

### ACCENTURE

### PSEUDO CODE

## What will be the output of the following pseudocode for a = 9, b = 7?

```
Integer funn(Integer a, Integer b)
Integer c
Set c = 2
b = b mod c
```

return a + b
End function funn()

 $a = a \mod c$ 

- A) 17
- B) 5
- C) 2
- D) -5

### Answer: C) 2

### **Explanation:**

- c is set to 2.
- $b = b \mod c \rightarrow b = 7 \mod 2 \rightarrow b = 1$
- $a = a \mod c \rightarrow a = 9 \mod 2 \rightarrow a = 1$
- The function returns  $a + b \rightarrow 1 + 1 = 2$ .

## What will be the output of the following pseudocode?

```
Integer a, b, c
Set a = 8, b = 6, c = 4
If (a > b)
a = b
Else
 b = a
End If
If (c > b)
c = b
Else
 b = c
End If
Print a + b + c
```

#### Answer: C) 14

#### **Explanation:**

- Initially, a = 8, b = 6, c = 4.
- First if condition: a > b is true, so  $a = b \rightarrow a = 6$ .
- Second if condition: c > b is false, so  $b = c \rightarrow b = 4$ .
- Now, a = 6, b = 4, c = 4.
- The output is  $a + b + c \rightarrow 6 + 4 + 4 = 14$ .

### What will be the output of the following pseudocode for input a = 30, b = 60, c = 90?

```
Integer a, b, c, sum

Read a, b, c

Set sum = a + b + c

if ((sum EQUALS 180) and (a NOT EQUALS 0) and (b

NOT EQUALS 0) and (c NOT EQUALS 0))

Print "Success"

Otherwise
```

A) Success

Print "Fail"

- B) None of the mentioned options
- C) Error in the logic of the pseudocode
- D) Fail

**End if** 

#### **Answer: A) Success**

#### **Explanation:**

- sum =  $a + b + c \rightarrow sum = 30 + 60 + 90 = 180$ .
- Since sum equals 180 and all variables a, b, c are non-zero, the condition is true.
- Therefore, the output is "Success".

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

```
Integer funn(Integer a, Integer b)
if (a < 3 and b < 4)
return funn(a + 1, b + 1)
Elsereturn a + b
End if
End function funn()
```

- A) 8
- B) 19
- c) -7
- D) 7

### Answer: D) 7

#### **Explanation:**

- Call funn(1, 2).
- a < 3 and b < 4 is true.</li>
- Call funn(2, 3).
- a < 3 and b < 4 is true.
- Call funn(3, 4).
- a < 3 and b < 4 is false.
- Return a + b = 3 + 4 = 7.

#### What will be the output of the following pseudocode for a = 2, b = 6?

```
Integer funn(Integer a, Integer b)

if (a > 0)

if (b > 0)

return a + b + funn(a + 1, 0) + funn(a + 2, 0) + funn(a + 3, 0)

End if
End if
return a + b
```

• A) 21

End function funn()

- B) 17
- c) 37
- D) 20

#### Answer: D) 20

#### **Explanation:**

- Call funn(2, 6).
- a > 0 and b > 0 are true.
- return 2 + 6 + funn(3, 0) + funn(4, 0) + funn(5, 0).
- funn(3, 0), funn(4, 0), funn(5, 0) return 3, 4, 5 respectively.
- $\bullet$  2 + 6 + 3 + 4 + 5 = 20.

#### What will be the output of the following pseudocode for a = 4, b = 6?

```
Integer funn(Integer a, Integer b)

if (a > 2)

if (b > 2)

return a + b + funn(a + 1, b - 5)

End if

End if

return a - b
```

• A) 17

End function funn()

- B) 14
- C) 22
- D) 12

#### What will be the output of the following pseudocode?

```
Integer p, q, r

Set p = 3, q = 1, r = 2

If (p + (2 & 2 & 2) and q + (3 & 3 & 3) and r + (2 ^ 2 ^ 2))

p = p - 2q = p

Else
p = r
q = q ^ 2

End If
```

• A) 8

Print p + q + r

- B) 4
- C) 16
- D) -8

#### Answer: B) 4

#### **Explanation:**

- (2 & 2 & 2) evaluates to 2.
- (3 & 3 & 3) evaluates to 3.
- (2 ^ 2 ^ 2) evaluates to 2.
- (p + 2) is 5, (q + 3) is 4, (r + 2) is 4, all conditions are true.
- $p = p 2 \rightarrow p = 3 2 = 1$ .
- $q = p \rightarrow q = 1$ .
- Now, p = 1, q = 1, r = 2.
- Output is p + q + r = 1 + 1 + 2 = 4.

#### What will be the output of the following pseudocode?

```
Integer p, q, r
Set p = 0, q = 4, r = 3
If (p or r)
 If (p and r)
  p = p \& r
 End If____
 p = p \wedge r
End If
Print p + q + r
```

- A) 10
- B) 20
- C) 12
- D) 7

Answer: A) 10

#### **Explanation:**

- (p or r) is true because r is 3.
- (pandr) is false because p is 0.
- $p = p \land r \rightarrow p = 0 \land 3 = 3$ .
- Now, p = 3, q = 4, r = 3.
- Output is p + q + r = 3 + 4 + 3 = 10.

