a piece of work than B takes. B alone can do the same work in :
a) 12 days b)15 c)20 d)30
ans available in Agarwal: pp 261 (13)

54.

What is the number of squares under the figure? ans: 16

55. Three groups of students 60, 84 and 108. They should be placed in a room for a test. In each room, only one group of students should be placed. All the rooms should have equal no of candidates. What is the minimum no of rooms required? Ans:21

DO THE QUANS FIRST, THEN THE ANALYTICAL AND FOR THE LAST TEN MINUTES DO THE PASSAGES.

**Cognizant Placement Paper**

Question There are 60 questions to be answered in 60 minutes

1) In a club there are certain no. of males and females. If 15 females are absent then no. of males will be twice that of females. If 45 males are absent then female strength will be 5 times that of males. Find no. of males actually present.

2) Three men A, B, C plays Cards. If one loses the game he have to give Rs.3. If he wins the game he will gain Rs.6. If A has won 3 Games, B loses Rs.3, C wins Rs.12.What is the total no. of games played?

3) A can swim & cross 50m(the length of swimming pool) in 2 min. B can swim & cross 50m in 2min 15sec. Every time when they meet a bell gong is struck. For 2000m how many bell sounds might be produced?

4) When I was married 10 years ago my wife is the 6th member of the family. Today my father died and a baby born to me. The average age of my family during my marriage is same as today. What is the age of Father when he died?ans:70.

5) There are 9 balls of equal size and same weight(they look similar) except 1. How may weighs required to find the dissimilar ball using a weighing balance?

6) Product of Prime no. between 1 to 20?

7) Find out the total numbers between 1 to 999 that are neither divisible by 8 nor by 12?

8) Find out the distinct numbers that can be formed by 2, 3, 7, 6(don't now exactly) that should be divided by 4?

9) Two trains at speed 60 km/hr comes in the opposite direction. At a particular time the distance between the two trains is 18km. A shuttle flies between the trains at the speed of 80 km/hr. At the time the two trains crashes what is the distance traveled by shuttle?

10) There are n urns and m balls. If we put 3 balls in each urn 3 balls will be excess. If we put 4 balls in each urn 1 urn will be excess. Find no. of Urns (or) Balls?

11) Find the area not occupied by circles:
Given length =y breadth =x (Answer: 3x2(1-pie/4))

12) A man gets x/y of Rs.10 and y/x of Rs.10. He returns Rs.20. The Answer choices are
a) He may not lose
b) He may lose
c) He always loses
d) Cannot be Determined

13) Three men A,B,C can complete a work separately in some specified days(may be6,7,8).
If they do the work together by alternate days. Then how many days need to complete the work?

14)Four Members A,B,C,D are playing a game .A person losing a game should double the amount of others .B,C,D are losing in order after three games .The amount after 3 games are A&B having 40,D is having 16&C 80.
Each questions carry one mark:
a) who started with small amount of money?
Ans)A
15)who started with greatest amount of money?
Ans)B

16)what amount did B have?

Ans)93

Hint: I solved and found the answers to be A->5,B->93

17)There are some houses in a street back to back .And they that house behind 10 was 23. How many houses in the street?

Ans)32

18) There are 1997 doors in a auditorium and as many as people as the no of doors open enter the auditorium .A door was closed and as many as people as no of doors open leave the auditorium . the process was repeated till the no of doors is equal to1.find the total no of peoples enter the auditorium?

19)A batsman average was 15.at last innings he took 23 runs then his average became 16.how much run he should take to make his average 18?

20)Find the number WXYZ divisible by 36?

i)let the digits be5,4,3,6 –not in that order

ii)sum of last two digits is 9

iii) sum of middle two digits is 7

->if one is sufficient then ans as A || if two is sufficient then ans as B || if all are necessary then ans as C|| if nothing is needed then ans as D

21)X and Y live in a North-South parallel street. X travels 10 km towards North to reach the east-west street . Y travels 6 km towards south to reach the east –west street . X travels now 4km towards east and y travels 8km towards west and they met each other. What is the distance between x and y?

22)The houses are numbered 1,2,3,… and reach the end of the street and backtracks toward s the starting point. The house numbered 10 is opposite to 23. there are even no of houses. Find the total no of houses.

23)A seller has a set of apples out of which he sells one half of it and half an apple to his first customer. Then he sells half of the remaining apples and a half apple to his second customer. Then he sells half of the remaining apple and ½ apples to his third customer and so on. This repeats up to 7th customer and no more apples are remaining. Find the total no of apples he had.

24) A hollow cube of size 5cm is taken, with the thickness of 1cm. it is made of smaller cubes of size 1cm. if the outer surface of the cube is painted how many faces of the smaller cubes remain unpainted?

