SAP Written Test - Technical Questions:-

Q1. What is incorrect for strlen()

   a) Returns length of string
   b) Does not count null terminator
   c) Both
   d) None

Q2. Which of the following is wrong?

   a) a=b=3=4
   b) a=b=c=d=0;
   float a=int;b=3.5;
   c) int a;
   float b;
   a=b=3.5;

Q3. In a C statement what cannot be done?

   a) Comments can go over multiple line
   b) Comments can start anywhere in the line
   c) A line can contain sentences without any language statements
   d) Comments can occur within comments

Q4. Int *a[5] refers to

   a) Array of pointers
   b) Pointer to an array
   c) Pointer to a pointer
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Q5. This will display what?

```c
#include
main()
{
Float f
F=10/3
Printf (%f,f);
}
```

a) 3.3 
b) 3 
c) 3.2 
d) None

Q6. C function should

a) Return more than one value 
b) Return a float 
c) Return an integer 
d) Not return any value

Q7. In the following read the function conv()

```c
conv(int t)
{
Int u;
U=5/9*(t-32);
}
```

a) 15 
b) 0 
c) 21
Q8. 

\[ Y = g; \]
\[ if \ (x == 10) \]
\[ else if \ (x == 9) \]
\[ else \ y = 8; \]

What is y if x = 10?

a) 9
b) 8
c) 6
d) 7

Q9. Where is MAIN written in a programme in C?

a) First function
b) Second function
c) Last function
d) Anywhere

Q10. What is the recursive form of the following algebra

\[ Y = (x_1 + x_2 + \ldots + x_n) \]

a) \[ Y = x_n + x_i \]
   b) \[ Y = x_n + n - 1 - 1 x_i \]
   c) \[ Y = x_n + n \]
   d) None

Q11. Variable that holds memory address of another is
a) Memory variable  
b) Integer  
c) Constant  
d) None

Q12. MAIN() is an example of

a) Library function  
b) User defined  
c) Header  
d) Statement

Q13. GOTO is used for?

a) Terminate loops or exit from a switch  
b) Carry out a logical test and then on the basis of the answer choose one of the two options  
c) Both  
d) None

Q14. Evaluate following expression:

\[ a=3, \ b=6, c=4, d=2 \]
\[ a=b>c \land \land b-c= a+c \]

a) 0  
b) 1  
c) Error  
d) None of these

ANS: b
Explanation:

Substituting values we get 
\[((3+6)>4)&&(6-4<2))||\n\((6+2)>(3+4))\ i.e. \((1)&&(0))||(1)= 1\n
Q15. Under which of the following Big O notation it is suggested to review design of algorithm?

a) O(n^2)
b) O(nlogn)
c) O(n)
d) O(2n)

ANS: d

Q16.

\[
\text{fun}(\text{int } a,\text{int } b) \\
\{ \\
\quad /*\text{some code}*/ \\
\}
\]

\[
\text{fun}(a,b) \\
\text{int } a,b; \\
\{ \\
\quad /*\text{some code}*/ \\
\}
\]

a) Both functions are in ANSI notation
b) 1st one in ANSI & 2nd in K& R notation(Ans)
c) 1st in K&R, 2nd in ANSI
d) Both in K&R

Q17. Consider the macro definitions:
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#define square(x) x*x
and # define square(x) (x*x)

when used in a program statement B = ++ square(C)

a) both macros will produce the same result
b) both macros will not produce same result
c) the second macro definition is not valid
d) the first macro definition is not valid

ANS: b

Explanation:

if ++ square(C) is called the first macro gives ++x*x, and
second macro gives ++(x*x).

Q18. What is the output of the program:-

main()
{
    int i =0;
    printf(In the name of lord);
    for(i =0;i<5;i++)
        main();
}

Q19. Which of the following is a type of DBMS software?

a) Utilities
b) query Language
c) Report writer
d) All of these
Q20. 

```c
struct one
{
    int j;
    char m;
union two
{
    int a;
    char b;
    float c;
union three
{
    int x;
    float y;
    char z;
};};
};
```

What is the size of union?

Q21. The declarations

```c
typedef float height [100];
height men, women;
```

a) define men and women as 100 element floating point arrays
b) define men and women as 100 floating point variables
c) define height, men and women as floating point variables

ANS: a
Q22. Which of the following is not true about linked lists?

a) Insertion is O(n^2)
   b) Deletion is O(n)
   c) Searching is O(n)
   d) All of these

ANS: a

**Explanation:**

We maintain pointers to the node(s) at the head and tail of the linked list and so performing a traditional insertion to either the front or back of the linked list is an O(1) operation. Random insertion has complexity O(n).