# What will be the output of the following pseudocode?

### Integer x

$$Set x = 5$$

$$x = x + 5$$

Print x

- A) 5
- B) 10
- C) 15
- D) 20

Answer: B) 10 Explanation: The value of x is initially set to 5, then increased by 5, resulting in 10.

## What does the following pseudocode do?

Integer x
Set x = 10
Print x

- A) Sets x to 0
- B) Prints the value 10
- C) Increases x by 10
- D) Prints 0

Answer: B) Prints the value 10 Explanation: The pseudocode sets the variable x to 10 and then prints it.

# Q: What will be the output of the following pseudocode?

Integer i
for(i = 0 to 4)
Print "Hello"
end for

- A) "Hello" is printed 4 times
- B) "Hello" is printed 5 times
- C) "Hello" is printed 6 times
- D) "Hello" is printed 1 time

Answer: B) "Hello" is printed 5 times

Explanation: The loop runs from 0 to 4, executing 5 iterations.

## What is the value of sum after executing the following pseudocode?

Integer i, sum
Set sum = 0
for(i = 1 to 5)
sum = sum + i
end for

- A) 10
- B) 15
- C) 20
- D) 25

Answer: B) 15

**Explanation: The loop calculates** 

the sum of integers from 1 to 5.

## What will be the output of the following pseudocode?

- A) 2
- B) 4
- C) 6
- D) 1

Answer: B) 4
Explanation: Arrays are zeroindexed, so arr[1] accesses the second element.

# What is the value of arr[2] after the following operations?

Integer arr[3] = 
$$\{1, 2, 3\}$$
  
arr[2] = arr[0] + arr[1]

- A) 1
- B) 2
- C) 3
- D) 4

Answer: C) 3

Explanation: arr[0] is 1 and arr[1]

is 2, so arr[2] becomes 3.

What will be the output of the following pseudocode when fun(2) is called?

Integer fun(Integer n)
if (n <= 0) return 1
return n \* fun(n - 1)</pre>

- A) 1
- B) 2
- C) 3
- D) 4

• Answer: B) 2
Explanation: The function
calculates the factorial of n. For n
= 2, it returns 2 \* fun(1) which
results in 2.

# What does the following pseudocode do?

Integer fun(Integer n)
if (n == 0) return 1
else return n + fun(n - 1)

- A) Computes the factorial of n
- B) Computes the sum of integers from n to 1
- C) Computes the product of integers from n to 1
- D) Returns 1 for any value of n

 Answer: B) Computes the sum of integers from n to 1
 Explanation: This recursive function adds the current n to the result of fun(n-1) until n is 0. What is the result of the following pseudocode when compute(2) is called?

Integer compute(Integer x) return x \* x

- A) 2
- B) 4
- C) 6
- D) 8

• Answer: B) 4 Explanation: The function compute squares the input value. What does the following pseudocode return when add(3, 4) is called?

Integer add(Integer a, Integer b)
return a + b

- A) 3
- B) 4
- c) 7
- D) 10

• Answer: C) 7 Explanation: The function adds the two input values.

## What will be the value of the following pseudocode?

- A) 0
- B<del>) 1</del>
- c) 2
- D) 3

Answer: B) 1
Explanation: The bitwise AND of 5 (0101) and 3 (0011) is 1 (0001).

#### What will be the output of the following pseudocode?

- A) 8
- B<del>) 10</del>
- C) 16
- D) 18

• Answer: C) 16 Explanation: The bitwise left shift operation << moves all bits in x one place to the left, doubling the value.

## What will be the value of y after the following pseudocode?

- A) 5
- B) 6
- c) 7
- D) 8

• Answer: B) 6
Explanation: The pre-increment operator ++x increases x by 1 before assigning it to y.

## What is the value of z after the following pseudocode?

Integer z = 10

**Z**--

Print z

- A) 9
- B) 10
- C) 11
- D) 12

• Answer: A) 9
Explanation: The post-decrement operator z-- decreases z by 1 after its current value is used.

# What will be the output of the following pseudocode?

Integer a = 10, b = 20
if (a > b)
Print "a is greater"
else
Print "b is greater"

- A) a is greater
- B) b is greater
- C) a and b are equal
- D) None of the above

• Answer: B) b is greater Explanation: Since a is not greater than b, the else block is executed.

#### What does the following pseudocode do?

Integer n = 15
if (n % 2 == 0)
Print "Even"
else
Print "Odd"

- A) Prints "15"
- B) Prints "Even"
- C) Prints "Odd"
- D) Does nothing

• Answer: C) Prints "Odd" Explanation: The code checks if n is even or odd and prints the appropriate message. Since 15 is odd, "Odd" is printed.

#### What does the following pseudocode do?

Stacks
s.push(10)
s.push(20)
s.pop()

- A) Pushes 10 and 20 onto the stack, then pops 10
- B) Pushes 10 and 20 onto the stack, then pops 20
- C) Pops 20, then pushes 10 and 20
- D) Pushes 10, pops 20

• Answer: B) Pushes 10 and 20 onto the stack, then pops 20 Explanation: The last element pushed onto the stack is popped first (LIFO).

#### What will be the value of q.front() after the following pseudocode?

Queue qq.enqueue(5) q.enqueue(10) q.enqueue(15) q.dequeue()

- A) 5
- B) 10
- C) 15
- D) 20

• Answer: B) 10
Explanation: The first element enqueued (5) is removed by dequeue, making 10 the front of the queue.

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