**CSCI 152 Midterm Exam 1**

Name:

Student Id:

**Basic Programming Concepts:**

1. Why won’t this program (below) named BadProgram.java compile?

public class Program{

public static void main(String[] args) {

int x = 10;

System.out.println(x);

}

}

**Terminal Command:**

javac BadProgram.java

**Compiler Output:**

BadProgram.java:1: error: class Program is public, should be declared in a file named Program.java

public class Program{

^

1 error

**Answer: The program name in java must be the same as the class name.**

**Data Types:**

**For this section of the exam please identify the type and the value of the expression within System.out.println():**

Sample Answer: (type, value)

int i = 0;  
System.out.println(i + "1");

**Answer: (String, “01”)**

1. System.out.println(2.78);

**Answer: (double or float, 2.78)**

1. System.out.println(‘C’);

**Answer: (char, ‘C’)**

int numberOfIterations = 0;

for (int i = 0; i <= 20; i++){

numberOfIterations += 1;

}

System.out.println(numberOfIterations);

**Answer: (int, 21)**

1. System.out.println(true || false);

**Answer: (boolean, true)**

1. System.out.println(true && false);

**Answer: (boolean, false)**

1. System.out.println(!(true && false));

**Answer: (boolean, true)**

1. What are the three boolean operators in Java?

**Answer: &&, ||, and !**

**Conditionals and Loops:**

1. What is the control flow of the following loop?

for (**1.** int i = 0; **2.** i < 10; **3.** i++){

// **4.** Some code here between { }.

}

\*Give your answer as a list of integers ordered by execution i.e.,

3,4,2,1

**Answer: 1, 2, 4, 3**

1. Given the following…

int i = 1;

How can we increment the value of i so that it has a new value of 2 (Please list at least three ways to increment i)?

**Answers:**

* **i += 1;**
* **i++;**
* **++i;**
* **i = i + 1;**

1. what type of the variable **whatIsTheTypeOfMe**?

while (**whatIsTheTypeOfMe**){

// Some code here...

}

**Answer: boolean**

1. How many iterations are do while loops guaranteed to execute?

**Answer: 1**

1. What is the following called (i.e., it’s a special type of while loop)?

while(true){

// Do something…

}

**Answer: Infinite loop**

1. What is the value of i?

int i = 10;

if (i < 10){

i \*= 2;

}

else if (i < 10){

i = i + 1;

}

else{

i /= 2;

}

**Answer: 5**

1. What is the value of i after this code has executed?

int i = 1;

switch(i){

case 0: {

i = i + 5;

}

case 1:{

i = i + 1;

}

default:{

i = (int) (Math.random() \* 1);

}

}

System.out.println(i);

**Answer: 0**

1. True or False? In Java the file name of the program and class name must be the same.

**Answer: True**

**For this section, please select one of A, B, or C for the answer.**

1. Declaration
2. Assignment
3. All the above
4. Name the type of programming statement.

int i;

**Answer: A (Declaration)**

1. Name the type of programming statement.

i = 3;

**Answer: B (Assignment)**

**Arrays:**

1. What is the value of i?

int[] myArray = new int[4];

int i = myArray[0];

System.out.println(i);

**Answer: 0**

1. What is the value of i?

int[] myArray = {1, 2, 3};

int i = myArray[1];

System.out.println(i);

**Answer: 2**

1. What is the type of my2DArray[0]?

int[][] my2DArray = new int[1][1];

**Answer: int[]**

**Input and Output:**

1. List one of the escape sequences in Java?

**Answer: \t, \r, \n, etc...**

1. Which operator would I use on the command line to “pipe” output from one java program to the input of another (give the actual operator as your answer, not just the name)?

**Answer: |**

**Clients and Libraries:**

1. True or False? In Java, primitive type arguments to a function are “passed by value”?

**Answer: True**

1. What is the bolded part of the following method referred to as?

public static **int** random(int n){

return 1;

}

**Answer: Return Type**