Q 01. Find out the number of swappings required for sorting the given numbers in ascending order if you are using Bubble sort for sorting.
80, 70, 75, 60, 65

Ops:
A. ○ 6
B. ○ 9
C. ◉ 8
D. ○ 7

Reset

Q 02. In an array with 10 integers how many comparisons are required to find the maximum and minimum number?

Ops:
A. ○ 13
B. ○ 15
C. ○ 12
D. ◉ 8

Reset

Q 03. What will be the output of the following pseudo code?

```
1.  Integer n
2.  Set n = 5
3.  for (each i from 1 to n)
4.      for (each j from 1 to i)
5.          if j == 0 || j == i - 1
6.              Print("*", end=" ")
7.          Else
8.              if i != n
9.                  Print(" ", end=" ")
10.             Else
11.                 Print("*", end=" ")
12.             End if
13.         End if
14.     End for
15.     Print()
16. End for
```

Q 03. What will be the output of the following pseudo code?

```
1.  Integer n
2.  Set n = 5
3.  for (each i from 1 to n)
4.      for (each j from 1 to i)
5.          if j == 0 || j == i - 1
6.              Print("*", end=" ")
7.          Else
8.              if i != n
9.                  Print(" ", end=" ")
10.             Else
11.                 Print("*", end=" ")
12.             End if
13.         End if
14.     End for
15.     Print()
16. End for
```

Ops: A.

```
*
* *
* *
* *
* * * *
```

B.

```
*
* *
* *
* *
* * * * *
```

C.

```
*
*
* *
* *
* * * * *
```

D. *

Q 05. If we draw a binary search tree by inserting the given numbers from left to right, then what would be the height of the BST?
48, 36, 12, 9, 11

Ops: A. ○ 3
B. ○ 6
C. ◉ 4
D. ○ 2

Reset

Q 06. What will be the output of the following pseudo code for a=7, b=6?

```
1.
2.  Integer funn(Integer a, Integer b).
3.      if((b-4)>(a^b) && (a^b)<(b+a))
4.          b=(b+2)+b
5.          b=b+2
6.          b=b+3
7.          return 1+funn(a,b+a)
8.      End if
9.      return a+1
```

Note- &&: Logical AND - The logical AND operator (&&) returns the Boolean value true(or 1) if both operands are true and return false (or 0) otherwise.
^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Ops: A. ○ 13
B. ○ 14
C. ◉ 9
D. ○ 8

Reset

Q 07. What will be the output of the following pseudo code for a=0, b=0?

D.
```
*
**
**
**
***
```

Reset

Q 04. What will be the output of the following pseudocode?

```
1.  Integer  j, m
2.  Set m=0
3.  Integer a[4] = {0,1,1,4}
4.  for(each j from 0 to 2 )
5.      if (a[j+1]+a[j] > 4 )
6.          m=m-a[j]
7.      End if
8.  End for
9.  Print m
```

Ops:
A. 8
B. -19
C. -1
D. 16

Reset

Q 05. If we draw a binary search tree by inserting the given numbers from left to right, then what would be the height of the BST?
48, 36, 12, 9, 11

Ops:
A. 3
B. 6
C. 4
D. 2

Reset

Reset

Q 07. What will be the output of the following pseudo code for a=0, b=0?

```
1.
2.  Integer funn(Integer a, Integer b)
3.      if(a<4 && a<3)
4.          a=2+b+a
5.          a=a+3
6.          return funn(a,a)+a
7.      End if
8.      return a+b-1
```

Note- &&: Logical AND - The logical AND operator (&&) returns the Boolean value true(or 1) if both operands are true and return false (or 0) otherwise.

Ops:
A. ○ 7
B. ○ 24
C. ○ 16
D. ◉ 14

Reset

Q 08. What will be the output of the following pseudo code for a=0, b=1?

```
1.
2.  Integer funn(Integer a, Integer b)
3.      if(1>a && (5-b)>(b-a))
4.          a=b+2
5.          b=3+2+b
6.          return a+b+funn(b,a)-a
7.      End if
8.      b=(a+2)+a
9.      return a-1
```

D. 14

Reset

Q 08. What will be the output of the following pseudo code for a=0, b=1?

```
1.
2.  Integer funn(Integer a, Integer b)
3.      if(1>a && (5-b)>(b-a))
4.          a=b+2
5.          b=3+2+b
6.          return a+b+funn(b,a)-a
7.      End if
8.      b=(a+2)+a
        return a-1
```

Note- &&: Logical AND - The logical AND operator (&&) returns the Boolean value true(or 1) if both operands are true and return f. 0) otherwise.

Ops: A. 7

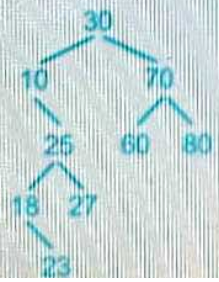
B. 11

C. 23

D. 16

Reset

Q 09.



