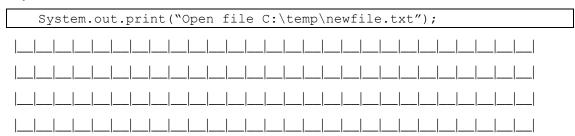
## **CSCI 1226 Midterm Exam**

	Thursday, October 15, 2009
	Name:
	Student #:
Ge	eneral Instructions
Re	ead and follow all directions carefully.
e	hen writing programs or program segments, use the conventions used in the xt for identifiers and indentation. Print clearly so that the grader can tell that the proventions are being followed.
	ote: not all spaces need to be filled in, but you will not need more spaces than e provided.
Th	nere are 72 points available. You have 75 minutes to complete it. Good luck.
1.	[12] Declare each of the following items. Use appropriate names, types, and styles. Create the most reasonable kind of item. Initialize the item if appropriate.
	a) the number of words entered by the user
	b) the time taken by a race car for one circuit of the race track
	c) whether the user is 65 or older
	d) the number of hours in a day (which is 24)
2.	[4] Show the output for the following program fragment. Put each character in a box by itself.
	<pre>int n = 42; System.out.print("The value is:"); System.out.println(n); System.out.print("The next value will be" + n + 1);</pre>

3. [2] Show the output of the following program fragment. Put each character in a box by itself.



- 4. **[10]** Translate the following English conditions into Java logical expressions.
  - a) a is equal to b
  - b) b is not equal to c
  - c) m and n are both greater than 0
  - d) one (or both) of x and y is less than 0
  - e) resp is not "No" (regardless of case)
  - f) s1 comes before s2 in the lexicographic order
- 5. [2] Show the output of the following code for each of the values shown below.

```
if (m > 10)
    if (n > 10)
        System.out.print("A");
else
        System.out.print("B");
        System.out.print("C");
System.out.print("D");
```

a) 
$$m = 5, n = 5$$

6. **[6]** Write a code fragment that *declares* and *reads* a word (myWord) and a double (myDbl), then pauses with the message "Press Enter...". Assume that a Scanner named kbd has already been created.

7. [8] Write a conditional control to assign a value to the variable toll based on the value in the variable vehicleClass, based on the following chart.

Use EITHER a nested if/if-else control OR a switch control (not both).

8. **[8]** Write a loop (and its associated initializations) to sum a sequence of positive integers entered by the user. The loop stops when the user enters zero or a negative number. Assume that a Scanner named kbd has already been created.

9. [8] Write nested for loops to produce the following output:

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10. [12] Multiple Choice: select the best available answer from the options shown.

A byte is made up of

- a) 0 or 1 bits.
- b) 2 bits.
- c) 8 bits.
- d) 256 bits.
- e) as many bits as are required to represent the object the programmer created.

An example of an input device is

- a) a monitor.
- b) a mouse.
- c) a printer.
- d) the CPU.
- e) (all of the above)

An imperative computer programming language is one that

- a) has us draw pictures to show the computer what to do.
- b) has us explain to the computer what things mean.
- c) has us specify which operations are to be carried out at the same time.
- d) has us tell the computer what to do.
- e) is only understood by the CPU of the same kind of computer.

Based on the style guidelines for this course, numStudents would be the name of a

- a) class.
- b) constant.
- c) method.
- d) variable.
- e) (any of the above)

## CPU stands for

- a) Canadian Programmers Union.
- b) central processing unit.
- c) computer's primary unit.
- d) computer's principle unit.
- e) controlled programming unit.

Java is more suited to Web applications than C++ because

- a) C++ programs are imperative and object oriented.
- b) compiled Java code can be run on many different kinds of computers.
- c) Java programs are much easier to write than C++ programs.
- d) more kinds of computers have Java compilers than have C++ compilers.
- e) (all of the above)

The command to create a Scanner named kbd is

- a) Scanner kbd = new Scanner();
- b) Scanner kbd = new Scanner(System)
- c) Scanner kbd = new Scanner(System.in);
- d) Scanner kbd = new Scanner(System.out);
- e) Scanner kbd = new Scanner(System.out.print);

The correct header for the main method of a program is

- a) public void main()
- b) public void static main()
- c) public void main(String args)
- d) public static void main(String[] args)
- e) public void static main(String[] args)

The difference between main memory and secondary memory is

- a) main memory is inside the computer and secondary memory is outside.
- b) main memory is on disks and tapes, but secondary memory is just on disks.
- c) main memory is used for programs that are running, and secondary memory is for long-term storage.
- d) secondary memory is faster than main memory.
- e) secondary memory holds less than main memory.

The output of the command System.out.print ("7 / 4 = " + (7 / 4)) is

- a) 1 = 1
- b) 1.75 = 1.75
- c) 7/4=1
- d) 7/4 = 1.75
- e) 7/4 = (7/4)

The value of the expression 2 + 8 / 2 + 3 is

- a) 2
- b) 2.0
- c) 8
- d) 9
- e) 9.0

Which of the following loops does NOT iterate exactly ten times?

- a) for (int i = 0; i < 10; i++)  $\{...\}$
- b) for (int i = 0;  $i \le 10$ ; i++) {...}
- c) for (int i = 1;  $i \le 10$ ; i++) {...}
- d) for (int i = 10; i > 0; i--)  $\{...\}$
- e) (all of the loops above iterate exactly ten times)

(This page is for your rough calculations. You may tear it off the exam booklet.)