Online Class

▼ While loop Questions

1. What is the minimum number of times a `while` loop can execute?
   - A) Zero
   - B) One
   - C) Two
   - D) Infinite

2. Which of the following keywords can be used to immediately exit a `while` loop?
   - A) skip
   - B) exit
   - C) break
   - D) continue

3. What will the following code output?

```
x = 3
while x:
    print(x)
    x -= 1
```

   - A) 3 2 1
   - B) 2 1 0
   - C) 3 2 1 0
   - D) Infinite loop

4. What happens if the condition in a `while` loop is always `True` and no `break` is used?
   - A) The program stops automatically
   - B) It runs forever
   - C) Executes once
   - D) Syntax error

5. What does the `continue` statement do in a `while` loop?
   - A) Ends the loop
   - B) Skips the rest of the code and starts a new iteration
   - C) Repeats the current iteration
   - D) Pauses the loop

6. Which of these is a valid `while` loop condition?
   - A) `while (x = 5):`

- B) `while x == 5:`
- C) `while 5 = x:`
- D) `while x equals 5:`

7. When does the `else` block associated with a `while` loop execute?
   - A) If the loop runs at least once
   - B) Only if the loop breaks
   - C) Only if the loop completes without hitting a `break`
   - D) Always, after the loop

8. Which of the following situations is best for using a `while` loop?
   - A) You need to iterate over a fixed-size list
   - B) You know the exact number of iterations
   - C) You want to loop until a condition becomes false
   - D) You need to sort a list

9. What is the output of the following code?

```
i = 1
while i <= 3:
    print(i * '*')
    i += 1
```

   - A) * ** ***
   - B) 1 2 3
   - C) * ** ***
   - D) * ** ***

10. Which part of a `while` loop is checked first?
    - A) The body
    - B) The else block
    - C) The increment
    - D) The condition

▼ While Loop Homework

1. What is the output of the following code?

```
i = 1
while i < 4:
    print(i)
    i += 1
```

Options:

A. 1 2 3

B. 1 2 3 4

C. 0 1 2

D. 1 2

---

2. Which of the following creates an infinite loop?

Options:

A. `while False:`

B. `while 1 < 0:`

C. `while True:`

D. `while 5 > 10:`

---

3. What is the output of the code below?

```
x = 3
while x > 0:
    print(x)
    x -= 1
```

Options:

A. 3 2 1

B. 0 1 2 3

C. 1 2 3

D. Infinite loop

---

4. What is wrong with this code?

```
n = 5
while n > 0
    print(n)
    n -= 1
```

Options:

A. No error

B. Missing colon after `while n > 0`

C. `print` should be outside the loop

D. `n` should be a string

---

5. What keyword is used to exit a `while` loop early?

Options:

A. continue

B. stop

C. exit

D. break

---

6. What does the `continue` keyword do in a `while` loop?

Options:

A. Stops the loop completely

B. Skips the rest of the loop and goes to the next iteration

C. Ends the program

D. Restarts the whole loop from the beginning

---

7. What is the output of this code?

```
i = 0
while i < 3:
    i += 1
    if i == 2:
        continue
    print(i)
```

Options:

A. 1 2 3

B. 1 3

C. 2 3

D. 1 2

---

8. How many times will this loop run?

```
count = 0
while count < 5:
    count += 1
```

Options:

A. 4

B. 5

C. 6

D. Infinite loop

---

9. What is the output of this code?

```
x = 5
while x:
    print(x)
    x -= 2
```

Options:

A. 5 3 1

B. 5 4 3 2 1

C. 5 3 1 -1

D. Infinite loop

---

10. Which of the following will result in an infinite loop?

```
i = 0
while i < 3:
    print(i)
```

Options:

