

# A 8 POINTS

Full Name \_\_\_\_\_

Section & Subsection \_\_\_\_\_

Roll # \_\_\_\_\_

1. (1/2 point) What is the result of the following code?

```
xs = range(3)
x = sum(xs)
y = sum(xs)

print(x, y)
```

A. None None    B. Error    C. 3 3    D. 4    E. 3 0  
F. 3 None    G. 6

2. (1/2 point) What is the result of the following code?

```
xs = range(3)
ys = range(2)
print(xs + ys)
```

A. 5    B. [0, 1, 2, 0, 1]    C. Error    D. 3  
E. [[0, 1, 2], [0, 1]]

3. (2 points) The below function tries to flatten a nested list. For an input: `[[1, 2, 3], [4], 5, 5.5, False]`, the expected output is `[1, 2, 3, 4, 5, 5.5, False]`. Identify the error in the following function and write the corrected function.

```
def flatten_list(l):
    out = []
    for item in l:
        for subitem in item:
            out.append(subitem)
    return out
```

4. (1/2 point) What is the output of the following program? Explain.

```
x = 0.3
y = x==0.2 + 0.1
print(y)
```

5. (1/2 point) What is the result of the following code?

```
x = 10.0
for x in range(2):
    print(x, end=",")
    x = x + 1
    print(x, end=",")
```

A. 10,10,10,10,    B. 10,11,12,13    C. 10,10,10,10  
D. 0,1,1,2,    E. 0,1,1,2

6. (1/2 point) What is the result of the following code?

```
def f(x):
    return x[1:]
def g(x):
    return f(x[1:])
z = "hello"
print(f(z), g(z))
```

A. llo lo    B. 0 1    C. ello ello    D. None    E. llo llo  
F. Error    G. ello llo    H. 1 2

7. (1/2 point) What is the result of the following code?

```
xs = range(10)
ys = range(xs[1], xs[2])
print(sum(ys))
```

A. 3    B. 23    C. 0    D. Error    E. None    F. 1

8. (1/2 point) What is the result of the following code

```
def g(x):
    return x % 2 == 1
def f(x):
    s = 0
    for i in range(x):
        if g(i):
            s = s + i
    return s
print(f(1), f(6))
```

A. 0 9    B. 6, 0    C. 0, 6    D. 1 6    E. 0    F. Error  
G. s    H. None

9. (1/2 point) What is the result of the following code

```
x = 4
def f(x):
    for i in range(x):
        if i % 3 == 1 or i % 5 == 1:
            return i
    print(i, end=" ")
print(f(1), f(5))
```

A. None None None None    B. 0 0 None 1  
C. Syntax Error    D. 0 None 1 None    E. 1 1 1 1    F. 0 0

10. (1/2 point) What is the result of the following code?

```
x = 10
y = 5
x = [x]
x = [x] + x + [x]
z = [x, y]
print(z)
```

A. [[10], [10], [10], 5]    B. [[[10], 10, [10]], 5]  
C. Error    D. [[10], [10], [10], [5]]    E. None  
F. [[10], [10], [10]], 5    G. [10, 10, 10, 5]

11. (1 point) What is the output of the following program? Explain.

```
def f(x):
    def g(y):
        x.append(y)
    return g
xs = []
h = f(xs)
for i in range(1, 5):
    h(i)
print(xs)
```

12. (1/2 point) What is the result of the following code?

```
xs = range(3)
ys = list(xs) + list(xs)
print(sum(ys[1:4]))
```

A. 3    B. 5    C. None    D. Error    E. 4  
F. None None None    G. 6