

Començat el	dimecres, 3 d'abril 2024, 12:10
Estat	Acabat
Completat el	dimecres, 3 d'abril 2024, 12:33
Temps emprat	23 minuts 32 segons
Punts	18,8/22,0
Qualificació	8,6 sobre 10,0 (85,6%)

Pregunta 1

Incorrecte

Puntuació 0,0 sobre 1,0

Given:

```
def f(x):  
    print("two")  
    def f1(a,b):  
        print("one")  
        if b==0: `<br>  
            print("zero")  
        returnc  
        return x(a,b)  
    return(f1)  
@f  
def g(a,b):  
    return(a%b)
```

Please consider the call:

`g(4,0)`

Mark the valid result:

- ☒ a. two **✗**
one
zero
- ☐ b. zero
- ☐ c. two
- ☐ d. zero
one
- ☐ e. division error
- ☐ f. one
zero
- ☐ g. one

La resposta correcta és: one
zero

Pregunta 2

Parcialment correcte

Puntuació 0,5 sobre 1,0

Given :

```
def g(a,b=0):  
    return(a*b)
```

Mark the valid invocations:

- ☐ a. `g(b=1)`
- ☐ b. `g(b=1,0)`
- ☒ c. `g(a=0)` ✓
- ☐ d. `g(1)`

Les respostes correctes són: `g(1)`, `g(a=0)`**Pregunta 3**

Correcte

Puntuació 1,0 sobre 1,0

Consider the following code

`a = [...,some lements in the list, ...]``b = list(a)`

The result of

`a is b`

is:

- ☐ a. True
- ☒ b. False ✓

La resposta correcta és: False

Pregunta 4

Correcte

Puntuació 1,0 sobre 1,0

Consider the code (arrows are tabs):

```
def something(n,i):  
    return(all(n%i != 0 for i in range(2,n)))
```

returns:

- ☒ a. Will Return A True or False ✓
- ☐ b. n if n is even
- ☐ c. An even number
- ☐ d. n/2 i n is even
- ☐ e. A list of booleans
- ☐ f. An odd number
- ☐ g. None of the other responses

La resposta correcta és: Will Return A True or False

Pregunta 5

Correcte

Puntuació 1,0 sobre 1,0

Given the following code

```
from functools import reduce  
l = [1,0,1,0,0,1,1,0,1]  
r = reduce(lambda x,y:y, map(lambda x: x+1, l))  
r is equal to:
```

- ☐ a. 0
- ☐ b. 1
- ☐ c. None
- ☒ d. 2 ✓
- ☐ e. 6
- ☐ f. 7
- ☐ g. 4

La resposta correcta és: 2

Pregunta 6

Correcte

Puntuació 1,0 sobre 1,0

The function:

```
def c():  
    i = 0  
    while ("zero"):  
        i += 1  
        yield(i)
```

behaves as a:

- ☐ a. a decorator
- ☒ b. a generator ✓

La resposta correcta és: a generator

Pregunta 7

Correcte

Puntuació 1,0 sobre 1,0

What of the following types are *immutable*?

- ☒ a. tuple ✓
- ☐ b. dictionary
- ☐ c. set
- ☒ d. string ✓
- ☐ e. list

Les respostes correctes són: tuple, string

Pregunta 8

Correcte

Puntuació 1,0 sobre 1,0

Assuming the following code

```
a = [1]
```

```
b = a
```

```
a[0] = 0
```

has been correctly executed, which sentences are **True**? :

- ☐ a. `a[0]+1 == b[0]`
- ☐ b. `b[0]+1 == a[0]`
- ☒ c. `len(a) == len(b)` ✓
- ☒ d. `a[0] == b[0]` ✓
- ☒ e. `a is b` ✓

Les respostes correctes són: `len(a) == len(b)`, `a[0] == b[0]`, `a is b`

Pregunta 9

Correcte

Puntuació 1,0 sobre 1,0

Which of the following is an *invalid* statement?

- ☐ a. `abc = 7,000,000`
- ☒ b. `a b c = 1000 5000 7000` ✓
- ☐ c. `a,b,c = 1000, 6000, 7000`
- ☐ d. `a_b_c = 6,000,000`

La resposta correcta és: `a b c = 1000 5000 7000`

Pregunta 10

Correcte

Puntuació 1,0 sobre 1,0

The code

```
["ht", 3+5j, abs, min, 5.6][:5:2]
```

returns:

- ☐ a. [(3+5j), 5.6]
- ☐ b. None
- ☐ c. an error
- ☐ d. ['ht']
- ☒ e. ['ht', function abs, 5.6] ✓
- ☐ f. []

La resposta correcta és: ['ht', function abs, 5.6]

Pregunta 11

Parcialment correcte

Puntuació 0,3 sobre 1,0

Consider the following code, stored on a file with name `api.py` :

```
from fastapi import FastAPI
app = FastAPI()
@app.get("/")

def fun():
    return{"Hello":"Scipy"}
```

You code in a terminal in your computer:

```
$ uvicorn api:app --reload
```

Please mark the **True** sentences:

- ☐ a. The purpose of the code is to serve the method `fun()` as a web service
- ☐ b. `fun()` is a decorator
- ☐ c. the method `fun()` returns a `string`
- ☐ d. `fun()["hello"] = "world"`
- ☐ e. the api is served on a cloud-based remote server
- ☒ f. `app.get()` is a decorator ✓

Les respostes correctes són: The purpose of the code is to serve the method `fun()` as a web service, `app.get()` is a decorator, `fun()["hello"] = "world"`

Pregunta 12

Correcte

Puntuació 1,0 sobre 1,0

Which of the following sentences are true?