A. Loop runs 3 times

B. Error

C. Infinite loop

D. No output

▼ Jump Statements

1. What does the `break` statement do in a loop?

   a) Skips the current iteration

   b) Terminates the loop entirely

   c) Does nothing

   d) Restarts the loop

2. What will be the output?

```
for i in range(5):
    if i == 3:
        break
    print(i)
```

   a) 0 1 2 3

   b) 0 1 2

   c) 1 2 3

   d) Infinite loop

3. What is the use of `continue` in loops?

   a) Exits the loop

   b) Skips the rest of the current iteration and goes to the next

   c) Pauses the loop

   d) Repeats the same iteration

4. What will be the output?

```
for i in range(5):
    if i == 2:
        continue
    print(i)
```

   a) 0 1 2 3 4

   b) 0 1 3 4

   c) 0 1 2 3

   d) 1 2 3 4

5. What is the function of `pass` in Python?

   a) Terminates the loop

b) Skips the current iteration

c) Acts as a placeholder and does nothing

d) Repeats the iteration

6. Which of these will result in an infinite loop?

```
while True:
    pass
```

a) Yes

b) No

7. What will be the output?

```
for i in range(4):
    pass
print("Done")
```

a) Done

b) 0 1 2 3 Done

c) Syntax error

d) No output

8. Choose the correct output:

```
for i in range(3):
    if i == 1:
        break
    print(i)
```

a) 0

b) 0 1

c) 1

d) 0 1 2

9. What will be the output?

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

a) 0 2 4

b) 1 3

c) 1 3

d) 1 3

10. What does `pass` mean in an `if` block?

```
if True:
    pass
else:
    print("False")
```

a) Executes the else block

b) Executes pass and then else

c) Does nothing and moves on

d) Error

▼ Jump Homework

1. What is the output of the following code?

```
i = 0
while i < 3:
    print(i)
    i += 1
    if i == 2:
        break
```

a) 0 1

b) 0 1 2

c) 0

d) Infinite loop

2. Which statement is used to skip the current iteration and continue with the next one in a loop?

a) break

b) skip

c) continue

d) pass

3. What will this code output?

```
for i in range(5):
    if i == 3:
        pass
    print(i)
```

a) 0 1 2 3 4

b) 0 1 2 4

c) 0 1 2 pass 4

d) Syntax Error

4. Which loop control statement is useful as a placeholder for future code?

a) break

b) continue

c) return

d) pass

5. What will be the output?

```
for i in range(4):
    if i == 2:
        break
    print(i)
```

a) 0 1 2

b) 0 1

c) 0 1 2 3

d) 1 2

6. What is the purpose of `break` in the following loop?

```
for i in range(10):
    if i > 5:
        break
    print(i)
```

a) Stop the loop after 5

b) Print all numbers

c) Infinite loop

d) Skip printing 5

7. Which statement does *not* terminate or skip iterations?

a) break

b) continue

c) pass

d) return

8. Identify the loop control structure used:

```
for i in range(5):
    if i == 3:
        continue
    print(i)
```

a) pass

b) break

c) continue

d) return

9. What will be printed?

```
for i in range(5):
    if i == 1 or i == 3:
        continue
    print(i)
```

a) 0 2 4

b) 1 3

c) 0 1 2 3 4

d) 2 4

10. Which statement is used to exit a loop prematurely?

a) pass

b) stop

c) break

d) continue

▼ Array in Python

1. What is the output of the following code?

```
arr = [1, 2, 3, 4]
print(arr[2])
```

A) 1

B) 2

C) 3

D) 4

---

2. Which method is used to add an element at the end of a list?

A) `insert()`

B) `add()`

C) `append()`

D) `extend()`

---

3. What will `arr[-1]` return for the array `arr = [10, 20, 30, 40]`?

A) 10

B) 20

C) 30

D) 40

---

4. Which of the following is a correct way to update the second element of a list?

A) `arr(1) = 10`

B) `arr[2] = 10`

C) `arr[1] = 10`

D) `update(arr, 1, 10)`

---

5. What does the `pop()` method do?

A) Removes and returns the last element

B) Adds an element at the start

C) Reverses the list

D) Duplicates the list

---

6. What will be the output?

```
arr = [5, 10, 15]
arr.insert(1, 20)
print(arr)
```

A) [5, 10, 15, 20]

B) [5, 20, 10, 15]

C) [20, 5, 10, 15]

D) [5, 10, 20, 15]

---

7. Which of the following methods adds multiple elements to a list?

A) `append()`

B) `extend()`

C) `insert()`

D) `add()`

---

8. How do you remove a specific value from a list?

A) `remove(value)`

B) `delete(value)`

C) `pop(value)`

D) `cut(value)`

---

9. What is the output?

```
arr = [1, 2, 3]
print(len(arr))
```

A) 2

B) 3

C) 4

D) Error

---

10. Which of the following creates a list with 5 elements, all set to 0?

A) [0, 5]

