CTS Placement Paper 2012:-

1. 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

2. BC CE EG GK ?

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

3. AA AB BC CE?

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

4. AB EF JK QR ?

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

5. ACD EGL IKT MOB?

a)QST
b)QSZ
c)QSY
d)None

6. AC CG GO OE?

a)EJ
b)EI

c)EL
d)None

7. On a man's tombstone, it is said that one sixth of his life was spent in childhood and one twelfth as a teenager. One seventh of his life passed between the time he became an adult and the time he married; five years later, his son was born. Alas, the son died four years before he did. He lived to be twice as old as his son did. How old did the man live to be?

Ans: 84 years

8. What two numbers have a product of 48 and, when the larger number is divided by the smaller, a quotient of 3?

Ans: 4 and 12

9. A drove of sheep and chickens have a total of 99 heads and feet. There are twice as many chickens as sheep.How many of each are there?

Ans: nine sheep and eighteen chickens.

10. A can do a work in 8 days, B can do a work in 7 days, C can do a work in 6 days. A works on the first day, B works on the second day and C on the third day respectively that is they work on alternate days. When will they finish the work.(which day will they finish the work)

Ans: 7 7/168 days

11. A batsman scores 23 runs and increases his average from 15 to 16. find the runs to be made if he wants top inc the avg to 18 in the same match.

Ans: 39 Runs.

12. There are coins of Rs.5, 2,1,50p,25p,10p,5p. Each one has got a weight. Rs 5 coin weighs 20gms.find the minimum number of coins to get a total of 196.5gms.

13.A can do a work in 8 days, B can do a work in 7 days, C can do a work in 6 days. A works on the first day, B works on the second day and C on the third day resly.that is they work on alternate days. When will they finish the work. which day will they finish the work.

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Ans: 39runs.

15. A man sells apples. First he gives half of the total apples what he has and a half apple. Then he gives half of the remaining and a half apple. He gives it in the same manner. After 7 times all are over. How many apples did he initially have.

Ans: 127 apples.

16. In a club there are male and female members. If 15 female quit then the number of females will become double the number of males. If 45 males quit no. of female becomes five times the number of males. Find the number of females.

Ans: females:175,males:80

17. 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.

Ans - 8 person

18. 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.

19. 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

21. 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

21.//What is the output of the program, if integer occupies 2 bytes memory?

```
union
{
int a;
char b;
char c[10];
}u1;
```

```
void main()
{
int l=sizeof(u1);
printf("%d",l);
getch();
}
// A. 13
// B. 10
// c. 16
// D. None of the above
```

Ans: B. 10

22. What is the output of the program

```
#include<stdio.h>
#include<conio.h>
void main()
{
int i,j=20;
clrscr();
for(i=1;i<3;i++)
{
printf("%d,",i);
continue;
printf("%d",j);
break;
}
getch();
}
// A. 1,20
// B. 1,20,1,20
// c. 1,2
// D. 1,2,20,20
```

Ans: c

23. Four persons can cross a bridge in 3,7,13,17 minutes. Only two can cross at a time. find the minimum time taken by the four to cross the bridge.

ans:20

24. Find the product of the prime numbers between 1-20

ans.9699690

25. 4. 2,3,6,7--- using these numbers form the possible four digit numbers that are divisible by 4.

ans.8

26. Two trains are traveling at 18kmph and are 60 km apart. There is fly in the train. it flies at 80kmph. It flies and hits the second train and then it starts to oscillate between the two trains. At one instance when the two trains collide it dies. Distance traveled by the fly when both trains collide is
Ans.---12km

27. there are 1000 doors that are of the open-close type. When a person opens the door he closes it and then opens the other. When the first person goes he opens-closes the doors ion the multiples of 1 i.e., he opens and closes all the doors. when the second goes he opens and closes the doors 2, 4 6 8 respectively. Similarly when the third one goes he does this for 3 6 9 1 2 15th doors resly. Find number of doors that are open at last.

Ans: square numbers

28. In a pile of 10 books, there are 3 of History, 3 of Hindi, 2 of mathematics and 2 of English. Taking from above, there is an English book between a history and mathematics book, a history book between a mathematics and an English book, a Hindi book between an English and a mathematics book, a mathematics book between two Hindi books and two Hindi books between a Mathematic and a History book. Book of which subject is at the sixth position from top ?
A. English
B. Hindi
B. Mathematics
C. History

Ans: B

29. There are 9 balls of this one is defective. Find the minimum no. of chances of finding the defective one.

Ans: 3times

30. In A tribal group two groups live in different climatic conditions. Ear Sensitivity is tested and found that one has more when compared to other. What is the reason.