- ☐ a. Lists may not be stored inside tuples
- ☒ b. Lists may be stored inside lists ✓
- ☒ c. Tuples may be stored inside lists ✓
- ☐ d. Tuples may not be stored inside tuples

Les respostes correctes són: Tuples may be stored inside lists, Lists may be stored inside lists

Pregunta 13

Correcte

Puntuació 1,0 sobre 1,0

The code

```
["ht", 3+5j, abs, min, 5.6][2](-5)-5
```

returns:

- ☒ a. 0 ✓
- ☐ b. None
- ☐ c. an error
- ☐ d. 0j
- ☐ e. -10

La resposta correcta és: 0

Pregunta 14

Correcte

Puntuació 1,0 sobre 1,0

A function can be decorated by more than two decorators.

Trieu-ne una:

- ☒ Vertader ✓
- ☐ Fals

La resposta correcta és 'Vertader'.

Pregunta 15

Correcte

Puntuació 1,0 sobre 1,0

Consider the code (arrows are tabs):

```
def c():
    i = 0
    while ("zero"):
        i += 1
        yield(i)
d = c()
p = map(lambda i: 4.*i*i/(4.*i*i-1), d)
o = 1
for n in range(100):
    o *= next(p)
```

The value of **o**, is:

- ☐ a. error
- ☐ b. e, approximately
- ☒ c. $\pi/2$, approximately ✓
- ☐ d. 0, approximately
- ☐ e. π , approximately
- ☐ f. 1, approximately
- ☐ g. 100, exactly

La resposta correcta és: $\pi/2$, approximately

Pregunta 16

Correcte

Puntuació 1,0 sobre 1,0

Please check the code :

```
for k in range(5):
    pass
```

In this case **k** is :

- ☐ a. not initialized
- ☒ b. 4 ✓
- ☐ c. 5
- ☐ d. 6

La resposta correcta és: 4

Pregunta 17

Correcte

Puntuació 1,0 sobre 1,0

Assuming the following code

```
a = [1]
```

```
b = a[:]
```

```
a[0] = 0
```

has been correctly executed, which sentences are **True**? :

- ☒ a. `b[0]-1 == a[0]` ✓
- ☐ b. `a[0] == b[0]`
- ☐ c. `a is b`
- ☐ d. `a[0]-1 == b[0]`
- ☒ e. `len(a) == len(b)` ✓

Les respostes correctes són: `len(a) == len(b)`, `b[0]-1 == a[0]`

Pregunta 18

Correcte

Puntuació 1,0 sobre 1,0

Python is a case sensitive language.

Trieu-ne una:

- ☒ Vertader ✓
- ☐ Fals

La resposta correcta és 'Vertader'.

Pregunta 19

Correcte

Puntuació 1,0 sobre 1,0

Given the following list

```
l = [3, 8, 1, 0, 6, 4]
```

What is the output of

```
[k**.5 for k in l][-1]
```

.

- ☐ a. 2
- ☒ b. 2.0 ✓
- ☐ c. 3.0
- ☐ d. 3
- ☐ e. An error
- ☐ f. -2

La resposta correcta és: 2.0

Pregunta 20

No s'ha respost

Puntuat sobre 1,0

Can a module run like regular code?

- ☐ a. it depends on the Python version
- ☐ b. yes, but we cannot differentiate its behavior between the regular launch and import
- ☐ c. yes, and we can differentiate its behavior between the regular launch and import
- ☐ d. no, it is not possible; a module can be imported, but never run

La resposta correcta és: yes, and we can differentiate its behavior between the regular launch and import

Pregunta 21

Correcte

Puntuació 1,0 sobre 1,0

Consider the code:

```
def gen():  
    yield("one")  
    yield("two")
```

The line:

`next(gen)`

returns:

- ☒ a. an error ✓
- ☐ b. "one"
- ☐ c. "two"

La resposta correcta és: an error

Pregunta 22

Correcte

Puntuació 1,0 sobre 1,0

The difference between a 'list' and a 'tuple' is that (mark all that apply):

- ☐ a. the elements in a tuple can be modified
- ☐ b. lists are faster
- ☒ c. lists are mutable ✓
- ☐ d. tuples accept the `.append()` method
- ☐ e. tuples are mutable

La resposta correcta és: lists are mutable