**1.What does the '==' operator do in Python?**

* Checks if two objects have the same identity
* Checks if two objects have the same value
* Assigns a value to a variable
* Checks if the left-hand side object is greater than the right-hand side object

**Ans: 2**

**Explanation**

'==' is the equality operator in Python. It compares the values of two objects. If the values are equal, it returns True, otherwise, it returns False.

clip

**2.What is the result of the expression 10 > 5 in Python?**

* True
* False
* 10
* 5

**Ans: 1**

**Explanation**

The expression 10 > 5 evaluates to True because 10 is greater than 5.

clip

**3.Which of the following is a mutable object in Python?**

* Integer
* Tuple
* List
* String

**Ans: 3**

**Explanation**

A list is a mutable object in Python, which means its elements can be changed after it has been created.

**4.What is the result of the expression 'hello' == 'Hello' in Python?**

* True
* False
* Error
* None

**Ans: 2**

**Explanation**

The expression 'hello' == 'Hello' evaluates to False because the two strings have different values ('h' vs 'H'). The comparison is case-sensitive.

clip

**5.In Python, which keyword is used to define a block of code under a conditional statement?**

* for
* if
* else
* while

**Ans: 2**

**Explanation**

In Python, the 'if' keyword is used to define a block of code under a conditional statement. The block of code is executed only if the condition is True.

clip

**6.Which of the following operators is used to check if a value is present within a sequence in Python?**

* ++
* is
* in
* ==

**Ans: 3**

**Explanation**

The 'in' operator is used to check if a value is present within a sequence (such as a list, tuple, or string) in Python. It returns True if the value is present, otherwise, it returns False.

clip

**7.What will be the output of the following code? x = 5 y = 6 result = 'x is greater' if x > y else 'y is greater' print(result)**

* x is greater
* y is greater
* 6
* Error

**Ans: 2**

**Explanation**

The output of the given code will be 'y is greater' because the condition 'x > y' evaluates to False, so the expression after 'else' is executed.

**8.What does the 'is' operator do in Python?**

* Checks if two objects have the same value
* Assigns a value to a variable
* Checks if two objects have the same identity
* Checks if the left-hand side object is greater than the right-hand side object

**Ans: 3**

**Explanation**

The 'is' operator in Python checks whether the two objects refer to the same location in memory, i.e., whether they have the same identity.

clip

**9.Which of the following is NOT a mutable object in Python?**

* List
* Dictionary
* Set
* Tuple

**Ans: 4**

**Explanation**

A tuple is NOT a mutable object in Python. Once a tuple is created, its elements cannot be changed, removed, or added.

clip

**10.What will be the output of the following code? def func(var=[]): var.append(1) return var print(func()) print(func())**

* [1] and [1]
* [1, 1] and [1, 1]
* [1] and [1, 1]
* [1, 1] and [1]

**Ans: 3**

**Explanation**

The output of the given code will be [1] and [1, 1]. The default mutable object (list) is shared among all calls to the function, so each call modifies the same list object.

**11.What will be the output of the following code? x = 5 y = 5 print(x is y)**

* True
* False
* Error
* None

**Ans: 1**

**Explanation**

The output of the given code will be True. In Python, small integers and short strings are cached and shared, so the variables x and y refer to the same memory location.

**12.What is the result of the expression 3 != 3 in Python?**

* True
* False
* Error
* None

**Ans: 2**

**Explanation**

The expression 3 != 3 evaluates to False because 3 is equal to 3. The '!=' operator checks for inequality.

**13.In Python, what does the 'and' operator do?**

* Returns True if at least one operand is True
* Returns True if both operands are True
* Returns True if neither operand is True
* Returns True if either operand is True

**Ans: 2**

**Explanation**

The 'and' operator in Python is a logical operator. It returns True if both the operands are True, otherwise, it returns False.

**14.Which of the following is a comparison operator in Python?**

* -
* <
* in
* and

**Ans: 2**

**Explanation**

'<' is a comparison operator in Python. It checks if the value on the left-hand side is less than the value on the right-hand side.

clip

**15.What will be the output of the following code? x = True y = False print(x and y)**

* True
* False
* Error
* None

**Ans: 2**

**Explanation**

The output of the given code will be False. The 'and' operator returns False if any of the operands is False, and in this case, y is False.