Ans. Depends on the physical place and condition he is living.

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break;
}
getch();
}
```

// A. 1,20
// B. 1,20,1,20
// c. 1,2
// D. 1,2,20,20
Ans: c

3. What is the output of the program

```
void main()

{

int i,j,k;

i=2;

j=4;

k=i++>j&2;

printf("%d\n",k);

if(++k && ++i<--j|| i++)

{

j=++k;

}

printf(" %d %d %d",i,-j--,k);

getch();

}
```

A. 4,-3,2

B. 5,-3,2

c. 4,-2,2

D. 5,-2,2

Ans: D

4. How many mashes are there in 1 square meter of wire gauge if each mesh is 8mm long and 5mm wide ?
(A) 2500
(B) 25000
(C) 250
(D) 250000

5. x% of y is y% of ?

(A) x/y
(B) 2y

(C) x
(D) can't be determined

6. The price of sugar increases by 20%, by what % should a housewife reduce the consumption of sugar so that expenditure on sugar can be same as before ?
(A) 15%
(B) 16.66%
(C) 12%
(D) 9%

7. Product of prime number between 1 and 20.9699690

8. Number of terms between 1 and 999 not divisible by 8 or 12. 831

9. There are number of houses on both sides of a road. On one side houses are numbered in increasing order (1, 2, 3…). On other sides houses are numbered in down order. It house number 10, opposite house is house no.23. Find no of houses (Even number of houses are provided). 32

10. What is the area of the shaded region? Ans: 3*x* X (1-(pi/4)).

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Ans: Females:175, Males:80

14. When I was married 10 years back my wife was the sixth member of my family. Now I have a baby. Today my father was dead and I had a new baby.now the average age of my family is the same as that when I was married. Find the age of my father when I was married.

Ans: 50.

15. .I had Rs100 and I play. If I win I will hav Rs110 and if I lose I will hav Rs90. at the end I hav 2 wins and 2 loses. How much do I have?

16. In a village, there is flood. In one village causalities were less than the other. Why?

Ans: There were better health care centres(HCC).

17. A person has Rs.100. If he wins he gains 10%. If he loses the game, he loses 10%. He wins twice and loses twice. How much he has at the end?

18. The equivalent compound ratio of 5:6::7:10::6:5 (question of this type this is not exact question).

19. work can be done by 8 men and 10 women in 25 days, the same work can be done by 10 children and 5 women . in how many days 2 children and 3 men (similar to this)

CTS Paper
Test Conducted in 2003

1st question was from function,
(a,b,c)- L(a) is if u delete 1st element from it whatever is left.
(a,b,c)-L(b) is 1st element of the list.
if (a,b) &a r two lists then M(l1,l2) is ((a,b),a)
X(a,l)=a
=L(a)
=M(a,l)
y(a,l)=l
=L(b)
=M(l,a)
based on this they gave 4 questions,most of the answers were b.
there is negative marking of .25.

if abacbb corresponds to bbcaba & acbbca corresponds
to acbbca then baabcb corresponds to what.
ans-bcbaab.
what they did in each question was either rotated the

full word clockwise by 1 .
like if abcbac corresponds to bcbaca & acbacb
correspnds to cbacba then abcabc corresponds to what.
ans-bcabca.
one question was on six block borders were given.
1 2 2 3 3 1
1 2 3 2 1 3
this was given in six different column blocks.
questions. was
if 1 2 3 2
2 3 2 1
1 3 2 3
3 2 1 2
then 1 2 - -
- - - -
- - - -
- - - -
corresponds to which of the block.four options were given.all these things were in square blocks. like this 10 questions were given. then at last they had around 8 questions like this p--s--d- corresponds to what
1.utopian 2.convince 3.pervade 4.
ans- convince.-persuade.
one was perverse.
decadent(not sure).

CTS Paper
Test Conducted in 2003

There were 5 sections
total 40 questions
1 HR

They distributed 2 sets to 2 batches. they were
conducted 1 after the other .not simultaneously

1.funtions(in all engineering students group u can get
hint of these questions)

2.based on dominoes

6 dominoes were given & target was given we had to
find the correct position of a specific domino from
the 4 options so that we can reach the target

8 problems were based on this

3.strings
3 rules were given 8 questions were asked based on those
rules.

we had to find whether the string given was valid or
not based on those rules.

there were 3 symbols g,o,d .in the Lang & x y were
strings of Gs with at least 1 g

4.based on coding of alphabets simple)
practice rs aggarwal reasoning for this

5.english anagrams

e.g. d_a_b_l_c
diabolic-devilish

a word incomplete was given & its meaning was given in
the choices

quixotic-utopian
persuade-convince
deprecate-degenerate
cognition-knowledge
quotidian-everyday

CTS Paper
Test Conducted at NIT-Surat 2003
---
60 minutes

section I
a question will be given from lists with some conditions. like L(a,b,c) is a list and the value of the list is the remaining elements in it except the first element. But if the list is L(a,(b,c))then it is called a list in a list and same conditions are put forward for that.

SECTION II