25) If a 36 cm thread is used to wrap a book, lengthwise twice and breadth wise once, what is the size of the book?

26)
the various degrees of the vertices are marked in the dig. Find y.

27) If 4 circles of equal radius are drawn with vertices of a square as the centre, the side of the square being 7 cm, find the area of the circles outside the square?

28)A bus has 40 seats and the passengers agree to share the total bus fare among themselves equally. If the total fair is 80.67 , find the total no of the seats unoccupied.

29) A 4 digit no may consist of the digits 6,2,7,5 where none of the nos are repeated. Find the possible no of combinations divisible by 36?

30) if u r traveling from Mumbai to Bangalore and return back .To find the speed of the car which of the following r needed.
a) The distance between them.
b) Time taken
c) Avg speed towards Mumbai and the avg speed towards Bangalore.
Choices:
1) a only. 2) a and b 3) a,b,c 4)b only 5) c only ( ans not in order)

31)

(Diagram drawn approximate not to scale.)
if all the blocks are squares and the complete fig is also a square and the area of the a is 1 cm2,b=81 cm2what is the area of i?

32) A secret can be told only 2 persons in 5 minutes .the same person tells to 2 more persons and so on . How long will take to tell it to 768 persons?
a)47.5 min b)50 min c) 500 min d)…. Ans: 47.5 min

33) Three birds cross a point in a same st. line and of that 2 fly in opposite directions. If a triangle is formed with the position of the birds what kind of the triangle will be formed?
a)isosceles b)right angle c)equilateral d)right angle and isosceles.

34)

When the angle a, b, c, d are given find x.

35) One question is given for explaining the working of cornea (in eyes) & the window
Ans: drawing analogy
36) m<n, & x<y which of the following is definitely false
A) m-n < x-y b)m+n < x+y
c) &d) similar options using all 4 variables

37) Four circles are drawn from the corners of a square of area 49 cm2 . Find the area of 4 circles outside the square
(They didn't mention that circles have radius=1/2 side of a square)
Ans: intermediate

38)In a pond ecosystem, large fishes and small fishes will be there. If we want to remove small amount of pollutants, small fishes are to be employed. In a food-chain food passes

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through a number of mouths and en route the mouth of the super feeder-the eagle. The size of the ecosystem is determined by its population. But this has been proved false. What can you infer from above?
(4 choices)
39)In Bangalore, during income tax deduction for a single person, the percentage increased by 3% and for middle house-holders, it decreased by 3%.What can you infer?
40)In China, Mao-Tse –Tung was responsible for organizing its people and taking China into success path. It evolved into a great economic power by improved industrial and economical statistics. China prospered in those years, but_____
Which of the following best completes the sentence? (4 choices)
41) A ridge formed over Pacific Ocean was because of the intersection of two volcanoes. But in history it was written that it was not due to those volcanoes. It proves a contradictory to form the view that history will be proved wrong in the future. Inference?
42) In a poultry form because of cloning, a large breed of hens was produced. This increased the production but the maintenance was very difficult because of the large number. This does not mean that cloning is a disaster in the scientific world but it is a tool which in some ways is constructive but in other ways, it is destructive. Inference?

(The remaining verbal questions are easy and they can be answered by seeing the question carefully)
___


CTS Apti Question paper


1. If all the 6 are replaced by 9, then the algebraic sum of all the numbers from 1 to 100(both inclusive) varies by Ans: 330

2. The total no. of numbers that are divisible by 2 or 3 between 100 and 200(both inclusive) are Ans:67

3. From a pack of cards Jack, Queen, King & ace are removed. Then the algebraic sum of rest of the cards is Ans:216

4. The average temperature of days from Monday to Wednesday is 37 degree Celsius and that of from Tuesday to Thursday is 34 degrees. The temperature of Thursday is 4/5th of Monday. Then the temperature of Thursday is
Ans: 36 degrees
5. Swetha, Tina, Uma and Vidya are playing a gambling. In this different people lose in different games-in the reverse alphabetical order. The rule is that if one loses she should double the amount of others. At the end of 4th game each of them have same amount of money (Rs.32). Which one of them started with the least amount? (6) Which one of them

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started with the largest amount of money? (7.) At the end of the 2nd game what is the amount of money with uma?
Ans: Vidya, Swetha, Rs.8

8. A cube of 12 mm is painted on all its side. If it is made up of small cubes of size 3mm. If the big cube is splitted into those small cubes, the number of cubes that remain unpainted is Ans: 8

9. B is 50% faster than A. If A starts at 9 A.M. and B starts at 10 A.M. A travels at a speed of 50 km/hr. If A and B are 300 kms apart, The time when they meet when they travel in opposite direction is Ans:12 noon

10. A graph will be there. Inside the graph sheet there will be a Quadrilateral. We have to count the number of squares in the Quadrilateral.

