

Name:

**Introduction to Programming in Python, I Semester, 2011–2012**  
**Quiz 5, 06 October 2011**

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Answer all **three** questions in the space provided. **Don't forget to fill your name!**

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

```
pairs = [ (x,y) for x in range(4) for y in range(3) if (x+y)%2 != 0 ]
```

*(3 marks)*

```
pairs : [(0, 1), (1, 0), (1, 2), (2, 1), (3, 0), (3, 2)]
```

2. What are the values of `matrix_v1` and `matrix_v2` after the following assignments?

```
matrix_v1 = [[0]*2] * 2  
matrix_v2 = [[0]*2 for i in range(2)]  
matrix_v1[0][0] = 17  
matrix_v2[0][0] = 17
```

*(3 marks)*

```
matrix_v1: [[17, 0], [17, 0]]
```

```
matrix_v2: [[17, 0], [0, 0]]
```

*(... Question 3 on reverse)*

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*Rough work*

3. Complete the following function definition—that is, fill in the parameters for `f()`—so that it behaves as described below.

```
def f(.....):  
    print("a",a,"b",b,"c",c,"d",d)
```

Expected behaviour:

```
>>> f(b=4,a=3)  
a 3 b 4 c 10 d 15
```

```
>>> f(3,5,7)  
a 3 b 5 c 7 d 15
```

```
>>> f(3,c=7)  
Traceback (most recent call last):  
  File "<stdin>", line 1, in <module>  
TypeError: f() takes at least 2 arguments (2 given)
```

*(4 marks)*

```
def f(a, b, c=10, d=15):  
    print("a",a,"b",b,"c",c,"d",d)
```

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*Rough work*