This also comprises similar type of questions. But with some ease.like xGyD is a word then xGGyGGo ia also a valid word and so find the number of valid words in the given set. Question may seem to be easy but very difficult if u attempt. It is very difficult the answer the first two sections.

section III
Consist a set of dominoes and essentially deals with numbers and this is also tough. NO aptitude. Some arrangement in a matrix of numbers.

section IV
Consists of anagrams and SOLVE THIS FIRST these can fetch you marks easily. ababab coded to bababa then what is cacaca coded to.....?same type only.

section V
Words>U have to fill the words and find the corresponding meanings from the answer. It was easy. IF u prepare for GRE.

THe first mark was 20 out of 40.There is 1 mark for each question with a negative marking of O.25 Interview nothing special. Only puzzle solving and basic technical.

CTS 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 father falling in the river.
After 5 min. he tells his father that his hat has fallen. So they turn around
a88888nd 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 from1 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 of11they must have goalki and captain so out of 9 now they plan to
select 3from 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 adultno of sonsno of daughtersno 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)

CTS
Test Paper from Madras-98

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) aredefined 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 questions. 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.risquestion

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 questionstions 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)
cognizent PAPER 1. A says " the horse is not black".
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14C6)

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G at the murder site.

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CTS PAPER

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

Questionstion 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 questionstions

19 = (8+11-5+5)

so ans = (8,11,5,5)

SECTION 4

(Attend this first)

Refer chapter - 17 from

'A MODERN APPROACH TO VERBAL, NON VERBAL REASONING'

by R. S. Aggarwal.

Page: 416 to 420

There might be questionstion 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 '99Pondicherry

SECTION I - 8 questionstions.

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 QUESTIONSTION 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 questionstion papers 5 questionstions above like

but numbers

change.

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 questionstion 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 questionstions.

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

Questionstion 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 sequestionnce 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)

40 questionstions 60mts

SECTION-1:

Find the sequestionnce:

(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 X1 THEN X=

16.f(X)-f(X-1)=f(X-8) FOR X5 THEN X=

SECTION -III:

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.

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) Mon
CTS 98IIT MADRAS

There are 50

questionstions,15-analytical,15-compscience,15-electronics,----hughes

1) there are six sweets and six people ram,mea,ananad

shruti,rahul and

sagarika.there are certain conditions given .the

right order is

ram,neelam,anand ,shrutiusangeeta,rahul

2) there are m balls and n boxes .we have to put m

balls equally in n

boxes.what

is the max. no. of balls in a box.

Ans m module n boxes willhave 1 extra ball and othger

boxes will have m div n

balls.

3) single parity bit in a 10 bit no. can detect how

many errors???????????

Ans) 1(check)]

4—

5—in a room there are 18 paople above 50yrs of age 15

people are below 50 yrs

of age .hhhow many people are there in a room.

Ans—d)in sufficient data

6---------If =(n(n+1))/2 for all integer n and m =<5

then =

ans (a) ---120

7char ch;

for (ch=0;ch,300;ch++)

printf(“hello”)

what will happen

ans -----infinite loop

8----which sort is used in default c library

1-heap

2-merge

3-quick

4-none

9------rondom no. is generated in unix by which

method

10—the ip address in the transport layer is

1--globally uniquestion

2—uniquestion in local network

3-uniquestion to protocsal and local host

11—the main feature of object oriented programming is

1-----overloading and polymorphism

2---inheritance

3---encapsulation

4-----virtual functon

12------whiuch has max noise reduction

13----find the signalling frequestionncy of

sin(2pi*300t)-cos(2pi*200t)

1-----analogy of flush with electronic circuit

1---capacitor

2---op-amp

3—integrate and dump

4---

14)a=2,b=2,c=2

c=a+++b++-c----a+b

paper of hcl applications mnrec

1. E78 convert to base redical 7 ans. 13541

2.110100 is equivalent to 83447 (decimal system) ans.

7

3.on problem based on van diagram two heads three

arms four legs etc. ans. 4

4.out of hundred student in a class 63 has height 5