11. You are having 31kg of rice. You are provided with a 1kg stone for weighing. In how many weights the 31kg of rice can be weighed. Ans: 5

12. A starts at 11:00AM and travels at a speed of 4km/hr. B starts at 1:00PM and travels at 1km/hr for the first 1hr and 2km/hr for the next hr and so on. At what time they will meet each other. Ans:

13. There are 80 coins, among them one coin weighs less compared to other. You are given a physical balance to weigh. In how many wieghings the odd coin can be found. Ans:

14. Dia of the circle 4cm. The shaded part is 1/3 of the square area. What is the side of the square. Ans: root of 3pi

15. A,B,C, can do a work in 8,14,16 days respectively. A does the work for 2 days. B continues from it and finishes till 25% of the remaining work. C finishes the remaining work. How many days would have taken to complete the work Ans:

16. Raja went to a beauty contest .his wife was eager to know the result he told that the lady wear a yellow sari was winner. Miss. Andhra Pradesh Miss. Utter Pradesh, Miss. Maharashtra, Miss. West Bengal were the participants all the participants sat in a row. The conditions are (A) The woman wore yellow sari won the competition. (B) Miss. West Bengal was neither the runner-up or winner.(C) Miss. West Bengal was not at either ends.(D) Miss. Maharastra wore the white sari.(E) The women wore white sari and yellow sari sat at extreme ends.(F) The runner-up and winner did not sit together. [This was the passage given and the questions were easy]

17. The ratio of white balls and black balls is 1:2. If 9 gray balls is added it becomes 2:4:3. Then what is number of black balls. Ans:12

18. There are 10 coins. 6 coins showing head. And 4 showing tail. Each coin was randomly flipped (not tossed) seven times successively.after flipping the coins are 5 heads 4 tails one is hided the hided coin will have what.

19. Two cars are 500 cm apart. each is moving forward for 100 cm at a velocity of 50 cm/s and receding back for 50 cm at 25 cm/s at what time they will collide with each other.

20. People near the sea shore are leading a healthy life as they eat fish.but people at other part of the city are also healthy. Inference.

21. It is found from research that if u r a drunken then u have a less chance for chronic heart diseases. Inference.

22. A-B+c>A+B-C i) B is +ve, ii) B is –ve when it will hold true.

23. i) C.P is Rs 120 and profit is 30%
ii) C.P is Rs 210 and profit is 20%
we can find the S.P by using
i)only ii)only both i &ii neither i&ii

24. How will u find distance between Nagpur and Mumbai?
I took one hour more when I travel at 80 km/hr than at 90 km/hr.

25. 100 coins were collected by four persons each collected more than 10 each collected a different number each was an even number find what is the max possible no of coins, two more questions based on the same passage.

26. A car travels from B at a speed of 20 km/hr. The bus travel starts from A at a time of 6 A.M. There is a bus for every half an hour interval. The car starts at 12 noon. Each bus travels at a speed of 25 km/hr. Distance between A and B is 100 km. During its journey , The number of buses that the car encounter is

27. The ratio of the ages of the father and the son is 5:3, After 10 years it will be in the ratio 3:2. What will be their ages.
28. There was a Island. In that Island there was Rubys and Emeralds. Those were available in plenty. 0.3 kg of ruby is 4 lakhs and 0.4 kg of emeralds is 5 lakhs. Jayanth is buying 12 kg of Ruby and emerald. Choices will be given . Jayanth has to carry both ruby and emerald to the maximum profit.
29. Varun buys 8 books,10 pens and 2 pencils and Babu buys 6 books, 5pens and 5 pencils. Babu pays 50% more than Varun. What is the amount Varun spends in buying pencils.
30. Prakash and Revathi rent a fancy shop. Prakash imposes the following restrictions on Revathi for buying clips,stickers and lip sticks. The number of clips is twice the no. of stickers. The no. of lipsticks should be more than the sum of clips and stickers. Cost of clip is 1 rupee. Cost of lipstick is twice the clips. Cost of 1 lipstick is the cost of four stickers. Then What is the amount that Prakash spents for Revathi. Answer choices will be given.

question

1. If all the 6 are replaced by 9, then the algebraic sum of all the numbers from 1 to 100(both inclusive) varies by Ans: 330

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16. Raja went to a beauty contest .his wife was eager to know the result he told that the lady wear a yellow sari was winner. Miss. Andhra Pradesh Miss. Utter Pradesh, Miss. Maharashtra, Miss. West Bengal were the participants all the participants sat in a row. The conditions are (A) The woman wore yellow sari won the competition. (B) Miss. West Bengal was neither the runner-up or winner.(C) Miss. West Bengal was not at either ends.(D) Miss. Maharastra wore the white sari.(E) The women wore white sari and yellow sari sat at extreme ends.(F) The runner-up and winner did not sit together. [This was the passage given and the questions were easy]

