Practice Midterm

CPSC 233, Fall 2013

Multiple choice: (choose exactly one answer) – 2 Pts each

1) The body of a method that returns a value must contain at least one _____ statement.
   a) void
   b) invocation
   c) throws
   d) return

2) A variable whose meaning is confined to a method definition is called an/a
   (a) instance variable
   (b) local variable
   (c) global variable
   (d) none of the above

3) All of the following are wrapper classes except:
   (a) String
   (b) Integer
   (c) Character
   (d) Double

4) The value of the expression (int) 35.2 evaluates to:
   a) 35
   b) 36
   c) 40
   d) None of the above.

5) To mark a block comment for inclusion in the Javadoc documentation, the block must be delimited by:
   a) /** */
   b) */* */
   c) **/ /*
   d) **/ */

6) A variable whose meaning is not to an object of the class and can be used without creating an onject:
   (a) instance variable
   (b) local variable
   (c) global variable
   (d) static variable

7) A method that performs some action other than returning a value is called a _____ method.
   (a) null
   (b) void

(c) public

(d) private

8) What does a derived class automatically inherit from the base class?

    (a) instance variables

    (b) static variables

    (c) public methods

    (d) all of the above

True/False: (for each statement choose either True or False) -- 2 Pts each

1) In Java, Strings are immutable objects. Immutable objects can be changed.

2) The modifier private means that an instance variable can be accessed by name outside of the class definition.

3) Primitive types are reference types.

4) A main method can be placed inside a class definition.

5) An array name references a memory address.

6) The call to the base class constructor (super) must always be the last action taken in a constructor definition.

Short Answers: 4 Pts each

1) Write a method called isEqual that returns a Boolean value. The method compares two integrs for equality.

2) Given the following character array
      char[] h = {'H', 'E', 'L', 'L', 'O'};
Write a Java statement that will create a new String object from the character array.

3) Declare and create an integer array that will contain the numbers 1 through 100. Use a for loop to initialize the indexed variables.

4) Explain what a call to super() does in a constructor of a derived class.

9) What is the output of the following code?

```
int[] numbers = new int[10];

for(int i=0; i < numbers.length; ++i)

    numbers[i] = i * 2;

for(int i=0; i < numbers.length; ++i)

    System.out.print(numbers[i] + " ");
```

Program 1 (10 pts)

Write a complete Java console application that prompts the user for a series of quiz scores. The user should type -1 to signify that the input of quiz scores is complete. Your program should then average the scores and display the result back to the user.

Program 2 (20 pts)

Write a Java class that represents a Student with instance variables name, id, and gpa. Include constructors, accessors, and mutators.