1.What are the two values of the Boolean data type? How do you write them?

**True , False**

**a = 10**

**y = 10**

**print(bool(x==y))**

**True.**

**integer, floating-point number, or complex number having zero as a value is considered as False, if they are having value as any positive or negative number then it is considered as True.**

2. What are the three different types of Boolean operators?

**And , Or, Not .**

3. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A | B | A and B | A or B | Not A |
| TRUE | TRUE | TRUE | TRUE | FALSE |
| TRUE | FALSE | FALSE | TRUE | FALSE |
| FALSE | TRUE | FALSE | TRUE | TRUE |
| FALSE | FALSE | FALSE | FALSE | TRUE |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) **False**

not (5 > 4) **False**

(5 > 4) or (3 == 5) **True**

not ((5 > 4) or (3 == 5)) **False**

(True and True) and (True == False) **False**

(not False) or (not True) **True**

5. What are the six comparison operators?

**Less than ( < )**

**Less than or equal to ( <= )**

**Greater than ( > )**

**Greater than or equal to ( >= )**

**Equal to ( == )**

**Not equal to ( != )**

6. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.

[**The “**=**” is an**](https://www.geeksforgeeks.org/operators-c-c/)[**assignment operator**](https://www.geeksforgeeks.org/assignment-operators-in-c-c/)**is used to assign the value on the right to the variable on the left.a = 10;**

**Comparision Operator ‘==’ checks whether the two given operands are equal or not. If so, it returns true. Otherwise it returns false.**

**# If the number is positive, we print an appropriate message**

**num = 1**

**if num ==1:**

**print(num)**

7. Identify the three blocks in this code:**3**

spam = 0

**if spam == 10:**

**print('eggs')**

**if spam > 5:**

**print('bacon')**

**else:**

**print('ham')**

print('spam')

print('spam')

8. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.

**spam = 489**

**if spam == 1:**

**print('Hello')**

**elif spam == 2:**

**print('Howdy')**

**else :**

**print('Greetings')**

9.If your programme is stuck in an endless loop, what keys you’ll press? **Ctrl+C**

10. How can you tell the difference between break and continue?

**Break terminates the execution of the current loop and passes the control over the next loop or main body, Continue is to skip the current iteration and executes / continue with the very next iteration in the loop.**

11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)? **none**

12. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.

**for i in range(1,11,1) :**

**print(i)**

**i = 1**

**while i <= 10:**

**print(i)**

**i += 1**

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

**Import spam as sp**

**Sp.bacon()**