Conditional Statements

1. What is the output of the following Python code?

```
x = 10
if x > 5:
    print("Greater")
else:
    print("Smaller")
```

A. Greater
B. Smaller
C. Error
D. None of the above

2. Which of the following is the correct syntax for an if statement in Python?

A. if (condition):
B. if condition:
C. if: condition
D. if condition:

3. What is the output of the following code?

```
x = 10
y = 20
if x > y:
    print("x is greater")
else:
    print("y is greater")
```

A. x is greater
B. y is greater
C. Error
D. None of the above

4. Which of the following keywords is used for an alternative condition in Python?

A. else if
B. elif
C. elseif
D. alt

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

```
x = 5

if x > 5:

    print("x is greater than 5")

elif x == 5:

    print("x is equal to 5")

else:

    print("x is less than 5")
```

A. x is greater than 5
B. x is equal to 5
C. x is less than 5
D. Error

6. Which of the following operators is NOT a comparison operator in Python?

A. >
B. ==
C. !
D. !=

7. What is the purpose of the else clause in an if statement?

A. It executes code when the condition in the if statement is True.
B. It executes code when the condition in the if statement is False.
C. It allows multiple conditions to be checked.
D. It creates an infinite loop.

8. What is the output of the following code?

```
x = 10

y = 5

if x > y and y < 10:

    print("Condition satisfied")

else:

    print("Condition not satisfied")
```

A. Condition satisfied
B. Condition not satisfied
C. Error
D. None of the above

9. What will be the output of this code?

```
x = 7

if x > 10:

    print("x is greater than 10")

else:

    print("x is not greater than 10")
```

A. x is greater than 10
B. x is not greater than 10
C. Error
D. No output

10. What is the correct way to write a conditional expression that checks if a variable num is between 1 and 100 (inclusive)?

A. if 1 <= num <= 100:
B. if num >= 1 and num <= 100:
C. Both A and B
D. None of the above

11. What is the output of the following code?

```
x = 10
if x == 10:
    if x > 5:
        print("x is 10 and greater than 5")
    else:
        print("x is 10 and not greater than 5")
else:
    print("x is not 10")
```

A. x is 10 and greater than 5
B. x is 10 and not greater than 5
C. x is not 10
D. Error

12. Which of the following statements about the ternary operator is true?

A. It cannot be used in Python.
B. It is used for multiple conditions in a single line.
C. It is used to write an if-else statement in a single line.
D. It is used to write loops.

13. What is the correct syntax for the ternary operator in Python?

A. result = condition ? value_if_true : value_if_false
B. result = value_if_true if condition else value_if_false
C. result = value_if_false if condition else value_if_true
D. result = condition if value_if_true else value_if_false

14. What is the output of the following code?

```
x = 20

if x > 10:

    if x < 15:

        print("Between 10 and 15")

    elif x < 25:

        print("Between 15 and 25")

    else:

        print("Greater than 25")

else:

    print("Less than or equal to 10")
```

A. Between 10 and 15
B. Between 15 and 25
C. Greater than 25
D. Less than or equal to 10

15. Which of the following best describes the purpose of conditional statements in Python?

A. They are used to perform repetitive tasks.
B. They are used to define functions.
C. They allow the program to execute certain sections of code based on whether a condition is True or False.
D. They are used to handle errors in Python code.