**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

**Data Types:**

**For this section (2-9) 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");

1. System.out.println(2.78);
2. System.out.println(‘C’);

int numberOfIterations = 0;

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

numberOfIterations += 1;

}

System.out.println(numberOfIterations);

1. System.out.println(true || false);
2. System.out.println(true && false);
3. System.out.println(!(true && false));
4. What are the three boolean operators in Java?

**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 time of execution i.e.,

3,4,2,1

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)?

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

while (**whatIsTheTypeOfMe**){

// Some code here...

}

1. How many iterations are do while loops guaranteed to execute?
2. What is the following called (i.e., it’s a special type of while loop)?

while(true){

// Do something…

}

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;

}

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);

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

**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;

1. Name the type of programming statement.

i = 3;

**Arrays:**

1. What is the value of i?

int[] myArray = new int[4];

int i = myArray[0];

System.out.println(i);

1. What is the value of i?

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

int i = myArray[1];

System.out.println(i);

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

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

**Input and Output:**

1. List one of the escape sequences in Java?
2. 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)?

**Clients and Libraries:**

1. True or False? In Java, primitive type arguments to a function are “passed by value”?
2. What is the bolded part of the following method referred to as?

public static **int** random(int n){ return 1; }