

PP2 FinalEx V1

17, 7 May 2023

This test has 25 questions. Each question equals 4 points.
As a result, you will get a score on a hundred-point scale, in order to convert to points according to KBTU standards, you must multiply by 0.4.

Total: 100 Points

🕒 90 minutes

* Required

* This form will record your name, please fill your name.

1. Where is the variable created correctly?

* We are asking about an answer option that will not give an error when starting the project * (4 Points)

- ☐ `int num = 2`
- ☐ No suitable option
- ☐ `num = float(2)`
- ☐ `var num = 2`
- ☐ `$num = 2`

2. What will be the result of this code?

`x = 23`

`num = 0 if x > 10 else 11`

`print(num)` * (4 Points)

- ☐ 0
- ☐ 23
- ☐ 10
- ☐ 11
- ☐ error

3. What will this code show?

```
for j in 'Hi! I\'m mister Robert':  
    if j == '\\':    print("Found")  
        break  
    else: \  
        print ("Done") * (4 Points)
```

- ☐ An error in the code
- ☐ "Found" and "Done"
- ☒ Found
- ☐ Done

4. How many libraries can be imported into one project? * (4 Points)

- ☐ No more than 3
- ☒ Unlimited amount
- ☐ No more than 10
- ☐ No more than 5

5. Which library is responsible for the time? * (4 Points)

- ☒ time
- ☐ localtime
- ☐ clock
- ☐ Time

6. Which function prints something to the console? * (4 Points)

- ☐ write()
- ☐ log()
- ☐ out()
- ☒ print()

7. What will be shown as a result?

```
name = "John"
```

```
print('Hi, %s' % name) * (4 Points)
```

- ☐ "Hi, name"
- ☐ "Hi, "
- ☒ "Hi, John"
- ☐ Error

8. How to get data from user? * (4 Points)

- ☒ Use the input() method
- ☐ Use the get() method
- ☐ Use the cin() method
- ☐ Use the read() method

9. What are the errors in the code below?

```
def factorial(n):  
    if n == 0:  
        return 1  
    else:    return n * factorial(n - 1)  
print(factorial(5))
```

- * (4 Points)
- ☐ A function cannot call itself
 - ☐ Return type must be specified
 - ☐ The function will always return 1
 - ☒ There are no errors in the code

10. What will this code show?

```
for i in range(5):  
    if i % 2 == 0:  
        continue  
    print(i) * (4 Points)
```

- ☐ Error because i is not assigned
- ☐ Error due to invalid output
- ☐ Numbers: 1 and 3
- ☐ Numbers: 1, 3 and 5
- ☐ Numbers: 0, 2 and 4

11. a = 3

```
for i in range(4):  
    a += a  
Will there be an answer?  
* (4 Points)
```

- ☐ 48
- ☐ 52
- ☐ 12
- ☐ 96

12. The while loop is called: * (4 Points)

- ☐ There is no correct answer
- ☐ Loop with postcondition
- ☐ Loop with precondition
- ☐ Loop with parameter

13. How many times will the loop run
for k in range(7,12): * (4 Points)

- ☐ 4
- ☐ 3
- ☐ 0
- ☐ 5
- ☐ 6

14. What will be the value of the integer variable "a" after the execution of this program fragment?

```
a = 4
```

```
for i in range(5):
```

```
    a += i * (4 Points)
```

☒ 14

☐ 9

☐ 20

☐ 10

15. Сколько раз исполнится цикл:

```
i=4
```

```
while i<10:
```

```
    i=i+3 * (4 Points)
```

☐ 4

☐ 10

☐ 3

☒ 2

16. What is the name of the algorithms containing the repetition construction? * (4 Points)

- ☐ branching
- ☒ Cyclic
- ☐ Линейные
- ☐ Рекурсивные

17. There is a tuple of the form $T = (4, 2, 3)$.

Which operation will cause the name T to refer to a tuple $(1, 2, 3)$? * (4 Points)

- ☐ $T[0] = 1$
- ☐ $T = (1) + T[1:]$
- ☒ $T = (1,) + T[1:]$
- ☐ $T.startswith(1)$

18. What is the built-in function `enumerate()` used in Python for? * (4 Points)

- ☒ For simultaneous iteration over the elements themselves and their indices.
- ☐ To determine the number of elements in a sequence.
- ☐ To sort elements by id values.

19. What will the interpreter output for the following program (Python version 3.6+)?

```
def get_name_and_decades(name, age):  
    print(f"My name is {name} and I'm {age / 10:.5f} decades old.")  
get_name_and_decades("Leo", 31) * (4 Points)
```

- ☐ My name is Leo and I'm 31.00000 decades old.
- ☐ My name is Leo and I'm 3.1 decades old.
- ☐ My name is {name} and I'm {age / 10:.5f} decades old.
- ☒ My name is Leo and I'm 3.10000 decades old.

20. It is necessary to collect and display all unique words from a line of advertising text. Which of the following Python data types is the best fit? * (4 Points)

- ☒ set
- ☐ list
- ☐ tuple
- ☐ array
- ☐ dict

21. Recording of animals in the zoo is carried out using the list of dictionaries below. Which line of code will output a structure sorted in ascending order of animal ages?

```
animals = [ {'type': 'penguin', 'name': 'Stephanie', 'age': 8},  
            {'type': 'elephant', 'name': 'Devon', 'age': 3},  
            {'type': 'puma', 'name': 'Moe', 'age': 5}, ] * (4 Points)
```

- ☐ `sorted(animals, key='age')`
- ☒ `sorted(animals, key=lambda animal: animal['age'])`
- ☐ Neither option is correct, two dictionaries cannot be compared with each other.
- ☐ `sorted(animals)`

22. What will be the output of the following code?

```
def f(a, *pargs, **kargs): print(a, pargs, kargs)  
f(1, 2, 3, x=4, y=5) * (4 Points)
```

- ☐ `1, 2, 3, {'x': 4, 'y': 5}`
- ☒ `1 (2, 3) {'x': 4, 'y': 5}`
- ☐ An exception will be thrown, after the colon it is necessary to go to a new line.
- ☐ `1, 2, 3, 'x=4', 'y=5'`
- ☐ `1, 2, 3, 4, 5`

23. How to list methods and attributes of x object? * (4 Points)

- ☒ `dir(x)`
- ☐ `help(x)`
- ☐ `info(x)`
- ☐ `?x`

24. What will the following code display?

```
a, *b, c = [1, 2]  
print(a, b, c) *
```

 (4 Points)

- ☒ `[1] [] [2]`
- ☐ An exception will be thrown: there are fewer elements in the list than variables.
- ☐ `1 0 2`
- ☐ `1 [] 2`

25. When declaring a class using the class statement, what is written in parentheses after the class name? * (4 Points)

- ☐ The names of the arguments accepted by the `__init__` method.
- ☐ The names of the arguments accepted by the class.
- ☐ The names of the arguments accepted by the class.
- ☒ `Names of classes generated by this class.`

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