B) [0]*5

C) [5]*0

D) `list(0,5)`

---

11. Which slice returns the first 3 elements of a list `arr`?

A) `arr[1:3]`

B) `arr[:3]`

C) `arr[3:]`

D) `arr[-3:]`

---

12. What will be the output?

```
arr = [1, 2, 3, 4]
print(arr[::-1])
```

A) [1, 2, 3, 4]

B) [4, 3, 2, 1]

C) Error

D) [2, 3]

---

13. Which method clears all elements from a list?

A) `removeAll()`

B) `clear()`

C) `delete()`

D) `reset()`

---

14. What will `arr.count(2)` return for `arr = [1, 2, 2, 3]`?

A) 1

B) 2

C) 3

D) 0

---

15. Which operation will concatenate two lists?

A) `arr1 + arr2`

B) `arr1.append(arr2)`

C) `arr1 * arr2`

D) `arr1.concat(arr2)`

---

16. Which keyword is used to check if an item exists in a list?

A) `has`

B) `exist`

C) `in`

D) `find`

---

17. What is the output?

```
arr = [3, 1, 4, 2]
arr.sort()
print(arr)
```

A) [3, 1, 4, 2]

B) [1, 2, 3, 4]

C) [4, 3, 2, 1]

D) Error

---

18. Which method returns the index of the first occurrence of a value?

A) `find()`

B) `index()`

C) `locate()`

D) `position()`

---

19. What will be the output?

```
arr = [1, 2, 3]
arr += [4]
print(arr)
```

A) [1, 2, 3]

B) [4]

C) [1, 2, 3, 4]

D) Error

---

20. Which of the following methods returns a deep copy of a list?

A) `copy()`

B) `clone()`

C) `replicate()`

D) `slice()`

▼ Module quiz

1. **What is a module in Python?**
   a) A loop
   b) A function
   c) A file containing Python code
   d) A built-in variable
2. **Which keyword is used to import a module in Python?**
   a) include
   b) import
   c) define
   d) using
3. **What does `import math` do?**
   a) Creates a new math function
   b) Starts math operations
   c) Imports the standard math module
   d) Defines a math variable
4. **How can you import only the `sqrt` function from the `math` module?**
   a) import math.sqrt
   b) using sqrt from math
   c) from math import sqrt
   d) include sqrt from math
5. **What is the output of:**

```
import math
print(math.pi)
```

a) 3.14

b) math.pi

c) 3.141592653589793

d) pi

6. **How do you give an alias to a module during import?**

   a) import math as m

   b) import math.m

   c) import as math m

   d) math = import m

7. **What does `dir(math)` return?**

   a) Math formulas

   b) All functions and constants in the math module

   c) Math file path

   d) Math errors

8. **What is the difference between `import module` and `from module import *`?**

   a) No difference

   b) The second imports only one function

   c) The second imports all functions without prefix

   d) First one is faster

9. **Can you create your own module in Python?**

   a) No

   b) Yes

   c) Only in Python 3

   d) Only using classes

10. **How do you use a function defined in a user-defined module called `my_module.py`?**

    a) call(my_module.function())

    b) my_module.function()

    c) use my_module.function

    d) module.function()

11. **What is the file extension of a Python module?**

    a) .mod

    b) .txt

    c) .py

    d) .module

12. **What will `from math import sqrt as s` allow you to do?**

    a) Use sqrt as a variable

    b) Use s() to call sqrt()

    c) Rename the module

    d) Import all math functions

13. **Which module helps to generate random numbers?**
    a) rand
    b) math
    c) random
    d) numbers
14. **What does `from random import randint` do?**
    a) Imports the full random module
    b) Imports only the randint function
    c) Creates random integers
    d) Starts a random process
15. **Can two different modules have the same function name?**
    a) Yes
    b) No
    c) Only in Python 3
    d) Only if they are standard modules
16. **Which module provides information about the system/platform?**
    a) os
    b) sys
    c) platform
    d) info
17. **What does `import os` allow you to do?**
    a) Draw shapes
    b) Use operating system functionalities
    c) Handle errors
    d) Connect to internet
18. **What is the output of:**
    ```
    import random
    print(random.choice([1, 2, 3]))
    ```
    a) Error
    b) Always 1
    c) Any one of 1, 2, or 3
    d) Prints the list
19. **How do you reload a module in Python?**
    a) import.reload(module)
    b) reload(module)
    c) importlib.reload(module)
    d) refresh(module)
20. **Which built-in function returns a list of all functions and attributes in a module?**
    a) help()
    b) dir()
    c) list()

d) show()