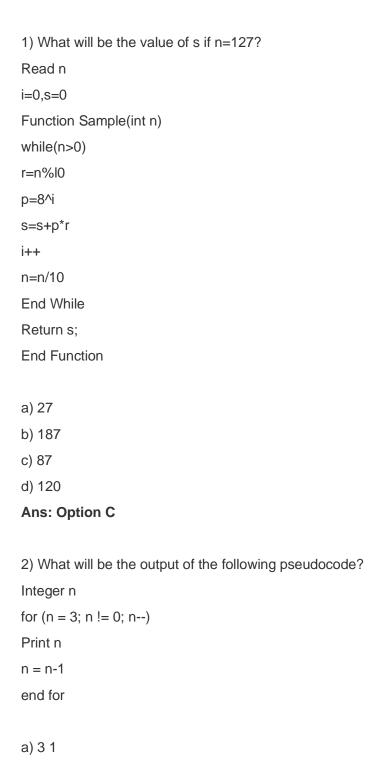
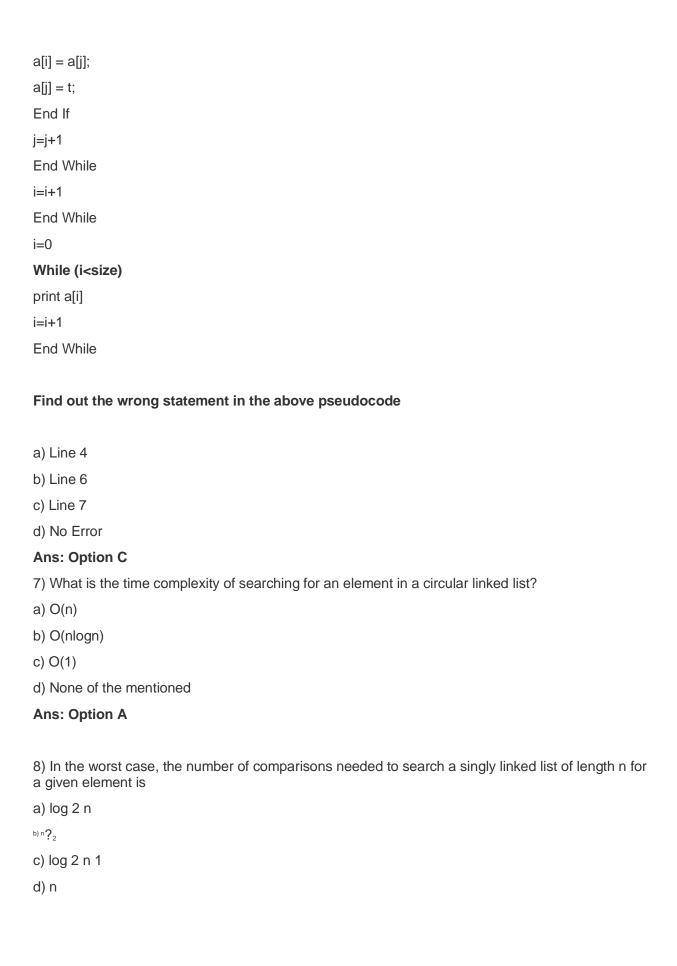
## Capgemini Pseudo Code MCQs (previously asked)



```
b) 3 2 1
c) 3
d) Infinite Loop
Ans: Option D
3) What will be the output of the following pseudocode?
For input a = 8 \& b = 9.
Function(input a, input b)
If(a < b)
return function(b, a)
elseif(b != 0)
return (a + function(a,b-1))
else
return 0
a) 56
b) 78
c) 72
d) 68
Ans: Option C
4) What will be the value of even_counter if number = 2630?
Read number
Function divisible(number)
even_counter = 0, num_remainder = number;
while (num_remainder)
digit = num_remainder % 10;
if digit != 0 AND number % digit == 0
even_counter= even_counter+1
End If
num_remainder= num_remainder / 10;
End While
return even_counter;
```

a) 3
b) 4
c) 2
d) 1
Answer: Option D
5) \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
5) What will be the value of t if a =56, b = 876?
Read a,b
Function mul(a, b)
t = 0
while (b != 0)
t = t + a
b=b-1
End While
return t;
End Function
a) 490563
b) 49056
c) 490561
d) None of the mentioned
Ans: Option B
6) Code to sort given array in ascending order:
Read size
Read a[1],a[2],a[size]
i=0
While(i <size)< td=""></size)<>
j=i+1
While(j <size)< td=""></size)<>
If a[i] < a[j] then
t= a[i];



