Statements:

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

python

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x = 10

if x > 5:

print("A")

elif x > 8:

print("B")

else:

print("C")

a) A b) B c) C d) AB

1. Which of the following is not a valid loop statement in Python? a) for b) while c) do-while d) comprehension
2. What will be the output of the following code?

python

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for i in range(5):

if i == 3:

continue

print(i, end=' ')

a) 0 1 2 4 b) 0 1 2 3 4 c) 0 1 2 d) 0 1 2 3

1. In a try-except block, where should the finally clause be placed? a) Before the try block b) After the try block but before the except block c) After the except block d) It can be placed anywhere within the try-except block
2. What is the purpose of the pass statement in Python? a) To exit a loop b) To skip the rest of the code in a block c) To do nothing and act as a placeholder d) To raise an exception
3. What will be the output of the following code?

python

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x = 0

while x < 5:

x += 1

if x == 3:

break

else:

print("Loop completed")

print(x)

a) Loop completed 5 b) 3 c) 5 d) Loop completed 3

1. Which statement is used to define a block of code in Python? a) Curly braces {} b) BEGIN and END keywords c) Indentation d) Parentheses ()
2. What will be the output of the following code?

python

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x = 5

assert x > 10, "x is too small"

print("This will not be printed")

a) AssertionError: x is too small b) This will not be printed c) x is too small d) No output, the program will continue silently

1. In a for loop, what does the else clause do? a) It is always executed after the loop b) It is executed if the loop completes normally (without a break) c) It is executed if the loop is empty d) It is executed if an exception occurs in the loop
2. What will be the output of the following code?

python

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x = 1

match x:

case 1:

print("One")

case 2:

print("Two")

case \_:

print("Other")

a) One b) SyntaxError c) Other d) No output

Statements:

1. Answer: a) A Explanation: The first condition (x > 5) is true, so "A" is printed and the rest of the conditions are not checked.
2. Answer: c) do-while Explanation: Python does not have a do-while loop. It has for, while, and list comprehensions.
3. Answer: a) 0 1 2 4 Explanation: The continue statement skips the rest of the loop for i = 3.
4. Answer: c) After the except block Explanation: The finally clause, if present, is always placed after all except clauses.
5. Answer: c) To do nothing and act as a placeholder Explanation: pass is a null operation; when it is executed, nothing happens.
6. Answer: b) 3 Explanation: The loop breaks when x == 3, so the else clause is not executed.
7. Answer: c) Indentation Explanation: Python uses indentation to define blocks of code.
8. Answer: a) AssertionError: x is too small Explanation: The assert statement raises an AssertionError with the given message when the condition is false.
9. Answer: b) It is executed if the loop completes normally (without a break) Explanation: The else clause in a for loop is executed if the loop completes without encountering a break statement.
10. Answer: a) One Explanation: This is an example of Python's match statement (introduced in Python 3.10). It matches x to 1 and prints "One".