Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section Number \_\_\_\_\_\_\_\_\_

*This exam is printed on both sides of the paper. Be sure to answer all questions and pay attention to all instructions. In sample output, input provided by the user is underlined.*

Q1. Compute the value of these 7 Python expressions assuming the following variable values.

|  |  |  |
| --- | --- | --- |
|  | Expression | Expression Value |
| a) | y+z/4 |  |
| b) | x.index(y) |  |
| c) | z in x |  |
| d) | y/z |  |
| e) | z/z |  |
| f) | x[2] |  |
| g) | x.index(2) |  |

x = [2, 5, 7, 3, 1]  
y = 3  
z = 2.0

|  |
| --- |
| Q2 Sample Output |
| >>> product()  **Enter list:[1,3,7,2]**  **42** |

Q2. Write a Python function product() that reads in a list of values and prints out the product of multiplying all values together. The output of your program must match the Sample Output on the right **exactly**.

|  |
| --- |
| Q3 Sample Output |
| >>> firstGreater()  **Enter list:[8,10,12,14]**  **x[2]=12** >>> firstGreater() **Enter list:[8,9,10]** >>> |

Q3. Write a Python function firstGreater that reads in a list of integers from the user and prints out the index location and value of the first element in the list whose value is greater than 10. The output of your program must match the Sample Output on the right **exactly**. If all integers entered by the user are less than or equal to 10, then nothing should be printed out.

Q4. The following code is intended to read a string “LASTNAME,FIRSTNAME” and print the string “FIRSTNAME LASTNAME”. You can assume the user input will have a single comma between two names.

**define** expandName():  
 s = input ("Enter LASTNAME,FIRSTNAME: ")  
 i = ',' **in** x  
 fname = s[i+1]  
 lname = s[0:i]

print (fname + ',' + lname)

Circle four defects and explain how you would fix them.

Q5. You are given the code below:

x = input ("Enter an Integer:")  
t = 0  
for i in range(4):  
 x = x / 2   
 t = t + x

print(t)

(a) Assume you type **10** as input to the program.

What is the value of i when the program completes? What value is output?

**Value of i at end**

Output Value

(b) What integer can you type as input so the program prints the number 7? What is the value of i when the program completes?

**Value of i at end**

**Input Value**