CSA WS 08G - Practice 2

Started: Nov 11 at 4:59pm

Quiz Instructions

- 2 attempts
- Highest score
- Not comprehensive of the chapter

Question 1	100 pts

Given the code segment:

```
int count = 1;
while (count <= 5)
    System.out.println("Hello");
    count++;
```

How many times is `Hello` displayed after the code segment is executed?

○ 6

◉ This is an infinite loop

○ This has a syntax error

○ 4

○ 5

Question 2

100 pts

If a loop does not contain, within itself, a valid way to terminate, it is called a(n) _____ loop

○ while

○ do-while

● infinite

○ for

Question 3

100 pts

Consider the following method:

```
public int countX(int n)
{
  int count = 0;
  while (n > 0 && n % 3 == 0) // n is pos. &  div. by 3
  {
    count = count + 1;
    n = n / 3;
  }
  return count;
```

```
}
```

What does `countX(36)` return?

○ 1

○ 0

○ 4

○ 5

◉ 2

Question 4   **100 pts**

What output does this `while` loop generate?

```
int j = 6;
while (j > 1)
{
    System.out.print(j + ", ");
    j--;
}
```

◉ 6, 5, 4, 3, 2,

○ The output is infinite

○ No output is generated

○ 6, 5, 4, 3, 2

Question 5   **100 pts**

Given that `n` and `count` are of type `int`, which statement is true about the following code fragments?

I	```for (count = 1; count <= n; count++) System.out.println(count);```
II	```count = 1; while (count <= n) { System.out.println(count); count++; }```

◉ I and II are exactly equivalent for all input values of `n`

○ I and II are exactly equivalent only when `n = 0`

○ I and II are exactly equivalent for all input values of `n >= 1`, but differ when `n < 1`

○ I and II are not equivalent for any value of `n`

○ I and II are exactly equivalent only when `n` is even

Question 6

100 pts

What are the values of i and j after the following code fragment is run?

```
int i = 10;
int j = 20;
int count = 0;
while (count < 5)
{
    i = 2*i;
    i = i + 1;
    j = j - 1;
    count++;
}
System.out.println("i = " + i + ", j = " + j);
```

- ⦿ i = 351, j = 15

- ○ i = 10, j = 20

- ○ i = 1311, j = 35

- ○ i = 351, j = 20

Question 7

100 pts

Which loop(s) (among the 3 in Java) always iterate(s) at least once?

○ `while` only

○ `for` and `while` and `do-while`

○ `for` only

◉ `do-while` only

○ `while` and `for`

Question 8   **100 pts**

How many times does the loop execute in the following code fragment?

```
int i;
for (i = 0; i < 50; i = i + 4)
{
    System.out.println(i);
}
```

○ 11

○ 12

○ 14

◉ 13

Question 9

100 pts

What is the output of the code fragment given below?

```
String s = "PQXYZ";
int i = 1;
while (i < 5)
{
    System.out.print(s.substring(i, i + 1));
    i++;
}
```

- ○ PQXY
- ○ PQQXXYYZ
- ● QXYZ
- ○ PQXYZ
- ○ No output

Question 10

100 pts

What will be printed by the statements below?

```
int a = 10;
while (a > 5)
{
```

```
    System.out.print (a + " ");
    a = a - 2;
}
```

- ○ 10 8 6 4

- ○ 10 8

- ○ 10 9 8 7 6 5

- ◉ 10 8 6

Question 11

100 pts

What will be the value of x after the following statements are executed?

```
int x = 10;
for (int y = 5; y < 20; y +=5)
    x += y;
```

- ○ 50

- ◉ 40

- ○ 25

- ○ 30

Question 12

100 pts

Given that there are two `int` variables called `val1` and `val2`, with values 2 and 10, respectively.

When the following code is executed

```
for (int i = val2; i >= val1; i--) {
    System.out.println(i);
    break;
}
```

* What is the value of `i`? AND

* How many numbers are displayed in the console window?

○ `i` is 2. And 8 numbers are printed.

○ `i` is 2. And 1 number is printed.

◉ `i` is 10. And 1 number is printed.

○ `i` is 11. And 9 numbers are printed.

○ Infinite loop, so both are "infinity".

Question 13

100 pts

Given the code segment:

```
int x = 31;
do {
```

```
    x += 10;
} while (x <= 70);
```

How many times is the loop executed?

