

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 will not be tolerated. You are to uphold the honor and integrity bestowed upon you by the Georgia Institute of Technology.

- a) Keep your eyes on your own paper.
- b) Do your best to prevent anyone else from seeing your work.
- c) Do NOT communicate with anyone other than a proctor for ANY reason in ANY language in ANY manner.
- d) Do NOT share ANYTHING during the exam. (This includes no sharing of pencils, paper, erasers).
- e) Follow directions given by the proctor(s).
- f) Stop all writing when told to stop. Failure to stop writing on this exam when told to do so is academic misconduct.
- g) Do not use notes, books, calculators, etc during the 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.

Signature: _____

Question	Possible Points	Earned Points	Graded By
1 - True / False	5		
2 - Multiple Choice	20		
3 - Code Reading	20		
4 - amountPaid	25		
5 - getRange	30		
Total	100		

Question 1: True/False - Circle the correct answer!

5 points

T / F – try/except statements work the same as if/else statements.

T / F – You can assign the result of a print function call to a variable using an assignment statement. E.g.: myVar = print(“Hey!”)

T / F – What you put in the parenthesis of a function, myFunction(**this**), is called the input.

T / F – If you have two if statements, such as:

```
if(x<5):  
    doSomething()  
if(x>5):  
    doSomethingElse()  
both function calls will always run.
```

T / F – If you have an if statement, such as:

```
if(x<5):  
    doSomething()  
else:  
    doSomethingElse()  
the doSomethingElse() function will always run.
```

Question 2: Multiple Choice / Fill in the Blank

20 points

- A. What is a way to change the string nbalegend = "Larry Bird" to say “Harry Bird”
- a) nbalegend[1] = "H"
 - b) nbalegend[0] = "H"
 - c) nbalegend = "H" + nbalegend[1:]
 - d) none of the above
- B. Which of the following statements about functions is true?
- a) All a function needs is a header to be a valid function
 - b) A function can be defined in another function
 - c) Once you write and debug a function, you can reuse it
 - d) Only A
 - e) B and C
 - f) A, B and C
- C. Which of the following is a valid line of code to open a file that you want to read?
- a) f.open(“filename.txt”, ”read”)
 - b) f.open(“filename.txt”, ”r”)
 - c) f = open(“filename.txt”, “r”)
 - d) f = open(“filename.txt”, ”w”)

D. Which of these does not require parenthesis?

- a) .strip
- b) print
- c) print
- d) return
- e) int

E. The code contained in an if statement is called what?

- a. Group
- b. Block
- c. Section
- d. Lines

F. Infinite recursion is often caused by an incorrect or lack of a(n) _____:

- a) Recursive call
- b) Terminating condition
- c) Iterator
- d) Global counter variable

Questions G-J will fill in the blanks for the following code:

```
def classStanding (hours):
    status = ""
    if   G   <= 29:
          H   = "Freshman"
      I  :
          H   = "Not a Freshman"
    ans = "My status is ", + status
      J   ans

standing = classStanding(56)
```

Choose the BEST choice to make the code valid

G. The value of space G should be

- a) try
- b) status
- c) else
- d) hours

H. The value of the spaces marked H should be

- a) year
- b) hours

- c) status
- d) grade
- I. The value of space I should be
 - a) else
 - b) next
 - c) elif
 - d) except
- J. The value of space J should be
 - a) print
 - b) then
 - c) 29
 - d) return

Question 3: Code Reading

20 points

- A. Look at the code below- what is the value stored in result?

```
myInput = [3,7,1,8,6]
def someFunc(funcInput):
    myVal = 5
    for item in funcInput:
        myVal = myVal + item
        x= int(len(funcInput))
        result = myVal / x
    return (result)

result = someFunc(myInput)
```

- B. Does this code run? If so, what is printed on the screen and what is the type of output?

```
def doesThisWork(string,i = 12):
    for x in string:
        i = i + 2
    return ( print(i) )
    return i
output = doesThisWork("Cs 1803 is fun!")
type(output)
```

C. What is printed when this code is run?

```
def whatDoIDo(num4, num2 = 0.1):
    num1 = [1.0, "hi", 'rawr']
    num3 = num1
    if(num4 == "bye" or "cya"):
        num3[0] = num2
    else:
        num1[2] = num4
    return num1

x = whatDoIDo("hello", 15)
print(x)
```

D. What would the value of the retValue variable be after this code is run?

```
moreNums= [3, 2.99, 12.01, 12, 2, 9]

def blank(num_list):
    variable = num_list[0]
    while type(variable) == type([]):
        variable = variable[0]
    for element in num_list:
        if type(element) == type([]):
            variable2 = blank(element)
            if variable < variable2:
                variable = variable2
            variable = float(variable)
        else:
            if variable < element:
                variable = element
            variable = int(variable)
    return variable

retValue = blank(moreNums)
```

Question 4: Code Writing –**amountPaid****25 points**

Write a function called amountPaid()

Prompt the user to enter the pay rate and the number of hours worked.

If the user worked more than 40 hours, their overtime rate of pay is time and a half (1.5 x the normal pay rate) and only applies to the extra hours (over 40) that were worked. The function should generate and return a string telling how much the person is to be paid: "Your amount paid is: \$67.50 "

You may assume that the user will only type correct floating point numbers, so no error checking is needed. The returned string must use string formatting to place the number immediately after the dollar sign, and the dollar amount must be rounded to exactly two decimal places.

Parameters: none

Return: A string stating the amount of pay

Question 5: Code Writing – getRange

30 points

Write a function that meets the following specifications:

Name: getRange

Parameters: a list of items, some of which are integers and floats (you may not assume that all list elements are numbers!)

Return: the difference between the largest and smallest numbers in the list as a floating point value

E.g: if the input list is [10,7,"Bob",23,21,3,8] the range would be 20.0 (23-3)