1. Find the output for the following pseudocode

```
Integer N=1
Integer M=10
Integer I
Sum=0
For I in range of N to M
Sum=sum+I
Print sum.
```

Ans:

i) 10

ii) Error

iii) 11

iv) 55 ✓

2. Find the output for the following pseudocode

```
Integer N=5
Integer M=10
N=N XOR M
M=N XOR M
N=N XOR M
Print N , M
```

Ans:

1. 10 5 ✓
2. 5 10
3. 5 5
4. 10 10

3. Find the output for the following pseudocode

```
Integer i
Set i = 3
do
print i + 3
i = i – 1
while(i not equals 0)
end while
```

Ans:

1. 5 4 6
2. 6 5 4 ✓
3. 6 4 5
4. 4 6 5

4. How many times the print statement will be executed

```
Integer a, b, c
 Set a = 8, b = 10, c = 6
 If(a > c AND (b + c) > a)
   Print a
 end if
if(c > b OR (a + c) > b)
   Print b
 end if
if((b+c) MOD a EQUALS 0)
   Print c
 end if
```

Ans:

1. 1
2. 3 ✓
3. 0
4. 4

```
Integer a, b, c
Set a = 8, b = 51, c = 2
c = (a ^ c)^ (a)
b = b mod 4
Print a + b + c
```

Ans:

1. 15
2. 17
3. 14
4. 13 ✓

```
 Integer i, j, k
Set k = 8for(each i from 1 to 1)
        for(each j from the value of i to 1)
            print k+1
        end for
end for
```

Ans:

1. 9 ✓
2. 4
3. 2
4. 7

Integer a, b
Set a = 15, b = 7
a = a mod (a - 3)
b = b mod (b – 3)
a = a mod 1
b = b mod 1
Print a + b

Ans:

1. 4
2. 0 ✓
3. 6
4. 9

```
Integer a, b, c
Set b = 5, a = 2, c = 2
if(b>a && a>c && c>b)
b = a + 1
Else
a = b + 1
End if
Print a + b + c
```

Ans:

1. 2
2. 13 ✓
3. 5
4. 7

Consider an array of float. Calculate the difference between the address of the 1st and 4th element, assuming float occupies 4 bytes of memory.

Ans:

1. 16
2. 4
3. 12 ✓
4. 5

What is the second part of a node in a linked list that contains the address of the next node called?

Ans:

1. Pointer
2. Data
3. Link ✓
4. Element

With the given information provided find out the address of Arr[17] in a 1-D array Arr[30].

- lower bound = 1

- starting base address = 1100

- size of each element is 2.

Ans:

1. 1070
2. 1132 ✓
3. 1128
4. 1068

```
Integer value, n
Set value = 1, n = 45
while(value less than equal to n)
 value = value << 1
 end loop
 Print value
```

Ans:

1. 32
2. 64 ✓
3. 45
4. 90

```
Integer c, d
 Set c = 15, d = 12
 d = c – 1
 Print c      //line
 c = d + (c – 2)
 if(c < 40)
   Goto line
 end if
```

Ans:

1. 27 39
2. 15 27 39 ✓
3. 14 26 38
4. None of the above

How many time the output would be printed?

```
Integer a, b, c Set a = 8, b = 10, c = 6
If(a > c AND (b + c) > a)
Print a
end if
if(c > b OR (a + c) > b)
Print b
end if
if((b+c) MOD a EQUALS 1)
Print c
end if
```

Ans:

1. 1
2. 2 ✓
3. 3
4. 0

Predict the output of the function when a = 4 and b = 6 ?

```
Integer func (Integer a, Integer b)
  Integer temp
  while(b)
    temp = a MOD b
    a = b
    b = temp
  end while
return a
 End function func()
```

Ans:

1. 3
2. 1
3. 4
4. 2 ✓

```
Integer x, y, z
Set x=24, y=8
x = x/y
 z = y<<x
Print z
```

Ans:

