

1. The grammar for A, B, S is given below.

$S \rightarrow Ax|By$

$A \rightarrow Ax|y$

$B \rightarrow x|y$

possible ans is $xy|xy$

2. In $n \times n$ matrix, there non zero numbers in diagonal and either side of the diagonal. If represented in one dimensional array, assign the values which are non zeros.

find relation with i, j iteration and linear array

like $a[2*(i-1)+j]$ this

the matrix will be

x x 0 0 0 0 -----

x x x 0 0 0 0 -----

0 x x x 0 0 0 -----

0 0 x x x 0 0 -----

0 0 0 x x x 0 0 -----

| | | | | | | |

| | | | | | | |

renumber $n \times n$ matrix

3. In-order of the letters is given as below:

If written in pre-order like given below:

write the post-order:

4. fun(n)

```
{
    if(n<=2)
        return (1);
    else
        return ((fun(n-1)*fun(n-2)));
}
```

find the order of complexity of the programme.

possible answer ---- $N(2^n)$

5.

6. If a and b are given. write the results of the programme given below.

$a = a \text{ XOR } b;$

$b = a \text{ XOR } b;$

$a = a \text{ XOR } b;$

answer is swapping of a and b

so b, a is answer

7.

8. for a given CMOS the voltage is halved

frequency doubled

capacitance halved

what is the present CMOS power

ans (b)---- dynamic power is $\frac{1}{2} * C * f * V^2$

9. if a row dominated two dimensional array in the following which one is

advantage

and why?

```
a) for(i=0;i<1000;i++)
    for(j=0;j<1000;j++)
        temp=temp+a[i][j];
b) for(j=0;j<1000;j++)
    for(i=0;i<1000;i++)
        temp=temp+a[i][j]
```

I donot know ans

10. what is area of a Hexagon with side as 1unit

ans is $3 \cdot (\sqrt{3})/2$

11. If traverse in a chess board right and down from one corner to another corner

how many possible ways will be there

ans is $C(16,8)$ or $(16!/(8! \cdot 8!))$

12. Tick the below which can biparate (graph theory)

1)tree 2)forest of trees 3) evencycle graph 4) oddcycle graph

ans is 1,2,3

13.The fig shown in below is a SRAM (1K* 4 bits) ,how many of this SRAMS are

required to design 16K of one byte

ans is 32 SRAMS and one 4 to 16 decoder

14. suppose two persons entering into one room in the morning 5 to 6 A.M.

what is the probability they will enter in 10 minits gap.

I donot know this answer

15. In a binary tree what is the hight and lowest no of levels for N nodes.

ans is highest is N and lowest is $\log(N+1)$ base 2

16.represent 3 and -3 in base -2 form taking two states (0,1) only

i do not know the ans

OTHER 5 QUESTIONS FROM SORTING TECHNICS SO PLEASE GO THROUGH SORTING TECHNICS .

OTHE 5 QUESTIONS FROM FLIP-FLOP DELAYS EXAMPLE

1. THERE IS ONE LOOKAHEAD ADDER IS THERE ONLY TWO STAGES IT GIVES CARRY

AHEAD WHAT IS

THE TOTAL DELY IF IT IS 8 BIT ADDER.

2. WHAT IS PROPAGATION DELAY TIME FOR RING COUNTER.

B.....

3.OB. WHAT IS MAX FREQUENCY FOR SOME COUNTER SO PLESE CHECK COUNTES AND

FLIP-FLOPS