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CTS-2004 VNIT(REC,NAGPUR)

THERE WERE A TOTAL OF 40 QUESTIONS TO BE ANSWERED IN 60 MINUTES.EACH
QUESTION CARRIED 1 MARK & 0.25 MARKS WERE DEDUCTED FOR EVERY WRONG
ANSWER.(NEGATIVE MARKING)THERE WERE 5 SECTIONS IN ALL, EACH HAVING 8
QUESTIONS.

i dont remember the exact questions but i'm sending you as many as i can.

SECTION:1(ques. 1 to 8)
1.LIST "L" is defined as : L=( a,b,c ) so that,A(L)=a;
B(L)=(b,c) [where a,b,c are the items ]
C(L) & D(L) are defined as
C(L)=M(O,L,..) WHERE M STANDS FOR MERGE, L STANDS FOR LIST AND O FOR
AN OBJECT WHICH CAN BE A LIST OR NULL...
D(L)=....
5 OR 6 CONDITIONS WERE GIVEN AND WE HAD TO SOLVE THE QUESTIONS ACCORDING TO THE INSTRUCTIONS

eg. L(a,(a,b),(b,c)) IS given then c( L) =? Or D( L)=?

The questions were based on recursion and were time consuming ,so
avoid them in the beginning.tackle them in the end.

SECTION:2(ques.9 to 16)
questions based on a set of conditions,we were given 6 conditions
and were asked to find a valid set of words from agiven set of words.
1.if xogoy is a valid word,where x is a string of "g"'s consisting of
atleast one "g",and y is also a string of "g"'s consisting of atleast
one "g"....then gogog is avalid word.
gg0goggg is also a valid word...and so on
2.if xgogxoy is avalid word..where x is a string of "g"'s consisting
of atleast one "g",and
y is also a string of "g"'s consisting of atleast one "g" then
ggogggog is avalid word...

and 4 more conditions were given

eg:find the no. of valid words in the following set if xogoy is the
valid word
(gogog,godogg,gggogog)
ans:2

SECTION:3(ques 17 to 24)
six dominoes were given, each having 2 numbers on one of its
faces..the boundaries of the dominoes were immaterial.

```
----
| |
|1 |
----
| |
|1 |
----
```
this is an example of a given dominoe..the six dominoes had numbers
(1,1),(1,2),(2,1),(3,2),(2,2),(3,3)..i dont remember the exact
numbers.the word "TARGET" had to be constructed from these
dominoes.we had to find from a given set of arrangements which one
was possible.

SECTION:4(ques 25 to 32)
THIS IS PERHAPS EASIEST OF ALL SECTIONS.
8 QUESTIONS ON FOLLOWING TYPE.

EG:if ABABCB is BABABC Then AAABCB IS
A)AABCAB B)... C)... D)AABABC
ANS:d
i.e a sequence of alphabets are rearranged in an order you have to
find that order and apply to the word.


SECTION:5(ques 33 to 40)
There will be a word with blanks and there will be four choices which
mean the word when complete .
Think of the right word and choose the meaning .
1) D_ _ _ E _ _ _ E
a ) degenerate b) knowledge c ) utopian d ) pervade
answer : deprecate - degenerate
2) Q _ _ _I _I_ _
answer: quotidian - daily
3) Q_ I_ _ _ I _
quixotic - utopian
4) C_ _ _I_I_ _
cognition-knowledge
5) D_ _ _O_I_
diabolic - devilish
6) P_ _ _ U_ _ E
persuade- convince
i dont remember rest of the eight.THIS IS THE EASIEST OF ALL THE
SECTIONS IF YOU HAVE A GOOD VOCAB.

if you can score a 20 of 40 you are through.i dont know the exact
cutoff.


CTS '03 Pondicherry


SECTION I - 8 questions.

Series.

1. Interchange of letters in a word and the adjacent letters are also to
be changed. given letters series like [also few condotions]
AAABBB=
ABABAB=
LET QUESTION IS ABBAAB
If we apply 25 on this it means we have to interchange the letters
at positions 2 and 5, and we have to change the adjacent letters 2 and 5

from A to B and B to A.
That is q's A B B A A B
after Step 1 i.e interchange 2 and 5.

now change adjacent elements of 2 and 5...finally answer becomes
Ans: B A A B B A

//Hint: As per question papers 5 questions above like but numbers
change.

