

Name : _____

Grading TA: _____

- **INTEGRITY:** By taking this exam, you pledge that this is your work and you have neither given nor received inappropriate help during the taking of this exam in compliance with the Academic Honor Code of Georgia Tech. Do NOT sign nor take this exam if you do not agree with the honor code.
- **DEVICES:** If your cell phone, pager, PDA, beeper, iPod, or similar item goes off during the exam, you will lose 10 points on this exam. Turn all such devices off and put them away now. You cannot have them on your desk.
- **ACADEMIC MISCONDUCT:** Academic misconduct will not be tolerated. You are to uphold the honor and integrity bestowed upon you by the Georgia Institute of Technology.
 - Keep your eyes on your own paper.
 - Do your best to prevent anyone else from seeing your work.
 - Do NOT communicate with anyone other than a proctor for ANY reason in ANY language in ANY manner.
 - Do NOT share ANYTHING during the exam. (This includes no sharing of pencils, paper, erasers).
 - Follow directions given by the proctor(s).
 - Stop all writing when told to stop. Failure to stop writing on this exam when told to do so will result in a substantial grade penalty.
 - Do not use notes, books, calculators, etc during the exam.
- **TIME:** Don't get bogged down by any one question. If you get stuck, move on to the next problem and come back once you have completed all of the other problems. This exam has 7 questions on 8 pages including the title page. Please check to make sure all pages are included. You will have 50 minutes to complete this exam.

I commit to uphold the ideals of honor and integrity by refusing to betray the trust bestowed upon me as a member of the Georgia Tech community. I have also read and understand the requirements outlined above.

Signature: _____

Question	Points	Score
1. Vocabulary	9	
2. Multiple Choice	5	
3. List Questions	6	
4. Buzz Wins	4	
5. Bravarian Strings	5	
6. GetTemp	10	
7. Reformat	10	
Total:	49	

1. (9 points)

For each of the following vocabulary terms, write a concise 1-2 sentence definition. Be brief, and to the point.

(a) [3 pts] argument

(b) [3 pts] dictionary

(c) [3 pts] parameter

2. (5 points)

For each of the following multiple choice questions, indicate the single most correct answer by circling it!

(a) [1 pt] What is the value printed when the following code is executed?

```
def func(aNum, bNum):  
    cNum = aNum/2-4  
    if cNum > 0 and bNum:  
        return aNum  
    else:  
        return bNum
```

```
print( func(15,5) )
```

A. 15 B. 5 C. 3 D. N/A. This code raises an exception.

- (b) [1 pt] Which of the following data types are NOT sequences?
A. Tuples B. Dictionaries C. Strings D. Lists E. All of these are sequences
- (c) [1 pt] Examine this code. What is the value referenced by `aVar` after the code is executed?

```
def func():  
    greetings = "Hello"  
    salutations = "Salutations!"  
    for i in range(len(greetings)):  
        greetings[i] = salutations[i]  
    return greetings
```

```
aVar = func()
```

- A. 'Salutations'!
B. 'Salut'
C. 'Hello'
D. N/A. This code raises an exception.

Use the following code to answer the next two questions.

```
aList = [5, 10, 15, 20]  
bList = 2 * aList  
cList = bList
```

- (d) [1 pt] What list does `bList` reference?
A. [2, 5, 10, 15, 20]
B. [10, 20, 30, 40]
C. [5, 10, 15, 20, 5, 10, 15, 20]
D. [5, 10, 15, 20, 20, 15, 10, 5]
- (e) [1 pt] Which of the following statements is true?
A. `cList` is an alias of `bList`
B. `bList` is an alias of `aList`
C. `cList` is an alias of `aList`
D. `cList` is a copy of `bList`

3. (6 points)

Examine the following code:

```
aList = [1,2,3,4,5]
bList = []
cList = []

for i in range(0,6,2):
    aList[i] = i
    bList.append(i)
    cList.append(bList)
```

After the code executes, what does each of the variables point at?

aList -

bList -

cList -

4. (4 points)

Examine this code:

```
n=0
while(n<10):
    output=""
    if(n%2==0):
        output= output + "Buzz buzzes."
    if(n%3==0):
        output= output + "Buzz wins."
    print(output)
    n= n + 1
```

What is printed to the screen when this code is executed?

5. (5 points)

Examine the following code.

```
def iSeeYou():  
  
    aString = "THIS IS NOT A TEST"  
    bString= aString[::-1]  
    aLetter = bString[12]  
    bLetter = bString[0]  
  
    cString = "MULL IT OVER"  
    dString = cString[3:0:-1]  
  
    nonsenseString = "MLOIOWNCXA"  
    eString = nonsenseString  
    fString = eString[0:7:3]  
  
    print(aLetter + dString + fString + nonsenseString[9]+ bLetter + aLetter)  
  
iSeeYou()
```

What is printed to the screen when this code is executed?

6. (10 points)

You are hired to write the control software for a bio-reactor. As part of this job, you need to write a function named `getTemp` that takes no parameters. It should display a message (prompt) to the user asking them to enter a temperature between 30 and 90 degrees C. (inclusive) ("Please enter a temp between 30 and 90 degrees C") Note that the user may enter a temp such as 45.8 which is valid.

Your function should return the temperature the user entered as a float. If the user does not enter a valid temperature (not a number e.g. "Fish", a number lower than 30 or higher than 90) you should print out "Invalid Temp, try again!", and then repeat the prompt asking for a temperature until they get it right.

7. (10 points)

Write a function called **reformat** that will take in a list of items as a parameter. Check the number of elements in the list. If the list has an odd number of elements, copy the list, reverse the copy, remove the center/middle element from the copy, and return the copy.

If the list has an even number of elements, you should return a tuple that contains all of the elements in the list (in the same order) with the following exceptions: do not copy zeros (int/float) or empty strings into the returned tuple.

Example test cases:

```
>>>reformat([1,"happy",7,False,0])
[0, False, 'happy', 1]
>>> reformat([0,"",12,"Learning is fun!",44.8, True])
(12, 'Learning is fun!', 44.8, True)
```

This page intentionally left blank. You may use it for scratch paper. If you place an answer on this page, box it, indicate which problem it is for by number, and BE SURE TO WRITE “Answer on last page” at the problem location!