1. 0
2. 64 ✓
3. 1
4. 4

Integer x, y, z, a
Set x = 2, y = 1, z = 5
a = (x AND y) OR (z + 1)
Print a

Ans:

1. 5
2. 2
3. 3
4. 1 ✓

```
Integer a, b, c, d
        Set b = 18, c = 12
        a = b – c
        for (each c from 1 to a – 1)
                b = b + c + 12
                b = b/5
                d = b + a
        end for
        c = a + b + c
        Print a b c
```

Ans:

1. 6 4 14
2. 6 4 16 ✓
3. 5 3 9
4. 6 14 17

```
Integer a
String str1
Set str1 = “Terv”
a = stringLength(str1)
Print (a ^ 1)
```

Ans:

1. 4
2. 5 ✓
3. 6
4. 3

For input a = 5 & b = 5.

```
function (input a, input b)
If (a < b)
return function (b, a)
elseif (b != 0)
return (a * function (a, b - 1))
else
return 1
```

Ans:

1. 3125 ✓
2. 15625
3. 525
4. 625

initialize char c
set c= a
print "%d",a

Ans:
1. 64
2. 65
3. 97 ✓
4. Error

Integer i, j, k,c;
Set value i=0,j=1,k=0;
C= i++ || ++j || k++;
Print i ,j ,k ,c;

Ans:

1. 1 2 0 1 ✓
2. 1 2 1 1
3. 1 2 0 1
4. 1 1 2 1

What will be the output of the following pseudo code for arr[]= 1,2,3,4,5

```
initialize i,n
intialize an array of size n
  accept the values for the array
for i= 0 to n
  arr[i] = arr[i]+arr[i+1]
end for
print the array elements
```

Ans:

1. 3 5 9 15 20
2. 3 5 7 9 5 ✓
3. 3 5 7 9 11
4. error

```
Integer x,z
set x value as 10
for loop starts from 10 and reduced
till x value is 0
z=x&(x>>1)
if(z)
print(%d ,x)
```

Ans:

1. 7 6 9
2. 7 6 3 ✓
3. 6 7 8
4. 6 7 9

Integer a;
set a value as 100
print("%0 %x",a)

Ans:
1. %a
2. 100
3. %x ✓
4. error

Float x
long y
set x value as 0.0 and y value as 10
print(%d , sizeof(y)==sizeof(x+y))

Ans:
1. 4
2. 8
3. 0 ✓
4. 1

```
Integer any
   set value of any is ‘ ‘ * 10
   print any
```

Ans:

1. 340
2. 320 ✓
3. 380
4. 360

```
Integer go,num
set value of go is 5 and num is 1*10
do
num/=go
end do
while go--
print num
```

Ans:

1. 2 0 0 0 0 0
2. Floating point exception
3. 2 0 0 0 0 ✓
4. Compilation error

Predict the output of the given pseudo code if the value of n is 35

```
Read n
i=0
While n%10!=0
n=n+3
i++
end while
n=n+i
write n
```

Ans:

1. 50
2. 55 ✓
3. 45
4. 53

What will be the output of the given pseudo code if n = 10

```
Read n
Initialize i to 5
Initialize sum to 0
while i < n
increase sum by i
increment i
end while
Write sum
```

Ans:

1. 25
2. 35 ✓
3. 45
4. 55

Predict the output of the given pseudo code if the value of number is 6

```
Read number
k = 2
i = 2
while i<=number
k = k * i
i = i +1
end while
write k
```

Ans:

1. 1700
2. 1440 ✓
3. 1560
4. 1340

What will be the number of " * " printed by the given pseudo code when input is 25

```
Write "Please enter a number"
Read input
Repeat while input > 0
if( input > 0 and input <=10 )
Write *
else if ( input >10 and input <=20 )
Write **
else if ( input >20 and input< = 30 )
Write ***
input --
end if
end while
```

Ans:

1. 55
2. 45 ✓
3. 25
4. 35

You have written the pseudo code given alongside for performing binary search in an array of elements sorted in ascending order. Which step to be followed in A to execute binary search successfully?