REMAINING 3 QUESTIONS:
6. To get AAABBD from BBBAAA what ot apply:-
a) 25 b) 34 c)25 & 34 d) none

SECTION II
1. Given the function f(n a b c ) = ac if n=1
f(n a b c) = f( n-1 a b c) + f( 1 a b c) + f( n-1 b a c )
if n > 1
f( 2) = ?
Ans: f( 2 a c b ) = ab + ac + bc.

2. similar question in functions.
3. [ based on function in 1.] f( 4 a b c ) the number of terms is...?
Ans: f( 4 a b c ) = f( 3 a c b ) + f( 1 a b c ) + f( 3 b a c ) etc.
= 5ab + 5ac + 5bc.
4. f( 5 a b c ) = ?

SECTION III
Permutations and Combinations.
8 questions.

1. r = number of flags;
n = number of poles;
Any number of flags can be accommodated on any single pole.

i) r=5,n=5 The no. of ways the flags can be arranged ?
ii) to iv) are based on this.

6. r= 5 n = 3 . If first pole has 2 flags ,third pole has 1 flag
how many ways the remaining can be arranged?
7.& 8. same as above.

SECTION IV
Question consising of figures consist of 4 small squares and every square
having an arrow pointing in one Direction.

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GRE test of reasoning.
hint: What is the next sequence if we tilt the figure by 90 degrees like
that( clockwise and mirror images ? ).

SECTION V
In this section first part of compound word is given. Select meaning of
the second part from the choice given:
1. Swan
2. Swans
3. Fool
4. Fools
5. Stare
6. Lady
For all above 4 choices are given.....
Eg. Swan
a) category b) music c) --- d) none
Ans: Swansong is compound word. But song is not given as option. so
b) music is answer.

CTS -REC'99(TRICHY)

SECTION-1:

Find the sequence:
( d is always NONE )

1. BC CE EG GK ?
a)KN b)KU c)KM d)
2. AA AB BC CE?
a)EG b)EH c)EI d)
3. AB EF JK QR ?
a)YZ b)ZA c)AB d)
4.ACD EGL IKT MOB?
a)QST b)QSZ c)QSY d)
5.AC CG GO OE?
a)EJ b)EI c)EL d)
6.AE BH CM DU?
a)EH b)EZ c) EB d)
7. AD DP PL LV
a)VS b)VK c)VI d)
8. SE QU EN TI?
a)CN b)BM c)AI or AZ d)

SECTION-II:

FIND THE VALUES FOR FOLLOWING PROBLEM:
F(X)= 2X-1 + f(X-1) if X NOT EQUAL TO ZERO
if f(X=0)=0
9. f(5) VALUE
a)15 b)24 c)22 d)NONE
10.f(f(2))

11.f(16)- f(15)

12.f(16)+f(15)-480

13.f(f(x))=81 THEN VALUE OF X=

14.f(X)=4f(X-1) THEN VALUE OF X=

15.f(X)= f(X-1)+f(X-2) FOR X>1 THEN X=

16.f(X)-f(X-1)=f(X-8) FOR X>5 THEN X=
SECTION -III:

###In the follwing questins we r giving 'aword' which may not have any
meaning.Find differnet possible words or palandrams for the word as per que.
I. for the following find no of distinct words that can be formed.
17. TYGHHTT
A).420 B)1540 C)840 D)NONE
18. TYGHHTY
19. TYGHHTT
20. TYGHHTT
21. TYGHASD
22. TYGHHTY
II Find NO OF POSSIBLE PALANDRAMS for following
23. TYGHHTY
24. TYHHHTYH.
/*dEAR FRIENDS DON,T CONFUSE WITH THE WORDS REPEATED.Iam
sure.Words are
same.They might have changed the questionsfor20,21,22.Concentrate on that
respect*/
25 to 32 are figures.Uhave to analyse them.He will give five figs.One is not
correct
SECTION IV:
It having complete of figs.(26 -32)
SECTION -V:

For following first find out the anagram and then note the corresponding meaning.

33.TABLET(anagram means first u arrange the letters in correct order like (TABLET===BATTLE . so ans is FIGHT i.e. B)

34.RUGGED

35.GORE.

36.STASSI.

For all above choices are.

A) resentment B)Fight c)Help d) Monster

37. ENFOLD

38. LAMB

39. RECEDE.

40. PLEASE.

For above 4 choices are same

A)cuddle B)sleeping c)proclamation d)ointment.

1.Train A starts from station A at 11.am.Train B starts from station B at 12 noon.the speed of train A is 4 kmph,train B is 1 kmph for the first hour,2 kmph for the 2nd hour,3 kmph for the 3rd hour etc.At what time do the two trains meet? ans:2 PM

2.There is a coin collection.100 coins in all.4 peopke collect coins.Each collects a minimum of 10 coins.and each has different number of coins.the numbers are even. (4 questions based on this)

3.Moped problem based on time and distance

4.Find the number of integers divisible by either 3 and 12 from 1 to 999.

