

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( $(b+c) \text{ MOD } a \text{ EQUALS } 0$ )

Print c

end if



Ans:

1. 1

2. 3 ✓

3. 0

4. 4

Integer a, b, c

Set  $a = 8$ ,  $b = 51$ ,  $c = 2$

$c = (a \wedge c) \wedge (a)$

$b = b \bmod 4$

Print  $a + b + c$

Ans:

1. 15

2. 17

3. 14

4. 13



Integer i, j, k

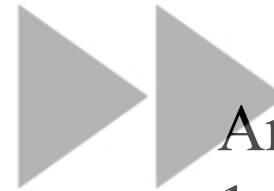
Set k = 8  
for(each i from 1 to 1)

    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  $a = 15$ ,  $b = 7$

$a = a \bmod (a - 3)$

$b = b \bmod (b - 3)$

$a = a \bmod 1$

$b = b \bmod 1$

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  $x = 2$ ,  $y = 1$ ,  $z = 5$

$a = (x \text{ AND } y) \text{ OR } (z + 1)$

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 ( $b \neq 0$ )
```

```
    return ( $a * \text{function}(a, b - 1)$ )
```

```
  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  
initialize 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

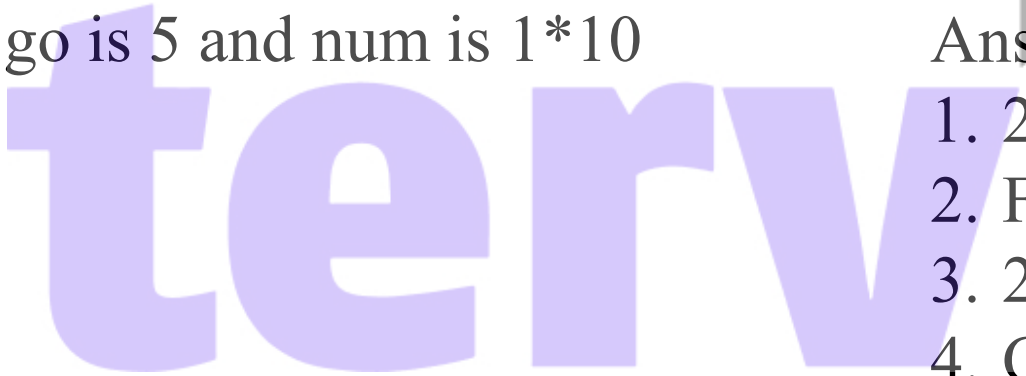
Ans:

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  $a = 1$ ,  $b = 1$

$a = (a \wedge 1) \& (1) + (b \wedge 1) \& (1)$

Print  $a + b$

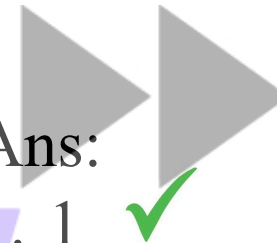
Ans:

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, 7, 8, 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;

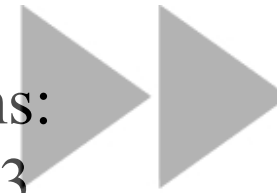
Ans:

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 ✓