1.Compare x with the middle element.
2.If x matches with the middle element, we return the mid index.
3.A
4.Else (x is smaller) recur for the left half

Ans:

1. Else if x is greater than the mid element, then x can only lie in left half subarray after the mid element. So we recur for left
2. Else if x is less than the mid element, then x can only lie in right half subarray after the mid element. So we recur for right
3. Else if x is greater than the mid element, then x can only lie in right half subarray after the mid element. So we recur for right ✓
4. None of the given options

```
Set Integer Emp_no=101
Set Integer salary=0
while (Emp_no=501)
    salary=salary+100
     display salary
end while
```

Ans:

1. Code executes successfully and value of salary is displayed once.
2. Code executes successfully and nothing is displayed.
3. Code executes successfully and value of salary is displayed infinite number of times. ✓
4. Compile time error.

```
Set Integer res=0
do
        --res
        display res
         res++
while(res>=0)
   end do-while
```

Ans:

1. The program will not enter the loop.
2. Code will run infinite number of times. ✓
3. Code will execute and value of res will be displayed twice.
4. Code will execute and value of res will be displayed once.

How many times will ‘#’ be displayed

```
for m = 0 to 4 step 1
Do
for n=0 to 4 step 1
Do
display '#'end-for
if(m==2) then break
end-if
end-for
```

Ans:

1. 1
2. 15 ✓
3. 8
4. 2

```
for i=0 to 4 step 1 do
        If  i==i++ + --i then do
                    display i
              end-if
end-for
```

Ans:

1. 3 2 1 0
2. 1 2 3 4
3. 0 ✓
4. 2 0

```
Set Character c='7'
switch(c)
case '1': display "One"
case '7': display "Seven"
case '2': display "Two"
default: display "Hello"
break
end-switch
```

Ans:

1. Onehello
2. Seventwohello ✓
3. Seventwo
4. seven

```
Integer a, p = 0
Set a = 5
a = a + 1
a = a * 2
a = a / 2
p = a / 5 + 6
print p
```

Ans:

1. 0
2. 7 ✓
3. 1
4. 2

```
Integer a, b, c
Set b = 8, a = 2
c = a ^ b
if (( c ^ b))
        b = 0
End if
Print b
```

Ans:

1. 3
2. 0 ✓
3. 5
4. 7

```
Integer a, b, c
Set b = 40, a = 20, c = 20
a = a + c
c = c + a
a = a + c
c = c + a
Print a + b + c
```

Ans:

1. 40
2. 100
3. 300 ✓
4. None of these

```
Integer a, b
Set a = 1, b = 1
a = (a ^ 1) & (1) + (b ^ 1) & (1)
Print a + b
```

Ans:

1. 1 ✓
2. 2
3. 0
4. None of the above

```
int x=222
while(x<225)
{
print x
x=x++
}
```

Ans:

1. 0
2. 221 222
3. 222 223
4. None of the above ✓

```
for i=0 to n-1
j=1
while j>0 and A[j]< A[j-1]
swap(A[j],A[j-1])
j=j+1
```

Ans:

1. Bubble sort is being implemented to sort an array ✓
2. Merge sort is being implemented to sort an array
3. Insertion sort is being implemented to sort an array
4. The code doesn’t sort an array

```
int x
set x = 888
if(x == 0)
print "1"
else if(x mod 9==0)
print "9"
else print (x mod 9)
end if
```

Ans:

1. 1
2. 3
3. 9
4. 6 ✓

```
Integer x, y, z, a
Set x=2, y=1, z=5
a=(x AND y) OR (z+1)
Print z
```

Ans:

1. 5 ✓
2. 2
3. 5
4. 0

```
int i
set i=6 do
print i-1
i=i-1
while(i not equals 0)
while loop ended
```

Ans:

