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Programming and Data Structures with Python
Quiz 2, 10 September 2026, I Semester, 2026–2027

Note: There were two question groups, with four variants of each. There were multiple question papers with different combinations of variants.

1. What is the value of `pairs` after the following assignment?

```
pairs = [ (x,y) for x in range(4,0,-1) for y in range(x-1,0,-1) if (x+y)%3 != 0 ]
```

2. What is the value of `pairs` after the following assignment?

```
pairs = [ (x,y) for x in range(1,5) for y in range(x,4) if (x+y)%2 == 0 ]
```

3. What is the value of `pairs` after the following assignment?

```
pairs = [ (x,y) for x in range(1,4) for y in range(x) if (x+y)%3 != 0 ]
```

4. What is the value of `pairs` after the following assignment?

```
pairs = [ (x,y) for x in range(4) for y in range(x,4) if (x+y)%3 == 0 ]
```

The next three questions refer to the following Python program.

```
def f():
    global l1,x1
    l1 = l1 + [6]
    l2.append(7)
    l3 = l1 + [8]
    x1 = x1 + 9
    x2 = x1 + 10

(l1,l2,l3) = ([1],[2],[3])
(x1,x2) = (4,5)
f()
```

5. What is the value of `l1+l2` at the end of this program?

6. What is the value of `l3+l2` at the end of this program?

7. What is the value of `x1+x2` at the end of this program?

The next three questions refer to the following Python program.

```
def g():
    global l2,x2
    l1.extend([8])
    l2 = l2 + [9]
    l3 = l2 + [10]
    x1 = x2 + 3
    x2 = x2 + 4

(l1,l2,l3) = ([6],[7],[11])
(x1,x2) = (5,8)
g()
```

8. What is the value of `l1+l2` at the end of this program?

9. What is the value of `l3+l2` at the end of this program?

10. What is the value of `x1+x2` at the end of this program?

The next three questions refer to the following Python program.

```
def f():
    global l3,x2
    l1 = l3 + [47]
    l2.append(80)
    l3 = l3 + [93]
    x1 = x2 + 11
    x2 = x2 + 42

(l1,l2,l3) = ([37],[28],[19])
(x1,x2) = (50,31)
f()
```

11. What is the value of `l1+l3` at the end of this program?

12. What is the value of `l2+l3` at the end of this program?

13. What is the value of `x1+x2` at the end of this program?

The next three questions refer to the following Python program.

```
def g():
    global l3,x1
    l1.extend([75])
    l2 = l3 + [85]
    l3 = l3 + [103]
    x1 = x1 + 12
    x2 = x1 + 25

(l1,l2,l3) = ([65],[86],[95])
(x1,x2) = (37,14)
g()
```

14. What is the value of l1+l3 at the end of this program?

15. What is the value of l2+l3 at the end of this program?

16. What is the value of x1+x2 at the end of this program?