

Programming Knowledge Test

1. Which of the following statements about the basic structures required for structured programming is incorrect?
 - A. Repetition (loop) structure
 - B. Selection (branch) structure
 - C. *Goto* statement
 - D. Sequential structure
2. Which of the following statements about Python's branching structure is incorrect?
 - A. The *if* keyword is used in conditional statements.
 - B. The *if-else* structure is used to create binary branches.
 - C. The *if-elif-else* structure represents multiple branches.
 - D. The branching structure allows jumps to previously executed code blocks.
3. Which of the following statements will correctly print "Hello World" to the screen?
 - A. `print("Hello World")`
 - B. `printf("Hello World")`
 - C. `printf('Hello World')`
 - D. `print(Hello World)`
4. What is the correct file extension for Python source files?
 - A. *.pdf*
 - B. *.do*
 - C. *.pass*
 - D. *.py*
5. Which of the following functions is used to change the color of the turtle drawing pen?
 - A. `seth()`
 - B. `colormode()`
 - C. `bk()`
 - D. `pencolor()`
6. Which of the following statements best describes the effect of the Python statement `P = -P`?
 - A. *P* is equal to its own negative.
 - B. *P* and its absolute value are equal.
 - C. *P* is reassigned to its negative value.
 - D. *P* is equal to zero.

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

```
t1 = (1, 2, 3, 4, 5, 6, 7)
t2 = ("a", "b", "c", "d", "e", "f")
a1 = t1[2:]
a2 = t2[2:5]
s = a1 + a2
print(s)
```

- A. (3, 4, 5, 6, 7, 'c', 'd', 'e')
- B. (4, 5, 6, 7, 'b', 'c', 'd', 'e')
- C. (1, 2, 3, 4, 5, 'c', 'd', 'e')
- D. (3, 4, 5, 6, 7, 'a', 'b', 'c')

8. Given the string `str = "学习力,思考力,行动力,创造力"`, what is the output of `print(str[4:7])`?

- A. 思考力
- B. ‘思考力
- C. 思考力
- D. ‘思考力’

9. What number will be printed by the following code?

```
numbers = [1, 3, 2, 8, 9]
print(numbers[1] + numbers[3])
```

- A. 3
- B. 11
- C. 4
- D. 9

10. Given the dictionary `d1 = {'a': 100, 'b': 200, 'c': 300}`, which of the following statements correctly updates the value of 'a' to 150?

- A. `d1[0] = 150`
- B. `d1[a] = 150`
- C. `d1['a'] = 150`
- D. `d1[100] = 150`

11. What will the following code output?

```
poem = "明日复明日"
for i in poem:
    if i == "明":
        continue
print(i)
```

- A. 明复明
- B. 日复日
- C. 明日复明日
- D. 明明

12. Which of the following statements about loops and conditional structures is incorrect?

- A. A *while* loop can only be used for infinite loops.
- B. Any *for* loop can be rewritten using a *while* loop.
- C. The keyword *break* can be used to terminate a loop.
- D. The keyword *continue* can skip the remaining code in the current iteration and restart the loop.

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

```
for j in range(0, 3):  
    print(j, end = " ")
```

- A. 1 2
- B. 0 1 2 3
- C. 0 1 2
- D. 1 2 3

14. What is the output of the following code?

```
i = 1  
while i <= 10:  
    i += 1  
    if i % 2 > 0:  
        continue  
    print(i)
```

- A. 1 3 5 7
- B. 2 4 6 8 10
- C. 2 4 6 8
- D. 1 3 5 7 9

15. Which of the following statements about Python's branching structure is incorrect?

- A. The *if* keyword is used in conditional statements.
- B. The *if-else* structure is used to create binary branches.
- C. The *if-elif-else* structure represents multiple branches.
- D. The branching structure allows jumps to previously executed code blocks.

16. What is the value of b after running the following code?

```
a = 6
```

```
if a >= 0:
    b = a + 2
else:
    b = a - 2
print(b)
```

- A. 6
- B. 8
- C. 10
- D. 12

17. Which of the following statements about branching structures is incorrect?

- A. Branching structures include single, binary, and multiple branches.
- B. The if-else structure is used in single-branch structures.
- C. Multiple-branch structures are used when evaluating multiple conditions or outcomes.
- D. When using multiple-branch structures, it is important to consider the logical order of conditions to avoid errors.

18. Which of the following code segments executes a different number of loop iterations than the others?

A.

```
i = 0
while i <= 10:
    print(i)
    i = i + 1
```

Iterations: 11

B.

```
for i in range(10):
    print(i)
```

Iterations: 10

C.

```
i = 1
while i <= 10:
    print(i)
    i = i + 1
```

Iterations: 10

D.

```
i = 10
while i > 0:
    print(i)
    i = i - 1
```

Iterations: 10