1. 4 3 2 1 5 0
2. 5 4 3 2 1 0 ✓
3. 0 1 2 3 4 5
4. 6 5 4 3 2 1

```
Set a=6, b=3, c=2
if(b>a && a>c && c>b)
b = a+1
else
a = b+1
print a+b+c
```

Ans:

1. 11
2. 9 ✓
3. 5
4. Run time error

```
main()
{
while(!!7)
printf("Hai");
return 0;
}
```

Ans:

1. Hai
2. Haihai
3. Infinite loop ✓
4. None of these

```
integer x =4, y = 0
integer z
z = (y++, y)
print(z)
```

Ans:

1. 1 ✓
2. 0
3. Undefined Behavior due to order of evaluation can be different.
4. Compilation error

```
Set j=1, k=1
for each i from 1 to 5 :
print(k)
j+=1
k+=j
end-for
```

Ans:

1. 1 2 3 4 5
2. 4 6 8 10
3. 1 1 2 3 5
4. 1 3 6 10 15 ✓

integer a = 40, b = 35, c = 20, d = 10
Comment about the output of the following two statements:

print a * b / c – d
print a * b / (c – d)

Ans:
1. Differ by 80 ✓
2. Same
3. Differ by 50
4. Differ by 160

```
integer num = 8;
print( num << 1, num >> 1)
```

Ans:

1. 8 0
2. 0 0
3. 16 4 ✓
4. error

```
integer a = 4, b = 2;
print(a^b)
```

Ans:

1. 4
2. 1
3. 0
4. 6 ✓

```
int j=41, k= 37
j=j+1
k=k-1
j=j/k
k=k/j
print(k,j)
```

Ans:

1. 42 36
2. 36 1
3. 1 1
4. 1 36 ✓

integer a = 60, b = 35, c = -30
What will be the output of the following two statements:

print (a > 45 OR b > 50 AND c > 10)
print ((a > 45 OR b > 50) AND c > 10)

Ans:
1. 0 and 1
2. 0 and 0
3. 1 and 1
4. 1 and 0 ✓

integer a = 984, b=10
float c
c = a / b
print c

Ans:
1. 984
2. 98.4
3. 98.0 ✓
4. error

Create integer Array ;

Array elements ={ 2, 4, 5,78,9};

Sum Array even index elements ;

Print sum;

Ans:

1. 82
2. 13
3. 14
4. 16 ✓

Create char c =’A’, b=’s’;
Integer n;
Add c and b store n;
Print n;

Ans:
1. 180 ✓
2. 148
3. 150
4. 212

Create integer a, b, c ;
a=13;
b=3;
a Right shift of b store c;
print c;

Ans:
1. 3
2. 2
3. 1 ✓
4. 0

Integer a=5;
Print a pre increment , a post increment ;
Integer b=5;
Print b pre increment + b post increment;

Ans:
1. 6 6 12
2. 7 6 13
3. 7 7 14
4. 7 5 13 ✓

Integer a , b , c;

Set the value of a=5 , b=11 , c=0;

a= ++a + a++ - b++;

b= ++b - --b + --a;

c= ++b + ++b - a--;

print a,b and c;

Ans:

1. 1 3 6
2. 0 3 5 ✓
3. 1 4 6
4. 7 12 8

```
Integer n, k;
Set n value 43;
 k = ~ n;
print n
```

Ans:

1. -44 ✓
2. -43
3. 44
4. 45

```
Integer n, k;
Set n value -13;
 k = ~ n;
print n;
```

Ans:

1. -14
2. -13
3. 12 ✓
4. 11

```
Integer n;
Set value of n =5;
If(n=0)
Its true print n value ;
Else
Print ++n;
```

Ans:

1. 6
2. 0
3. 2
4. 1 ✓

```
Integer n;
Set value of n=10;
Check the if Condition n equal to 10;
 Its true print n++;
else
   print n=n+2;
```

Ans:

1. 10
2. 11
3. 12
4. Compile time error ✓