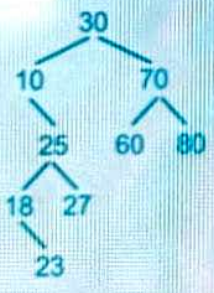
```
7.      End if
8.      b=(a+2)+a
9.      return a-1
```

Note- &&: Logical AND - The logical AND operator (&&) returns the Boolean value true(or 1) if both operands are true and return false (or 0) otherwise.

Ops: A. 7
B. 11
C. 23
D. 16

Reset

Q 09.



Which of the following is the correct Preorder Traversal of the given tree?

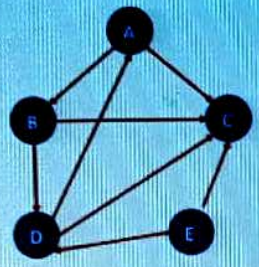
Ops: A. 30-10-25-18-23-27-70-60-80
B. 10-18-23-25-27-30-60-70-80
C. 30-10-70-25-60-80-18-27-23
D. 23-18-27-25-10-60-80-70-30

Reset

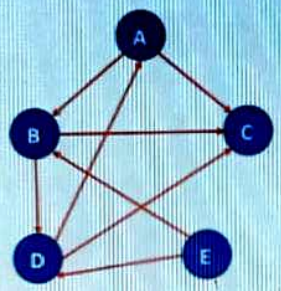
Q 10.

	A	B	C	D	E
A	0	1	1	0	0
B	0	0	1	1	0
C	0	0	0	0	0

C. ○



D. ◉



Reset

Q 11. Find out the number of vertices in a simple graph, if there are 10 edges, 4 vertices of degree 4, and all others of degree 2.

Ops: A. ○ 9

B. ○ 6

C. ○ 8

D. ◉ 7

Reset

Q 12. What will be the output of the following pseudocode?

```
1. Integer p,q,r
2. Set p=9, q=6, r=4
3. r=10^p
4. p=r+r
```

Q 11. Find out the number of vertices in a simple graph, if there are 10 edges, 4 vertices of degree 4, and all others of degree 2.

Ops: A. 9
B. 6
C. 8
D. 7

Reset

Q 12. What will be the output of the following pseudocode?

```
1. Integer p,q,r
2. Set p=9, q=6, r=4
3. r=10^p
4. p=r+r
5. p=p+q
6. p=12&r
7. Print p+q+r
```

Note- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.
^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Ops: A. 23
B. 9
C. 3
D. 11

Reset

Q 13. What will be the output of the following pseudo code?

Reset

Q 13. What will be the output of the following pseudo code?

```
1.  Integer p,q,r
2.  Set p=1, q=2, r=10
3.  if((r+p)<q)
4.      q=q+r
5.      if((r+p+q)<(q+r))
6.          q=(9+3)+p
7.      Else
8.          p=q+r
9.      End if
10.     p=(r+p)+q
11. End if
12. q=(p+3)+q
13. Print p+q+r
```

Ops:
A. ○ 31
B. ○ 22
C. ○ 10
D. ● 17

Reset

Q 14. What will be the output of the following pseudo code?

```
1.  Integer pp,qq,rr
2.  Set pp=1, qq=2, rr=10
3.  if((qq&rr)<pp)
4.      pp=(qq&4)+pp
5.  Else
```

Q 14. What will be the output of the following pseudo code?

```
1.  Integer pp,qq,rr
2.  Set pp=1, qq=2, rr=10
3.  if((qq&rr)<pp)
4.      pp=(qq&4)+pp
5.  Else
6.      rr=(rr+pp)&rr
7.      if((rr+qq+pp)<(9-rr))
8.          rr=qq+qq
9.      Else
10.         rr=(12^4)+rr
11.     End if
12. End if
13. Print pp+qq+rr
```

Note- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.
^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Ops:

A. ○ 29

B. ○ 19

C. ○ 22

D. ● 21

Reset

Q 15. What will be the output of the following pseudo code?

```
1.  Integer a,b,c
2.  Set a=1, b=2, c=10
```

D. 21

Reset

Q 15. What will be the output of the following pseudo code?

```
1.  Integer a,b,c
2.  Set a=1, b=2, c=10
3.  if((c+a+b)<(a+b+c))
4.      c=3+a
5.      if((c+a+b)>(b+c))
6.          c=(a+a)+a
7.      Else
8.          a=c+a
9.      End if
10.     c=(3+3)+a
11. Else
12.     c=(a+b)+a
13.     if((a-b)<(b-a))
14.         c=7+c
15.     Else
16.         c=b+a
17.     End if
18. End if
19. Print a+b+c
```

Ops: A. 25

B. 15

C. 5

D. 14

Reset

Q 16. What will be the output of the following pseudo code?

