Optimize the below 1,2,3,4 questions for time:

1)
```
int i;
if i=0 then i:=1;
if i=1 then i:=0;
```

2)
```
int i;
if i=0 then i:=1;
if i=1 then i:=0;
```
(given that i can take only two values (1,0))

3)
```
int i;
if i=0 then i:=1;
else if i=1 then i:=0;
```
(given that i can take only two values (1,0))

4)
```
int m,j,i,n;
for i:=1 to n do
m:=m+j*n
```

5) Expand the following
 a) ISDN
 b) CASE
 c) CSMA/CD
 d) OOPS
 e) MIMD

6) In the following questions, answer A,B,C,D depending on when the errors are detected?
  A if no error is detected
  B if semantic and syntactic checking
  C if during Code genration & Symbol allocation
  D run time

a) Array overbound
b) Undeclared identifier
c) stack underflow
d) Accessing an illegal memory location

7) How many page faults will occur for below sequence of pages when LRU
page replacement algorithm is used (The memory can only have 3pages):

1,2,3,4,2,1,5,2,4 (something like that)

8) If a CPU has 20 address lines but MMU does'nt use two of them.
   OS occupies 20K. No virtual memory is supported. What is the
   maximum memory available for a user program?

9) For a binary tree with n nodes, How many nodes are there which
  has got both a parent and a child?

10) Understand the funda of incrementing a variable using
    val++   and ++val . Some programs are given for error correction.

11) Learn datagram . (Computer networks)

12) Which of the following can be zero? (only one)
    a) swap space
    b) physical memory
    c) virtual memory

13) What is a must for multitasking?
    a) Process preemption
    b) Paging
    c) Virtual memory
    d) None of the above

14) A question on call by value,
                  call by name,
                  call by reference.

```
f(x,y,z)
{
y := y+1;
z := z+x;
}
main()
{
int a,b;
a := 2
b := 2;
f(a+b,a,a);
print a;
}
```

what is the value of a printed for three different calls in main.

15) Using the following instructions and two registers , A&B.
   find out A XOR B and put the result in A
   PUSH <reg>
   POP <reg>
   NOR   These instructions operates with A & B and puts the result i

n
   AND   A

(question basically to get XOR in terms of NOR and AND)

16) True/False questions:
   1) The page size should be the power of 2.
   2)

17)
```
int i=0;
int j=0;

loop:
  if(i = 0)
     i++;
  i++;
  j++;
  if(j<= 25)
    goto loop
xxx:
```

question1 : how many times is the loop entered
A few questions of that sort. some count fundaes. Easy one)

18) Who handles page faults?
  a) OS
  b) MMU
  c) Hardware logic
  d) etc etc....

19) For which of following is it not possible to write an algorithm.

a) To find out 1026th prime number
b) To write program for NP-complete problem
c) To write program which generates true Random numbers.
etc...

20) what is the essential requirement for an real-time systems

a) pre-emption
b) virtual memory
c) paging etc...

-- Question bank collected ,compiled and edited by BPM and Baiju.