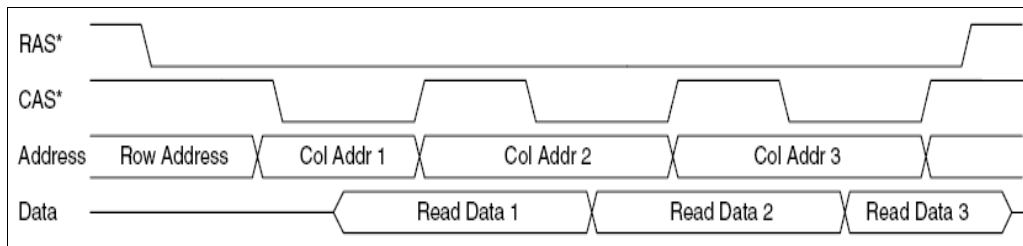


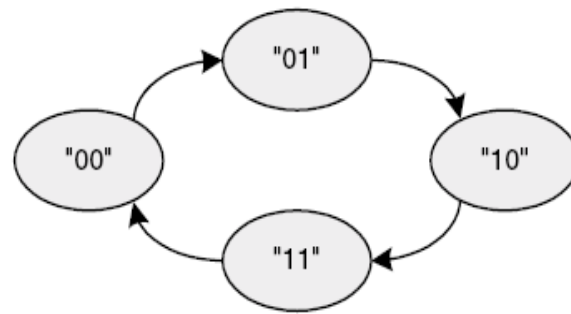
Sample Questions

- 1) A program that runs on x86 embedded processor shows the following time details.
User Code CPU time = 90.7 seconds
System Code CPU time = 12.9 seconds
Elapsed time = 2 minutes 39 seconds
Calculate the approximate percentage elapsed time.
A)8%
B)57%
C)65%
D)47%
- 2) A processor has an average CPI (Cycles Per Instruction) of 2. A application and system software executes thousand instructions per second. If the processor is running at a clock frequency of 1MHz, calculate the MIPS (Million Instructions Per Second) consumed by the application and system software..
A)0.002
B)0.001
C)0.01
D)0.1
- 3) Given that the subprogram **putc** displays the character in **al**, the effect of the following instructions:
mov al, 'c'
sub al, 2
call putc
is to
A)display 2
B)display 'c'
C)display 'a'
D)display a blank
- 4) Observe the timing diagram given below and identify the device a processor is addressing.



- A)SRAM
B)DRAM
C)ROM
D)FLASH

5) The state machine shown below represents the device functionality of



- A) 2-bit Down Counter
- B) 2-bit Up-Down Counter
- C) 2-bit Up Counter
- D) 4-bit Down Counter

6) Frame relay operates in which layer?

- A) physical layer
- B) datalink layer
- C) transport layer
- D) network layer

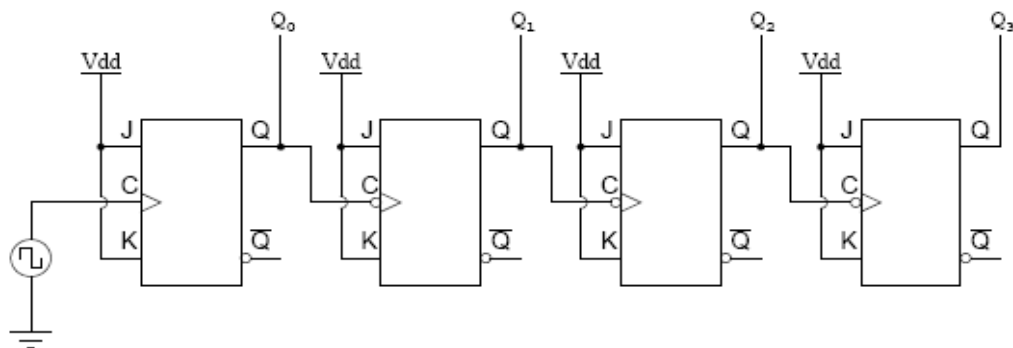
7) IEEE 802.15.4 is specifications for _____.

- A) Wireless LAN
- B) Low Power and Low Data Rate Wireless Connectivity
- C) Bluetooth
- D) IrDA

8) The purpose of the PREAMBLE field in the Ethernet frame format is _____.

