**CS 1301**

**Exam 3, Spring 2020**

**(40pts)**

**Name:**

1. State true or false: (6 x 2 = 12pts)

True a) A return statement is required for a value-returning method.

True b) The value of the parameter is passed to the argument.

True c) Ambiguous invocation causes an error.

False d) One cannot declare a local variable with the same name multiple times in different non-nesting blocks in a method.

True e) The scope of a parameter covers the entire method.

True f) The scope of a local variable starts from its declaration and continues to the end of the block that contains the variable.

1. If x is an int where x = 1, what will x be after the following loop terminates? (2pt)

while(x < 100)

x = x \* 2;

a. 2

b. 64

c. 100

d. 128

e. None of these, this is an infinite loop

1. What output is produced by the following code fragment? (2pts)

for(int i1 = 0; i1 < 9; i1 += 3)

System.out.print (i1 + "\t");

0 3 6

1. Given the code below. What is the output? (3pts)

int n = 0;

for (int k = 0; k <= 10; k++)

{

for (int m = 15; m > 9; m--)

{

n++;

}

}

System.out.println ("N = " + n);

66

1. How many times will the following loop iterate? (2pts)

int count = 0;  
 do  
 {  
 System.out.println("Hello World!");  
 count++;  
 }while (count <= 10);  
Hello World! \* 11

1. Given that s is a String, what does the following loop do? (2pts)

for(int j = s.length(); j > 0; j--)

System.out.print(s.charAt(j-1));

a. it prints s out backwards

b. it prints s out forwards

c. it prints s out backwards after skipping the last character

d. it prints s out backwards but does not print the 0th character

e. it yields a run-time error because there is no character at s.charAt(j-1) for j = 0

1. What output is produced by the following code fragment? (4pts)

int num = 1;

int max = 15;

while (num < max) {

num +=2;

if (num == max/2)

continue;

System.out.print(num + "\t");

}

3 5 9 11 13 15

1. What output is produced by the following code fragment? (4pts)

int number = 12;

while (number > 0) {

number = number - 2;

if (number == 6)

break;

System.out.print (number+"\t");

}

10 8

1. What is the output of the following code? (3pts)

public static void change(int n)  
{  
 n++;  
 System.out.println("n inside change() function: "+n);  
}  
  
public static void main(String [] args)  
{  
 int num = 1;  
 change(num);  
 System.out.println("num after change() function: "+num);  
}

n inside change() function: 2

num after change() function: 1

1. What is the output of the following code? (6pts)

public static void main(String [] args)  
 {  
 int i = 0;  
  
 while(i <= 4)

{  
 method(i);  
 i++;  
 }  
  
 System.out.println(i);  
}  
   
public static void method(int i)  
{  
 do{  
 if (i%3 != 0)  
 System.out.println(i);  
 i--;  
 }while (i >= 1);  
  
 System.out.println();  
 }

Line 1:

Line 2: 1

Line 3:

Line 4: 2

Line 5: 1

Line 6:

Line 7: 2

Line 8: 1

Line 9:

Line 10: 4

Line 11: 2

Line 12: 1

Line 13:

Line 14: 5