feet 6 inch and 75 has

weight above X pound

than max. and min. no ans. 63 ,38

5.two cyclist a and b 230 km. apart start toward each

other after three hours

they are 20 km apart

in one hour a covers 10 km. more than b. what is the

ratio of their speed.

ans speed ratio 4/3

two question.

6.cca+cba = acb d=0

assign value to b and c

7.

ans. b=9,c=2

8.physics chem. math bio. from 8am. to 12pm. of one

hour each three cond.

given

ans.I and II or I and III together

data insufficiency

9. sonali mother is

ans. e both cond. required

10. nic na ka "come and go"
ans. data insufficient

11. ans e both cond. required
logical reasoning three question.

21 to 24

there are 5 cars , 6 riders

Visnu,Shiva,Devi,Hanuman,Ganesha,Krishna

one car can accomodate 2 riders max. at a time

cond. are

a. shiva sharing a car
b. hanuman alone in a car behind an empty car
c. vishnu is sharing but not with ganesh and devi
d. ganesh is in either in 3rd or 4th car

CTS
Campus Interview Held at NIT Nagpur 2003

Disclaimer:

Total 1 hr ,40 marks…
5 sections, 8 questions each

1 mark for correct, -.25 for wrong

1st section It is based on reursive function……..

M(a,b,c)- L(a) is if u delete 1st element from it

whatever is left.

N(a,b,c)-L(b) is 1st element of the list.

if (a,b) &a r two lists then M(l1,l2) is ((a,b),a).

X(a,l)=a

=L(a)

=M(a,l)

y(a,l)=l

=L(b)

=M(l,a)

Based on this they gave 8 questions were there….
2nd section

This is about arrangement of dominos

6 Dominos are given … Also a figure created using these is also shown. But the alignment of the dominos in the figure is unknown. The question is to found out the possible alignment of the dominos.

The multiple choices some what look like this….
a) b)

1

1

3

2

c)…..d)…..
What they mean is….if the columns with no's shown in the figure, forms a single domino, is it possible to make the figure given in the question using the remaining dominos given ?
In this example I arranged the dominos from left to right , top to bottom .
The answer is b.

This forms 1 question. Likewise 8 questions in this section.

3 rd section

/*This section is the easiest. Ou better start with this section*/

This section consists of encoding decoding questions…

Eg:- 1) if abacbb corresponds to bbcaba

& acbbca acbbca

then baabcb ?

ans-bcbaab.(Read the string in reverse)

2) if abcbac corresponds to bcbaca

& acbacb cbacba

then abcabc ?

ans-bcabca.(Rotate the string left by 1 letter)

Like wise 8 questions…
4 th section

Finding the valid string..

Eg:- 1) if x G 0 0 y G y is a string
where x,y are variables which forms strings of G and contains at least 1 letter. Then which of the following is a valid string of the same language.

a) G G 0 0 G G G G G
b) G G 0 0 G G G G

What they mean is that x and y should be substituted using a consistent value in all the places.
In (a) I put x=G, y = G G.
In (b) x=G , but the 1st occurrence of y is G and 2nd one is G G.
So inconsistent …hence answer is (a)
In some case it may create ambiguity while we substitute the values of x,y.
Sufficient clues will be given in the question to handle this.

5 th section

Anagrams….
Eg:- 1) P_ _ S_ _ D_

a) utopian b)convince c)pervade

What they mean is , to find the particular synonym of the words given, that fill correctly in the blanks…!!

ans- convince.-persuade.

2) PERVERSE

3) DECADENT.

So that's it…!!
The overall standard of the paper is very tough.
Here, the highest was 27(nagpur -25). But even then they shortlisted 51 students. Those who got around 15 also got through. So no need to worry…as far as they plan to recruit in big numbers..

One cannot attempt the full paper.You better start with coding section(3)…and also finish 2, 4 sections. You may feel relaxed after this.Then go for the rest. It is better to leave the 1st section.(there is negative marking).As I'd told earlier …the order of the sections may vary from paper to paper. I think the examples I speified here r enough to identify the corresponding sections.
Before interview
You will be given One form to fill in…asking some personal questions……ur strengths, weakness; aim in the life; what do u expect from the company…..etc etc…It is better to take help from any english "funda master " or after discussing with our friends..
Interview will be cool… Technical…..bit from unix shell prg…OOPS.. Whatever u say make sure u say in good english ..without "babbabba…." Or "pardon sir". I guess they value the communiation skills very much.

CTS
Paper from Exam Conducted At NIT JamshedPur- 2003

Booklet color : Blue
Aptitude test: 60Qs Time 1 hr

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 : 45,000

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.?
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 rotein enriched RS - itamin 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

Aptitude Paper
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 people 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)

Find the number of squares.