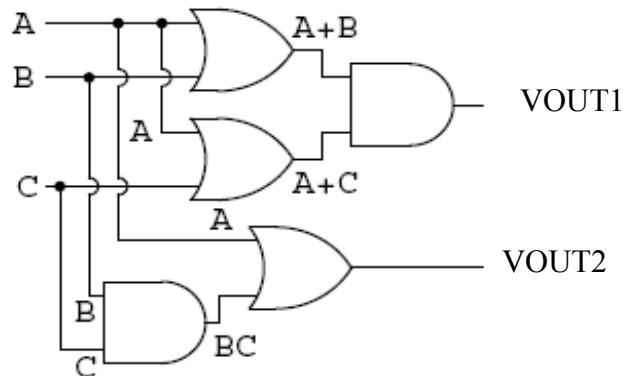
- A) to identify the boundaries
- B) to meet the minimum length requirements of the frame
- C) for frame synchronization purpose
- D) None of the above

9) The circuit shown below is a _____



- A) Parallel In Serial Out
- B) Parallel In Parallel Out
- C) Counter
- D) None of the above

10) A digital circuit shown below has two outputs, VOUT1 and VOUT2. Analyse the circuit and



find which of the statement below is false.

- A) VOUT1 and VOUT2 are equal
- B) $VOUT1 = (A+B) (A+C)$
- C) $VOUT2 = A + BC$
- E) VOUT1 and VOUT2 are complementary

11) The number of process running simultaneously and competing for the CPU is known as

- A) Thrashing
- B) Degree of Multiprogramming
- C) Response Time
- D) Throughput

12) Dirty bit is used to show the

- A. page with corrupted data
- B. the wrong page in the memory
- C. page that is modified after being loaded into cache memory
- D. page that is less frequently accessed

13) Semaphore is used for

- A) Synchronization
- B) deadlock avoidance
- C) page fault avoidance
- D) None of the above

14) System call is used to access

- A) Shell functionality
- B) Operating System functionality
- C) Application functionality
- D) None of the above

15) LRU page replacement algorithm will select the page that

- A) has not been used for the longest time in the past
- B) will not be used for the longest time in the future
- C) has been used least number of times
- D) has been used most number of times

16) What is the output of the following program?

```
#define MAX(x,y) (x)>(y)?(x):(y)
void main( )
{
    int i=10;
```

```

    j=5;
    k=0;
    k=MAX(i++,++j);
    printf("%d %d %d %d",i,j,k);
}

```

A) 11 5 11 B) 12 6 11 C) 10 6 11 D) 12 6 12

17) What is the output of the following C code?

```

a=10;
b=5; c=3;
d=3;
if(a<b)&&(c=d++)
printf("%d %d %d %d",a,b,c,d);
else
printf("%d %d %d %d",a,b,c,d);

```

A) 10 5 3 3 B) 10 5 3 4 C) 10 5 4 3 D) None

18) For the following C code

```

a=0;
b=(a=0)?2:3;

```

What is the value of b?
A) 0 B) 3 C) 2 D) None

19) What is the purpose for the following C function?

```

void f(int i)
{
    int j;
    for (j=0;j<16;j++)
    {
        if (i & (0x8000>>j))
            printf("1");
        else
            printf("0");
    }
}

```

A) Its output is hex representation of i
B) Its output is BCD representation of i
C) Its output is binary representation of i
D) Its output is decimal representation of i

20) What happens when we execute the following C code?

```

main()
{
    char a[10];
    strcpy(a,"");
    if (a==NULL)
        printf("\a is null");
    else
        printf("\n a is not null");}

```

A) Compile time error. B) Run-time error C) a is null
D) a is not null.

21) What is the output for the following?

```
#include <stdio.h>
#define FIRST 7
#define LAST 5
#define ALL FIRST+LAST
int main()
{
printf("The square of all parts is %d\n",ALL*ALL);
return(0);
}
```

A) 49 B) 47 C) 24 D) 144

22) What is the output for the following?

```
int num=0xAF;
printf("Number is %x %d %o\n", num, num, num);
A) Number is af 257 175
B) Number is af 175 257
C) Number is af 168 249
D) Number is af 192 270
```

23) What is the output for the following?

```
int array[]={4,5,8,9,8,1,0,1,9,3};
int *array_ptr;
int main()
{
array_ptr=array;
while((*array_ptr) != 0)
array_ptr++;
printf("%d\n", array_ptr - array);
return(0);
}
```

A) 7 B) 32 C) 16 D) 6

24) Consider the following structure:

```
struct numnam{
int no;
char name[25];
};
struct numnam n1[]={12,"Fred"},{15,"Martin"},{8,"Peter"},{11,"Nicholas"};
int main()
{
printf("%d %d",n1[2].no,(*(n1+3)).no +1);
return(0);
}
```

What does the above statement print?

