for TI aptitude test consist of all pictorial questions. ie in
        each question he will give 8 diagrams and ask to find the
        9'th diagram in that sequence.
        You go through RS Agarwal. These aptitude questins are
        very easy. Just pratice them. In RS Agarwal gothrough
        SERIES chapter. It is suffient. There are 35 aptitude
        questions. First 25 are very easy. Do these questions
        in just 15 or 20 minutes. Because last questions are
        very touch.

        TECHNICAL TEST:
        ----

        1)3 flipflops are connected so that after 0 to 5 count occured
          next number is zero. So what is the counter?
          Ans: mod 6 counter

    2)simplication of some boolean expression which is simple.
      Boolean Expression is A+A'B.
      Ans:A+B

    3)Given inorder sequence and preorder sequence and asked to
        find out postorder sequence.

   4)Some question on value of a static variable.

   5) Given an interger in binary form,find the number of ones in
         that number without counting each bit.(This questin is not
              multiple choice question. This question carries more
              marks. So please take care for this question.)

  6) 1-way set associative memory is called-----
     a)direct b)something c)1-way set associative 4)something
     Ans: c

  7)Fastest IPC mechanism is

   a)shared memory b)pipes c)named pipes d)semaphores
   Ans:c

  8)Some page references are given. You are asked to implement
        it with Least Frequently Used algorithm.

  9)Some diagram is given.
     Iam describinmg the diagram. A 2*1 MUX is given. The inputs
        are A,B. Output is C. C and A are tied together. What is
             the diagram.?

             Ans:Latch.

```
*************************************************************
```

This paper is for Electrical & Electronics students. There is
        separate test for computer Science Students. There are 20
              questions.

1) Some circuit is given. Iam describing the circuit.
   A resistor R & a capacitor C are connected in parallel.
   To this circuit another circuit which is having a capacitor
        of capacity 2C & an impedence Z, is connected in series.
        You are asked to find out the value of Z? Note that 2C & Z
        are connected in series.
 a) Z=2C
 b) Z=2L
 c) Z=L/2
 d) Z=2R

2) Some circuit which consist of only resistors R is given.
   This is a repetative circuit. U have to find the effctive
        resistance of the entire circuit.
        A) Rin=R
        B) Rin=(5+sqrt(3))/7
        C) Rin=(19+sqrt(3))/8
        D) None.

3) Two wave forms are given. You are asked to write the cirsuit
   to get B(second wave form) from A(first wave form).

4) #define SUM(a,b)   a+b

```
  main()
   {
     a=2;
     b=3;
     x=SUM(a,b)*2;
     printf("x=%d\n",x);
     }
     Ans:8.
```

5) number(int i)
```
{
number++;
printf("%d\n",number);
}

main()
{
static int i=0;
number(i);
```

```
}
```
Ans: I don't know.

6) Some circuit is given. I can't describe the circuit. There are
   3 resistors,3 capacitors & one inverter.. The question is
   What is the value of the frequency such that the circuit oscillates.
   A) f=RC
   B) f=sqrt(3)/(Pi*R*C)
   C) f=1/(Pi*R*C)
   D) something
   Ans:I don't know the answer.

   7) Question on flipflop. So gothrough all flipflops.

   8) There are 5 questions on Nmos & Pmos circuits.

****
This Paper is for Computer Science Students. THis paper is
very easy. You can definitely do it in one hour.
****

(1)   The fastest memory is
(i)   DRAM, (ii) ROM, (iii) SRAM, (iv) Main memory
Ans : SRAM

(2) Programing exceptions are
(i) Asynchronous, (ii) Synchronous, (iii) None
Ans : Asynchronous

(3) DSP which architecture is used
(i) MIMD, (ii) SIMD, (iii) Nueman, (iv) Harvard Architecture
Ans : Harvard Architecture

(4) C prog. for searching for an element in linked list

(5) main()
{
        unsigned char   i;
        int   sum;

        for(i=0; i<300; i++)
                sum+ = i;
        printf("\nSum = %d\n", sum);
}

Ans : infinite loop

(6) void fn(int *p)
        {
                static int val = 100;
```

```
              p = &val;
        }

main()
{
        int i=10;
        printf("i=%d\n", i);
        fn(&i);
        printf("i=%d\n", i);
}
```

Ans : i=10 i=10

(7) int a[10[15];
        char b[10[15];
        (a) location g a[3][4], if base location g a[0][0] is ox1000
        (b) location g b[3][4], if base location g b[0][0] is ox2000
        int taken 32 bits and char taken 8 bits.

Ans : (a) ox10C4   (b) ox2031

(8) Implement OR gate function with 2*1 MUX

Ans : A   _____
        --------|2*1 MUX |
              B | |--------o/p
        --------| |
              | ----------
              |_____|C

B=C

(9) Implement 4*1 MUX with 2*1 MUXES

(10) Swapping without using a temporary variables. (2 methods)

(i) x = x+y;
        y = x-y;
        x = x-y;

(ii) x = x^y;
        y = x^y;
        x = x^y;

(11) Count no of 1's in a word without using bit by bit.
        (This question carries more marks. It is not a multiple choice
        question.)

(12) Code 1 :

```
        for(i=0; i<1000; i++)
                for(j=0; j<100; j++)
                        x = y;

        Code 2 :
        for(i=0; i<100; i++)
                for(j=0; j<1000; j++)
                        x = y;
```

Which code will execute faster
(i) Code 1 and Code 2 are of same speed,
(ii) Code 1,
(iii) Code 2,
(iv) None.

Ans : Code 2

(13) main()
```
        {
                int a[10] = {1, 2, 3, ...., 10}, i, x=10, temp;

                for(i=0; i<x; i++){
                        temp = a[i];
                        a[i] = a[x-i-1];
                        a[x-i-1] = temp;
                }
```
(i) All contents of array a are reversed
(ii) Only some portions are altered
(iii) Remains same
(iv) None

Ans : (iii)

(14) An array is stored in row major order. The memory capacity is
        30 MB. And in unix system demand paging is used. Which one
will
        give more page faults?

```
        #define V_L_I 10000
        int i, j, array[V_L_I][V_L_I];

        Code 1 :
                                array[i][j] = 1;

        Code 1 :
                for(j=0; j<V_L_I; j++)
                        for(i=0; i<V_L_I; i++)
                                array[i][j] = 1;
```

Ans : Code 2

(15) In C which parameter passing technique is used?
(i) call by value,
(ii) call by reference,
(iii) both

Ans : call by value

(16) A circuit is given with 2 exclusive OR gates whose boolean
        expression will be y = '(AB) + AB
        (' indicates bar)

(17) main()
        {
                int i = 1;
                fork();
                fork();
                printf("\ni = %d\n", i+1);
        }

Ans : 4 printfs will occur and i = 2

(18) Compute the complexity of Binary search.
Ans : O(lg n) (Answer in detail. This is not a multiple choice
question.
        It carries more marks.)

(19) Write expression for the tree graph :
Ans : ((a-b) + c*d)/x

(20) # define MAX(a, b) a>b ? a:b
        main()
        {
                int m, n;
                m = 3 + MAX(2, 3);
                n = 2 * MAX(3, 2);
                printf("m = %d, n = %d\n", m, n)
        }

Ans : m=2, n=3