5.Find the number of integers divisible by either 3 or 2 from 100 to 200 including both,

6.There is a cube of side 4 cm.The faces are coloured in red.the cube is cut into pieces of size 1 cm.How many cubes have no colour Ans:8

7.There are 80 coins.One coin is counterfeit in weight.How many minimum weighings are required to find out the counterfeit coin? Ans 4

8.There are 31 kgs of rice .With a 1 kg weight,Find out the minimum number of weighings required to weigh 31 kgs.

9.there are four contestants in a beauty contest.they aer Ms.UP,Ms. MP, Ms.AP and Ms.WB.each is wearing a different colour saree(red,blue,green and white).They are seated in a row.The winner and runner are not sitting near each other.Ms.WB is noehter the winner nor the runner.the green and white saree contestans are sitting in either end and the green color saree contestant is the runner up.

4 questions based on this

10.there is a pack of cards.Find the sum of integers excluding all the picture cards. Ans.216

11.Two questions based on figure. Given at the end.

12.There are 2 cars moving in opposite directions.the distance between them is 300cm.They move forward for 100cm with a speed of 50 cm/s,and omes back 50 cms at

25cm/s.after how many seconds will the cars collide?

13) There is a room with 12 slots for painting. The details about the paintings are as follows:

18th century paintings - 3

19th century paintings - 2

20th century paintings - 4

Make up a sequence so that the paintings may be arranged with the following rules.

1) The 5th slot is always empty.

2) There must be an empty slot between paintings of different groups (century).

3) The paintings of the same group can be placed together.

A set of questions were asked with the pattern that was framed.

14)

Find the area of the square which is covered by the circle.
The area is 1/3 area of the square. Find the side of the square.

15)

1.LIST, L is defined as : L=( a,b,c ) so that,A(L)=a;

B(L)=(b,c) [where a,b,c are theitems ]C(L) & D(L) are defined as

C(L)= * if L=( )=A(L) if L!=( ) & B(L) = ( )=B(C(4))otherwise

D(L)= ** if L=( )=A(L) if L=!( ) &

……….=…………=…………based on these ques. 1 to 8

eg. L(a,(a,b),(b,c)) given then c( L) =? Or D( L)=?2vocabulary:

second part is given choose the first part( compound word type)

(1) -(head)- (a) purpose (b) man (c)obstacle (d)(ans:c for blockhead)

(2) (dust)- (a) container(b)celestial body (c)groom(d)(ans: c for star dust)

(3) (stream )-(a) mountain (b) straight (c) (d) (ans:a)

(4) (crash)- (a) course (b) stock3 anagram

first find the anagram of the given word & then choose the meaning of the anagram from the options.

1. latter ->rattle 2..spread 3.risque

4.dangled(ansjogged)…….may be4 series .
(1) 2,11,22,121 ,? ans 242 (2)102,211,1020,1210,?7
another type
string S=abc now substrings P=ab Q=ad such that
if p->q, then S=adc (according to the
firstoccurance)based on these type
(a) S=abcabc ;P->Q Q->R R->P what would be
theresulting S ,given P=ab, Q=ba R=bc
(b) S=aaabbb; P->Q Q->P R->P (according to the
firstoccurrence)P=….Q=……R=……
two questions on some figures given (see
compitionmaster )
type figure1:figure2::figure3:?three number strings
L1 L2 L3
L1 is reduced to L2 with mathematical operation find
that operation and reduce L3 to L4 with same
operation
and find the last digit of the string L4eg:
L1(6,3,4,4,7,2) reduces to
L2(20,1,21)L3(50,7,70,40,50,48)


*********


CTS (PSG TECH)

There are totally 5 sections in the qp and each
section has 8
questions.

NO. of questions = 40
Time = 60 min
Negative marking = 0.25 for each wrong answer

SECTION 1(try this at last because it is very tough and time consuming) L1, L2 - lists
M(L1,L2) = L1 + L2
If , L = (a,b,c)
A(L) = a (first term); B(L) = (b,c) (except the first
term)

I] P(L) = L if L=( ), & B(L)=()

P(L) = A(B(L)) if L <> ( ), and B(L)<>( ) B(B(L))=( )

P(L) = M(A(L)), M(A(B(L)), P(B(B(L)))) if B(B(L) <>C)

II] R(L) = L : B(L)=( )
R(L) = A(L) if L<>()
R(L) = M(dont know), R(B(B(L)))if B(B(L)) <>( )

With the above instructions, find the following using
iterations:
1. R(P(L)) where L=(a,b,(a,b),(b,a))
2. R(P(L)) where L=(a,(a),(b,b),b)

Example(1)P(L)=P(a,b,(a,b),(b,a))
where A(L)=(a)
B(L)=(b,(a,b),(b,a))
B(B(L))=((a,b),(b,a))
So, third condition is applicable
So, P(L)=M(a,M(b,P((a,b),(b,a)))) find this using the
same rule and
iterate.