A) 8 9
B) 8 11
C) 8 12
D) 8 unpredictable value

25) A list of data items, usually words or bytes, with the accessing restriction that elements can be added or removed at one end of the list only is known as

- A) Stack B) Memory C) Linked list D) Heap

(Q. No. 26) ANALOGIES: Select the answer-pair that expresses a relationship most similar to that expressed in the capitalized pair.

26) LIGHT : DIM ::

- A) indictment : investigate
- B) protest : muffle
- C) heat : radiate
- D) solid : incinerate

(Q. No. 27) ANTONYMS: Choose the phrase that is most nearly opposite in meaning to the word in capital letters.

27) LAVISH

- A) hostile
- B) unwashed
- C) timely
- D) frugal

(Q. No. 28) READING COMPREHENSION

In 1955 Maurice Duverger published the Political role of women, the first behavioralist, multinational comparison of women's electoral participation ever to see election data and survey data together, His study analyzed women's patterns of voting, political candidacy, and political activism in four European countries during the first half of the twentieth century, Duverger's research findings were that women voted somewhat less frequently than men (the difference narrowing the longer women had the vote) and were slightly more conservative. Duverger's work set an early standard for the sensitive analysis of women's electoral activities. Moreover, to Duverger's credit, he placed his findings in the context of many of the historical processes that had shaped these activities. However, since these contexts have changed over time, Duverger's approach has proved more durable than his actual findings, in addition, Duverger's discussion of his findings was hampered by his failure to consider certain specific factors important to women's electoral participation at the time he collected his data: the influence of political regimes, the effects of economic factors, and the ramifications of political and social relations between women and men. Given this failure, Duverger's study foreshadowed the enduring limitations of the behavioralist approach to the multinational study of women's political participation.

28) The primary purpose of the passage is to

- A) evaluate a research study
- B) summarize the history of a research area
- C) report new research findings
- D) reinterpret old research findings

(Q. No. 29) SENTENCE CORRECTION:

Instructions : select the best possible alternative of the underlined sentence in the question.

29) The coast guard is conducting tests to see whether pigeons can be trained to help find survivors of wrecks at sea.

- A) to see whether pigeons can be trained to help find
- B) to see whether pigeons can be trained as help to find

- C) to see if pigeons can be trained for helping to find
- D) to see if pigeons are able to be trained in helping to find

(Q. No. 30) CRITICAL REASONING

30) In many corporations, employees are being replaced by automated equipment in order to save money. However, many workers who lose their jobs to automation will need government assistance to survive, and the same corporations that are laying people off will eventually pay for that assistance through increased taxes and unemployment insurance payments.

The author is arguing that _____.

- A) higher taxes and unemployment insurance payments will discourage corporations from automating.
- B) Replacing people through automation to reduce production costs will result in increases of other costs to corporations.
- C) Many workers who lose their jobs to automation will have to be retrained for new jobs.
- D) Corporations that are laying people off will eventually rehire many of them.

(Q. No. 31) ANALYTICAL REASONING

As part of their sports physicals, seven collegiate athletes – F, G, H, I, J, K, L – are being weighed. In announcing the results of the physical exams, the coach has given the following information :

- None of the athletes is exactly the same weight as another athlete
- K is heavier than L, but lighter than H
- I is heavier than J
- Both F and G are heavier than H

31) Each of the following could be true EXCEPT

- A) F is the heaviest
- B) G is the heaviest
- C) I is the heaviest
- D) More than three athletes are lighter than K.

(Q.No. 32-35) QUANTITATIVE ABILITY

32) The difference between the ages of two persons is 10 years. 15 years ago, the elder one was twice as old as the younger one. The present age of the elder person is :

- A) 35 years B) 45 years C) 55 years D) 25 years

33) The length of a rectangle is increased by 20% and the width is decreased by 20%. The area decreases by:

- A) 0.8% B) 1.2% C) 4% D) 8%

34) A mixture contains milk and water in the ratio 5:1. On adding 5 litres of water, the ratio of milk to water becomes 5:2. The quantity of mil in the original mixture is

- A) 16 litres B) 25 litres C) 22.75 litres D) 32.5 litres

35) A faulty clock, the minute hand gains 10 minutes every hour, while the hour hand indicates the correct time. If the clock is set right at 12:00 noon, when is the first hour when the clock shows the right time?

- A) 6 p.m B) 6 a.m C) 9 p.m D) Never indicated again
