CSE 1321 Lecture Final Exam

Version D

Spring 2019

**Question 1) Warmup question:** Write a function (and only the function) that takes in two numbers and returns the sum of all the numbers between (and including) those two numbers **(10 points)**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**Question 2) SWITCH/CASE:** Zoo Atlanta has asked you tohelp update their feeding program. You are to determine which statement will be written to the console that tells the animal handlerswhich animal needs to be feed based on the following code segment: **(15 points)**

METHOD VOID animalCare(parameters: animal)

BEGIN METHOD

SWITCH(animal)

CASE E: PRINTLINE(“The ELEPHANTS need care and feeding.”)

BREAK

CASE G: PRINTLINE(“The GIRAFFES need and feeding.”)

CASE H: PRINTLINE(“The HIPPOPOTOMI need care and feeding.”)

BREAK

CASE L: PRINTLINE(“The LIONS need care and feeding.”)

CASE Z: PRINTLINE(“The ZEBRAS need care and feeding.”)

BREAK

DEFAULT: PRINTLINE(“All animals need care and feeding.”)

END SWITCH

Method Call: animalCare (L) – use this to determine which statement to print.

Exact output is:

END METHOD

**Question 3) 2D Arrays:** A mathematician has given you a 10x10 array of Boolean values called *Attending* which contains the results of their poll to see whether or not students have interest in attending an upcoming conference. You are to process the array so that it counts the number of each result and prints which value (true or false) occurs the most so they know whether or not to hold the conference (Do not create the array, it is already created). **(30 points)**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**Question 4) Sorting:** Sort {5 4 3 2 1} using the sorting algorithm of your choice (Bubble, Exchange, Insertion or Selection). You must show each movement of the sort to get any credit (no need to write down the algorithm) **(15 points)**

Answer is using: Bubble ⃝ Exchange ⃝ Insertion ⃝ Selection ⃝

**Question 5) Classes/Methods:** Write class Thermostat to the following specifications:

Attributes (should be invisible only inside the class): heatOn (Boolean), and temp (number)

Methods:

* Constructors (default and overloaded for all attributes)
* turnHeatOn(), turnHeatOff() – sets the heat on or off
* getTemp(), setTemp() – getter/setter for the temp attribute
* sense() – turns the heat on if it’s below 60 degrees

**CLASS DECLARATION AND ATTRIBUTES**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**DEFAULT CONSTRUCTOR:**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**OVERLOADED CONSTRUCTOR:**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**METHODS :**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**Methods Continued (if necessary):**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