Reset

Q 16. What will be the output of the following pseudo code?

```
1.  Integer p,q,r
2.  Set p=1, q=5, r=8
3.  p=6+r
4.  if((3+r+p)<(6+p+q))
5.      r=(6+7)+q
6.  Else
7.      r=p+p
8.  End if
9.  if((r+q+p)<(4-p-r))
10.     p=(11+11)+r
11. End if
12. Print p+q+r
```

Ops: A. ○ 60

B. ○ 28

C. ○ 54

D. ◉ 47

Reset

Q 17. What will be the output of the following pseudo code?

```
1.  Integer p,q,r
2.  Set p=1, q=5, r=8
3.  q=r+q
4.  if((p+5+q)>(9+p))
5.      p=r+q
6.      p=(p+2)+q
7.  End if
8.  Print p+q+r
```

Ops: A. ◉ 57

Reset

Q 17. What will be the output of the following pseudo code?

```
1. Integer p,q,r
2. Set p=1, q=5, r=8
3. q=r+q
4. if((p+5+q)>(9+p))
5.     p=r+q
6.     p=(p+2)+q
7. End if
8. Print p+q+r
```

Ops: A. 57

B. 52

C. 67

D. 59

Reset

Q 18. If we draw a binary search tree by inserting the given numbers from left to right, then what would be the height of the BST?

103, 83, 93, 73, 53

Ops: A. 3

B. 6

C. 5

D. 4

Reset

Q 19. In Linked List memory is allocated during -

I. Compile time

II. Run time

Ops: A. Only II

B. Only II

C. ○ 5

D. ○ 4

Reset

Q 19. In Linked List memory is allocated during -

I. Compile time

II. Run time

Ops: A. ○ Only II

B. ◉ Only II

C. ○ Both I and II

D. ○ Neither I Nor II

Reset

Q 20. Find out the number of swappings required for sorting the given numbers in ascending order if you are using Bubble sort for sortin

20, 28, 15, 22, 25

Ops: A. ◉ 4

B. ○ 5

C. ○ 3

D. ○ 6

Reset

Q 21. What will be the output of the following pseudocode?

```
1. String str1="mars",str2="lion"
2. Print isPalin(str2+str1)+countVowel(str2+str1)
```

Note: countVowel(string) returns the number of vowels in the string. Ex- countVowel("okay") returns 2.
isPalin(string) returns 1 if the string is a palindrame, otherwise returns 0. Ex- isPalin("yyy") returns 1.

Ops: A. ○ 5

Q 22. What will be the output of the following pseudo code?

```
1.  Integer a,b,c
2.  Set a=9, b=5, c=8
3.  if((1&c)<b || b>c)
4.      a=(8+5)+b
5.  End if
6.  if((b+a)<(c+b))
7.      c=(10+2)^c
8.  End if
9.  c=c+c
10. Print a+b+c
```

Note- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.
^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.
||: Logical OR - The logical OR operator (||) returns the Boolean value TRUE(or 1) if either or both operands is TRUE and returns FALSE(or 0) otherwise.

Ops:

A. ○ 42

B. ○ 50

C. ● 39

D. ○ 36

Reset

Q 23. What will be the output of the following pseudo code?

```
1.  Integer pp,qq,rr
2.  Set pp=5, qq=4, rr=9
3.  if(2>pp && 2>pp)
4.      pp=5+rr
```

```
1. Integer pp,qq,rr
2. Set pp=5, qq=4, rr=9
3. if(2>pp && 2>pp)
4.     pp=5+rr
5. Else
6.     qq=8&pp
7.     rr=(1+4)+rr
8. End if
9. Print pp+qq+rr
```

Note- &&: Logical AND - The logical AND operator (&&) returns the Boolean value true(or 1) if both operands are true and return false (or 0) otherwise.

&: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second opera both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Ops:
A. (●) 19
B. ( ) 32
C. ( ) 22
D. ( ) 16

Reset

Q 24. What will be the output of the following pseudocode for a=2, b=1?

```
1. Integer funn(Integer a, Integer b)
2.     if(b&a>0)
3.         return funn(b-1,a+2)
4.     End if
5.     return b+a
```

Note- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Ops:
A. ( ) 5
B. ( ) -1
C. (●) 4

C. ○ 22

D. ○ 16

Reset

Q 24. What will be the output of the following pseudocode for a=2, b=1?

```
1.  Integer funn(Integer a, Integer b)
2.      if(b&a>0)
3.          return funn(b-1,a+2)
4.      End if
5.      return b+a
```

ote- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Ops: A. ○ 5

B. ○ -1

C. ◉ 4

D. ○ 13

Reset

Q 25. The Tree data structure is used for-

1. Manipulating hierarchical data
2. Manipulate sorted lists of data
3. Router algorithms

Ops: A. ◉ 1 & 3

B. ○ 1 & 2

C. ○ 1, 2 & 3

D. ○ 2 & 3

Reset

Submit

SECTION 02/02
Next Section