**44-542 Object Oriented Programming Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Exam 01 Part01 (45 Points) KEY**

**Multiple Choice (3 pts each):** Select the BEST correct answer. If you select more than one option, the entire question will be counted as incorrect.

1. \_\_\_\_\_ store the state of an object.
   1. Attributes
   2. Constructors
   3. Methods
2. A getter method is an example of a(n) \_\_\_\_\_ method
   1. accessor
   2. mutator
3. Which of the following is true of object variables in Java?
   1. they are declared in the same way as primitive types
   2. they hold a reference to an object, rather than the actual value of the object
   3. both of the above are true
4. The Java default constructor is a no-arg constructor.
   1. true
   2. false
5. Which of the following is true of constructors?
   1. When you create a new class, you can provide as many constructors as you wish.
   2. When you create a new class, you must always provide at least one constructor.
   3. both of the above are true
6. Which of the following is true of primitive types in Java?
   1. primitive types are not objects
   2. primitive types have no methods
   3. primitive types hold a reference to an object
   4. all of the above are true
   5. only a) and b) are true
7. In Java a variable must be declared before it can be used.
   1. true
   2. false
8. The symbol <= is an example of a(n) \_\_\_\_\_ operator.
   1. arithmetic
   2. logical
   3. relational
9. Which is the correct order of precedence for arithmetic, logical, and relational operators? Assume the listing is from highest to lowest.
   1. arithmetic, logical, relational
   2. arithmetic, relational, logical
   3. relational, logical, arithmetic
   4. logical arithmetic, relational
   5. logical, relational, arithmetic
10. Which of the following is true of array lists in Java?
    1. they are fixed-length structures
    2. all values in the array list are of the same type
    3. each value has a position in the list, indicated by an integer index
    4. all of the above are true
    5. only b) and c) are true
11. Suppose we write a Java program with the following code.

**package myprograms;**

**public class MyProgram {**

**public static void main(String[] args) {**

**System.out.println("This is my program.");**

**}**

**}**

What is the name of the program file where this code will be stored? No path information is required – just the name of the file (including the extension).

* 1. **MyProgram.java**
  2. **MyProgram.class**
  3. **myprograms.java**
  4. **myprogram.java**
  5. **myprogram.class**

1. Find the output of the following code segment:

**int a = 14;**

**int b = 33;**

**System.out.println(**

**a % 5 == b / 8 ? "not equal": "equal");**

* 1. **not equal**
  2. **equal**

1. Suppose we write a Java program with the following code.

**package myprograms;**

**public class MyProgram {**

**public static void main(String[] args) {**

**System.out.println("This is my program.");**

**}**

**}**

We now compile this code using the **javac** command. What is the name of the program file where the resulting bytecode will be stored?

* 1. **MyProgram.java**
  2. **MyProgram.class**
  3. **myprograms.java**
  4. **myprogram.java**
  5. **myprogram.class**

1. Find the output of the following code segment:

**int a = 40;**

**int b = 3;**

**int c = 17;**

**int d = 10;**

**System.out.println(**

**a + b \* c / a - (b + c) % (d - b));**

* 1. 30
  2. 35
  3. 38.42
  4. 43
  5. 40.75

1. Find the output of the following code segment:

**int a = 50;**

**int b = 4;**

**int c = 18;**

**int d = 6;**

**if(!(a > b) && d > c || (b + d >= 10)) {**

**System.out.println(a + b);**

**} else {**

**System.out.println(a - b);**

**}**

* 1. 54
  2. 46
  3. true
  4. false