◉ 4

○ 3

○ This is an infinite loop

○ This has syntax error

○ 5

Question 14

100 pts

What is the output of the code fragment below?

```
int i = 0;
int j = 0;
while (i < 125)
{
    i = i + 2;
    j++;
}
System.out.println(j);
```

◉ 63

○ 0

○ 62

○ No output because the code does not compiler

Question 15

100 pts

Is the code fragment written below legal?

```
String s = "1234";

for (int i = 0; i <= 5; i++)

{

    System.out.print(s.substring(i, i + 1));

}
```

◉ No; for `i = 4`, `s.substring(i, i + 1)` will result in an `StringIndexOutOfBounds` error.

○ Yes.

○ No; line 4 should have no semicolon at the end.

○ No; there should be a semicolon at the end of line 2.

Question 16

100 pts

Given

```
for (int number = 5; number <= 15; number +=3)
    System.out.print(number + ", ");
```

What is displayed in the console window after the code segment is executed?

○ This is infinite loop

○ 5, 8, 11, 14, 17,

◉ 5, 8, 11, 14,

○ 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,

○ This has an error

Question 17

100 pts

What will be the result of running the following code fragment?

```
int year = 0;
double rate = 5;
double principal = 1000;
double interest = 0;
while (year < 46)
{
    interest = (principal * year * rate) / 100;
    System.out.println("Interest " + interest);
}
```

○ The code fragment will not display any output because it will not compile.

○ The code fragment will not display the calculated interest and halt abruptly.

○ The code fragment will display the interest calculated for 45 years.

◉ The code fragment will continue to display the calculated interest forever because the loop will never end.

Question 18   **100 pts**

What is the output of the code snippet given below?

```
String s = "12345";
int i = 1;
while (i < 5)
{
    System.out.print(s.substring(i, i + 1));
    i+=2;
}
```

○ 13

○ 2345

◉ 24

○ no output

Question 19   100 pts

Given the code segment:

```
int maxTimes = 20;
for (int i = 0, i < maxTimes, i++) {
...
}
```

How many iterations is the loop body executed?

○ This is an infinite loop

○ 20

○ 19

○ 21

◉ This has a syntax error

Question 20   100 pts

Given the code segment:

```
int maxNum = 8;
int sum = 0;
int i;
for (i = 2; i <= maxNum; i += 2) {
sum *= i;
```

```
. . .

return sum;

}
```

What is the value of `sum` after the code segment is executed?

- ⦿ 0

- ◯ 2

- ◯ This is an infinite loop

- ◯ 20

- ◯ 8

Question 21

100 pts

What is the output of the code fragment below?

```
int i = 1;
while (i < 20)
{
    System.out.print(i + " ");
    i = i + 2;
    if (i == 15)
    {
        i = 19;
    }
}
```

○ 1 3 5 7 9 11 13 15 17 19

◉ 1 3 5 7 9 11 13 19

○ 1 3 5 7 9 11 13 15 17

○ 1 3 5 7 9 11 13 17 19

## Question 22																					**100 pts**

What can be said about the loop in the following code fragment?

```
int years = 48;
double balance = 1000;
double targetBalance = 2000;
double rate = 4;
for (int i = 1; i <= years; i++)
{
   if (balance >= targetBalance)
   {
      i = years + 1;
   }
   else
   {
      double interest = balance * rate / 100;
      balance = balance + interest;
   }
}
```

○ There is a compilation error.

○ The loop will never stop.

○ The loop will run `48` times.

◉ The loop will run at most `48` times, but may stop earlier when balance exceeds or equals `targetBalance`.

Question 23   100 pts

What will be the value of `x` after the following code is executed?

```
int x = 10, y = 20;
while (y < 100)
{
    x += y;
    y += 20;
}
```

○ 130

◉ 210

○ 110

○ 90

Question 24

100 pts

Given the code segment:

```
int maxCt = 3;
int x = 4;
for (int i = 0; i < maxCt; i++); {
x *= 4;
...
}
```

What is the value of x after the code segment is executed?

- ◉ 16

- ○ 4

- ○ 64

- ○ 256

- ○ This is an infinite loop

Question 25

100 pts

Given the code segment:

```
int x = 70;
do {
    x += 10;
```

```
} while (x < 35);
```

What is the value of x after the code segment is executed?

○ This has syntax error

○ 90

◉ 80

○ This is an infinite loop

○ 70 (loop not executed due to false condition)

No new data to save. Last checked at 10:20pm   Submit Quiz