## SECTION 2

Question and Answers don't know
If GODG is a valid work, then the no. of valid words
in the
string (GGODGG,
GGOGGD, GGOGDGGG, ....)
(* Not aware of correct procedure)

## SECTION 3

A 'TARGET' is a number and 'BRICK' has five numbers
as clue.
Use only four
numbers (only once each number) from 'BRICK' using
arithmetic
opertions,

+,-,*,/,() and attain the 'TARGET'
1. TARGET = 114 BRICK =

2. TARGET = 19 BRICK = 8,11,5,5,2
3. TARGET = 87 BRICK =
4. TARGET = 146 BRICK =
5. TARGET= 127 BRICK =

Ans: for 2 questions
19 = (8+11-5+5)
so ans = (8,11,5,5)

SECTION 4

There might be question of following kind:
1. C_G_I__NT
ans. cognizant
in answer you have to select the most probable
meaning of cognizant. i.e. knowledgeable.
other ans. are
utopia,
quixotic,

SECTION 5
1. Head of attack (See "a")
Ans: attribute

2. Head of cuticls
Ans:cutlass

3. Garment leaves with article at end
Ans: cloaka

4. Good tailors does this
Ans: benefit
CTS 98 IIT MADRAS

Analogies

1. slur : speech
ans: smulge : writing (choice is B)
7. cpahlet : shoulder
ans: ring : finger (choice is C)
8. vernanlar : place
ans: finger print : identical (choice is B)

opposite
--------
9.corphlent
ans: emaciated (choice is D)
10. officious
ans: pragmate (choice is D)
11. dextrous
ans: clumsy (choice is B)

12 -14: each sentense is broke to four sections
a,b,c,d.choose which has
mistake mark (e) if you find no mistake.

12:a)phylchologists pointout that b)there are human
processes
c)which does not involve d) the use of words
(choice is A)
13:a)jack ordered for b)two plates of chicken c)and a
glass d)of water
(choice is A)
14:a) politics is b) (choice is A)
(are)
16 - 20: each question of group of questions is based
on a passage or a set
of conditions for each question,select the best
answer choice given.

(i).if it is fobidden by law if the object of
agreement is the doing of an
act,
that is forbidden by law the agreement is void.

(ii). if it is of the nature that,it would defeat the
provision of any law
is the agreement is void.if the object of agreement
is such that thing got
directly forbidden by law it would defeat the
provision of statuary law.

(iii). if the object of agreement is fraddulent it is
void.

(iv). an object of agreement is void if it involves
or implies to the
personnal property of another.

(v). an object of agreement is void where the
constant regards as ignored.

(vi). an object of agreement is void where the
constant regards is as opposed

to public policy.

17. A,B,C enter an agreement for the division a many
them of gains acqest
or by be acquit by them by them by the argument is
void as
ans: ---- (choice is D)

21-25) An algorithem follws a six step process
za,zb,zc,zd,ze,zf, it is
governed by follwing
(i) zd should follw ze
(ii) the first may be za,zd or zf
(iii) zb and zc have to be performed after zd
(iv) zc must be immediately after zb
21) ans:- D


22) if za the first set zd must be
a) 3rd b)5th c)2nd d)4th ans:- A or D (probably a)

23) zf can be 3rd or 5th------any of the six, first,
second or forth only,
any of first four only
none these
ans:- B
24) if zb must follw za then a)za can only 3rd or
fourth
b) first or second c) can not be third d) fouth or
fifth e)none
ans:- A
25) ze is third term the no of diff operations
possible is
ans:- D (dabad)

26-31) ravi plans six sep-- x,y,z,w,u,v in rows no 1
to 6 ,according to the
follwing conditions
he must plant x before y and u

he must plant y " w
the 3rd has to be z

26) which could be in order
a) xuywzv b) xvzyuw c)zuyxwv d)zvxuwy e) wyzuvx
ans:- B

27) which is true
a) z before v b) z before x c) w before u d) y before
u
e) x before w
ans:- D

28) if he plans v first which is second
x,y,z,w,u
so ans is 'x'.
choice is A.
29) which is true
a) x,3 b)y,6 c)z,1 d)w,2 e)u,6
ans:- E

30) if he plans b 6th which would be first and second

a) x and w b) x and y c)y and x d)w and z e) w and u
ans:- B

31) if he plans w before u and after v he should plan
w at
a) first b)second c)fourth d)fifth e)sixth
ans:- D
32)thursday
33)a&d
34)south hit
35)

