



Please answer the following questions by marking the correct response.
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Work time: 50 minutes

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Test Version: A B C D

1. Consider the following Python expression:

```
x = a + 5 - b
```

- a and b are D
 - a+5-b is _____
- values, respectively an instruction
 - operands, respectively an instruction
 - operators, respectively an expression
 - D operands, respectively an expression
 - terms, respectively an grup

2. For the following expression 'L = (1, 2, 3, 4)' the instruction 'L[0]=42' modifies 'L' as follows:

- It changes the list by assigning the value 42 to element with index 0
- B the operation is not permitted
- it does not change 'L'
- the tuple becomes '(42, 2, 3, 4)'
- it creates a new list '(42, 2, 3, 4)'

3. The size of a list can be obtained:

- by checking each of the elements
- using the strlen function

- using the length property, like this: `l.length`
- D using the len function, like this: `len([1, 2, 3])`
- the size of a list can not be computed

4. What does the following code snippet print:

```
class Point:
    def __init__(self, x = 0, y = 0):
        self.x = x+1
        self.y = y+1

p1 = Point()
print(p1.x, p1.y)
```

- A 1 1
- None None
- the snippet is wrong
- 0 0
- x y

5. What type of knowledge can help us deduce something ?

- fixed knowledge;
- symbolic knowledge;
- syntactic knowledge;
- D semantic knowledge;
- imperative knowledge;

6. When is the else clause of the try: except: block executed ?

- A The try: except: block does not have the else clause
- Only when there is no exception generated in the try: except: block
- Only when none of the exceptions received as argument by the else are generated
- The body of except is always executed
- The correct syntax is try: catch:

7. The repetitive instrucion in Python are:

- while, for, do
- loop, while, repeat
- while, foreach, for, do
- for (start, condition, increment), while, do-
- E while, for

8. What does the following snippet print:

```
class Vanzari:
    def __init__(self, id):
        self.id = id
        id = 100

val = Vanzari(123)
print (val.id)
```

- A 123
- 100
- None
- None of the other options
- SyntaxError, the programm will not run

9. Consider the following snippet:

```
s = "Timogara"
```

Which of the following statements returns the string 'aom'?

- A. s[:2]
- B. [i for i in s if i in 'aom']
- C. "".join([i for i in s if i in 'aom'])
- D. s[-3]
- E. s[-1:3:1]

10. What will the following code snippet print?

```
num = 1  
def func():  
    num = num + 3  
    print(num)
```

```
func()  
print(num)
```

A. 4 3

B. 4

C. 3

D. we get an error at runtime because the local variable num is not defined

E. 4 4

11. What can we say about a class?

- A. Represents a method for defining new functions
- B. Represents a method for creating new objects
- C. Is a Python data type
- D. Is used for manipulating data provided by the user
- E. Represents an abstract concept using for describing similar objects

12. What can we say about the 'readline' method?

- A. Returns a list with all the lines in the file
- B. Reads a line from the keyboard
- C. Returns a string representing a line in the file
- D. It is specific to the Python programming language
- E. The method 'readline' does not exist

13. What is the value of the following expression:

```
100 // 25 // 2
```

A. 2.0

B. 8

C. syntax error

D. 2

E. 8.0

14. What is the proper syntax for importing a function from a module?

- A. #include module_name
- B. use module_name.function
- C. #from module_name import function
- D. from module_name import function
- E. from module_name include function

15. How do you specify the data type of a variable in Python?

- A. The data type is dynamically inferred based on the data introduced by the user
- B. The type is inferred dynamically based on the context the variable is used
- C. In Python a variable does not have a type, only the referred value
- D. The data type is inferred from the underlying value
- E. The type of a variable is specified statically, like:

```
int(variable)
```

16. What does the following code sequence print?

```
def func(i,j):  
    if(i==0):  
        return j  
    else:  
        return func(i-1,i+j)  
func(5, 1)
```

A. 7

B. it will raise an exception after a number of recursions

C. 16

D. infinite loop

E. 13

$$1+5+4+3+2+1 = 16$$

17. Which of the following statements is wrong?

- A. The assert statement can be used for allowing us to pinpoint the source of a bug ✓
- B. The assert statement can be used for stopping the program when an unexpected condition is encountered ✓
- C. The assert statement cannot be ignored ✓
- D. The assert statement is usually used for checking the invariant properties
- E. The assert statement is usually used for checking the arguments received by a function ✓

18. What does the 'readline' method return for binary files?

- A. Returns a binary list
- B. It is not available for binary files ✓
- C. It behaves similarly to text files
- D. All bytes from the current position to the end of the file
- E. The method 'readline' does not exist

19. How can we delete all data from the current position of the cursor to the end of the file?

- A. Opening the file using the 'w' mode: open("fichier.txt", "w")
- B. Using the 'truncate' method
- C. Using the 'seek' method
- D. Using the 'delete' method
- E. You cannot delete data from a file

20. For the list: 'L = [1, 8, 9, 1, 2, 6, 7]' the instruction 'L[2:7:2]' returns:

- A. '[9, 2, 7]'
- B. '[9, 1, 2]'
- C. '[9, 1, 2, 6, 7]'
- D. syntax error
- E. an empty list