CIS 210 Winter 2017 - Week 1 Quiz - KEY

0. Consider the code segment below:

IF onTime
    display "Hello."
ELSE
    IF absent
        display "Is anyone there?"
    ELSE
        display "Better late than never."

If the variables onTime and absent both have the value False, what is displayed as a result of executing the code segment?

(A) Is anyone there? (C) Hello. Is anyone there?
(B) Better late than never. (D) Hello. Better late than never.

1. A dependent child can be very loosely defined as a person under 18 years of age who does not earn $10,000 or more a year. An expression that would define a dependent child is

(A) (age < 18) AND (salary < 10000)
(B) (age < 18) OR (salary < 10000)
(C) (age <= 18) AND (salary < 10000)
(D) (age <= 18) OR (salary <= 10000)

2. Given the following code, where the variables p, q, and result all have integer values:

\[
p \leftarrow 1 \\
q \leftarrow 2 \\
\text{result} \leftarrow 4 \\
\text{IF} \ (p < q) \\
\quad \text{IF} \ (q > 4) \\
\quad \text{result} \leftarrow 5 \\
\quad \text{ELSE} \\
\quad \text{result} \leftarrow 6
\]

What would be the value of result after the code is executed?

(A) 2 (C) 5
(B) 4 (D) 6

3. Given the following code, where the variables count, balance, and deposit all have numeric values:

\[
count \leftarrow 0 \\
\text{WHILE} \ (\text{count} < 357) \\
\quad \text{balance} \leftarrow \text{balance} + \text{deposit} \\
\quad \text{count} \leftarrow \text{count} + 1
\]

How many times will the body of the loop be executed? (A) 1 (C) 357
(B) 356 (D) 358
4. Given the following code, where the variables `result` and `i` have numeric values and `nums` is a list of integers:

```
result ← 0
i ← 0

WHILE i < length(nums)
    IF nums[i] < 0
        result ← result + 1
    i ← i + 1

What is the purpose or outcome of this section of code?
```

(A) to find the smallest element in a list of numbers
(B) to count the negative numbers in a list of numbers
(C) to count the numbers in a list of numbers
(D) to sort a list of numbers

5. Consider the following program code, where `i` and `sum` have integer values:

```
i ← 0
sum ← 0

REPEAT UNTIL i = 4
    i ← 1
    sum ← sum + 1
    i ← i + 1

DISPLAY sum
```

Which of the following best describes the result of running the code?

(A) The number 0 is displayed.
(B) The number 6 is displayed.
(C) The number 10 is displayed.
(D) Nothing is displayed; the program results in an infinite loop.

6. Given the following code, where `x` is an integer:

```
x ← 0
x ← x + 1
x ← x + 2
```

What is the value of `x` after the code has been executed?

(A) 0       (B) 1       (C) 2
(D) 3
7. A summer camp offers a morning session and an afternoon session. The list `morningList` contains the names of all children attending the morning session, and the list `afternoonList` contains the names of all children attending the afternoon session.

Only children who attend both sessions eat lunch at the camp. The camp director wants to create `lunchList`, which will contain the names of children attending both sessions.

The following code segment is intended to create `lunchList`, which is initially empty. It uses the function `isFound(list, name)` which returns True if name is found in list and returns False otherwise.

```
FOR EACH child IN morningList
    {
        <MISSING CODE>
    }
```

Which of the following could replace <MISSING CODE> so that the code segment works as intended?

(A) IF (isFound(afternoonList, child))
    {
        APPEND(lunchList, child)
    }

(B) IF (isFound(lunchList, child))
    {
        APPEND(afternoonList, child)
    }

(C) IF (isFound(morningList, child))
    {
        APPEND(lunchList, child)
    }

(D) IF ( (isFound(morningList, child)) OR (isFound(afternoonList, child)) )
    {
        APPEND(lunchList, child)
    }