36)at a certain moment a watch showes 2 min lag
althogh it is fast.if it
showed a 3 min lag at that moment ,but gain 1/2 min
more a day than it does.

it would show the true time one day sooner than it
usually does .how many
mins does the watch gain per day.
a).2 b).5 c).6 d).4 e).75
ans : e
---->(discount problem) 20%->15%then->32% (ans:32%)

37)in 400m race a gives b a start of 7 sec & beats by
24m.in another race

a beats by 10 sec.the speeds are
a)8,7 b)7,6 c)10,8 d)6,8 e)12,10
ans:c(10,8)
38)3x+4y=10
x cube+y cube=6 minimum value of 3x+11y=?
ans=?
39)0.75
40)-
41)sink---7.7kms--->
fills 2 1/4 t is 5.5 min. 92 tonnes enough.. sink
throws out 18 tonnes/hr.
avg. speed to
a)1.86 b)8.57 c)9.4 d)11.3 e)10.7

42) . _____
/ \ 2 2 cms
/_a_\ _____
/ \ 3 2 cms area of the d=50 cm square
/___b___\ _____ what is the area of the b=?
/ \ 4 2 cms
/_____c_____\ _____
/ \ 5 2 cms ans=(10.7)
/_____d_____\ _____
43)600 tennis players
4% ->wrist band on one wrist
of remain 96%->25%->on both hands
remain no of ---(ans:312)
44)312(doubt) or 432
45)in how many ways 5e,6s,3f be arranged if books of
each language are to be
kept together
17,64800,90,58400,3110400
ans:e(3!*5!*6!*3!=3110400)
46)---
47)three types of the a,b,c costs Rs.
95/kg,100/kg&70/kg .how many kg of
each be blended to produce 100 kg of mixture worth
Rs.90/kg,gives that
the quntities of b&c are equal
a)70,15,15 b)50,25,25 c)60,20,20 d)40,30,30
ans:b
48)water milk problem
49)x+y+z=w

q)two distinct no's are taken from 1,2,3,4......28
a)probably that the no is 6 -->1/14
b)probably that it exceeds 14 -->1/28
c)both exceed 5 is 3/28
d)less than 13->25/28 (24/28)
e)noneCTS '99
Pondicherry

SECTION I - 8 questions Series.

1. Interchange of letters in a word and the adjacent
letters are also to
be changed. given letters series like [also few
condotions]
AAABBB=
ABABAB=
LET QUESTION IS ABBAAB
If we apply 25 on this it means we have to
interchange the letters
at positions 2 and 5, and we have to change the
adjacent letters 2 and 5
from A to B and B to A.
That is q's A B B A A B
after Step 1 i.e interchange 2 and 5.

now change adjacent elements of 2 and 5...finally
answer becomes
Ans: B A A B B A

//Hint: As per question papers 5 questions above like
but numbers
change.

REMAINING 3 QUESTIONS:
6. To get AAABBD from BBBAAA what ot apply:-
a) 25 b) 34 c)25 & 34 d) none

SECTION II
1. Given the function f(n a b c ) = ac if n=1
f(n a b c) = f( n-1 a b c) + f( 1 a b c) + f( n-1 b a
c )
if n > 1
f( 2) = ?

Ans: f( 2 a c b ) = ab + ac + bc.

2. similar question in functions.
3. [ based on function in 1.] f( 4 a b c ) the number
of terms is...?
Ans: f( 4 a b c ) = f( 3 a c b ) + f( 1 a b c ) + f(
3 b a c ) etc.
= 5ab + 5ac + 5bc.
4. f( 5 a b c ) = ?

SECTION III
Permutations and Combinations 8 questions

1. r = number of flags;
n = number of poles;
Any number of flags can be accommodated on any single
pole.

i) r=5,n=5 The no. of ways the flags can be arranged
?
ii) to iv) are based on this.

6. r= 5 n = 3 . If first pole has 2 flags ,third pole
has 1 flag
how many ways the remaining can be arranged?
7.& 8. same as above.

SECTION IV

Question consising of figures consist of 4 small

squares and every square
having an arrow pointing in one Direction.

GRE test of reasoning.
hint: What is the next sequence if we tilt the figure
by 90 degrees like
that( clockwise and mirror images ? ).

SECTION V
In this section first part of compound word is given.
Select meaning of
the second part from the choice given:
1. Swan
2. Swans

3. Fool
4. Fools
5. Stare
6. Lady
For all above 4 choices are given.....
Eg. Swan
a) category b) music c) --- d) none
Ans: Swansong is compound word. But song is not given
as option. so
b) music is answer.

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