## **Ans: Option D**

```
9) Which of the following will give the best performance?
a) O(n)
b) O(n!)
c) O(n log n)
d) O(n^C)
Ans: Option A
10) How many times the following loop be executed?
ch = b;
while(ch \geq a && ch \leq z)
ch++;
}
a) 0
b) 25
c) 26
d) 1
Ans: B
11) Consider the following piece of code. What will be the space required for this code?
int sum(int A[], int n)
int sum = 0, i;
for(i = 0; i < n; i++)
sum = sum + A[i];
return sum;
// sizeof(int) = 2 bytes
a) 2n + 8
```

b) 2n + 4
c) 2n + 2
d) 2n
Ans: A
12) What will be the output of the following pseudo code?
For input a=8 & b=9.
Function(input a,input b)
If(a <b)< td=""></b)<>
return function(b,a)
elseif(b!=0)
return (a+function(a,b-1))
else
return 0
a) 56
b) 88
c) 72
d) 65
Ans: C
13) What will be the output of the following pseudo code?
Input m=9,n=6
m=m+1
N=n-1
m=m+n
if (m>n)
print m
else
print n
a) 6
b) 5

c) 10
d) 15
Ans: D
14) What will be the output of the following pseudo code?
Input f=6,g=9 and set sum=0
Integer n
if(g>f)
for(n=f;n< g;n=n+1)
sum=sum+n
End for loop
else
print error message
print sum
a) 21
b) 15
c) 9
d) 6
Ans: A
15) Consider a hash table with 9 slots. The hash function is $h(k) = k \mod 9$ . The collisions are resolved by chaining. The following 9 keys are inserted in the order: 5, 28, 19, 15, 20, 33, 12, 17, 10. The maximum, minimum, and average chain lengths in the hash table, respectively, are
a) 3, 0, and 1
b) 3, 3, and 3
c) 4, 0, and 1
d) 3, 0, and 2
Ans: A
16) You have an array of n elements. Suppose you implement a quick sort by always choosing the central element of the array as the pivot. Then the tightest upper bound for the worst case performance is:
a) O(n2)
b) O(nLogn)

```
c) ?(nLogn)
d) O(n3)
Ans: A
17) Let G be a graph with n vertices and m edges. What is the tightest upper bound on the running
time on Depth First Search of G? Assume that the graph is represented using adjacency matrix.
a)O(n)
b)O(m+n)
c)O(n2)
d)O(mn)
Ans: C
18) Let P be a Quick Sort Program to sort numbers in ascending order using the first element as a
pivot. Let t1 and t2 be the number of comparisons made by P for the inputs {1, 2, 3, 4, 5} and {4, 1,
5, 3, 2) respectively. Which one of the following holds?
a)t1 = 5
b)t1 < t2
c)t1 > t2
d)t1 = t2
Ans: C
19) What does the following piece of code do?
public void func(Tree root)
func(root.left());
func(root.right());
System.out.println(root.data());
a)Preorder traversal
b)Inorder traversal
```

- c) Postorder traversal
- d)Level order traversal

## Ans: C

```
20) How will you find the minimum element in a binary search tree?
a) public void min(Tree root)
while(root.left() != null)
{
root = root.left();
System.out.println(root.data());
}
b) public void min(Tree root)
while(root != null)
root = root.left();
System.out.println(root.data());
}
c) public void min(Tree root)
while(root.right() != null)
root = root.right();
System.out.println(root.data());
d) public void min(Tree root)
```

```
{
while(root != null)
{
root = root.right();
}
System.out.println(root.data());
}
```

Ans: a