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

The 2 values are True and False. They are written as True and False in python.

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

The 3 types of Boolean operators are 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 ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **condition 1 (e.g., X)** | **condition 2 (e.g., Y)** | **NOT X ( ~ X )** | **X AND Y ( X && Y )** | **X OR Y ( X || Y )** |
| false | false | true | false | false |
| false | true | true | false | true |
| true | false | false | false | true |
| true | true | false | true | 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?

|  |  |  |
| --- | --- | --- |
| **Operator** | **Name** | **Example** |
| == | Equal | x == y |
| != | Not equal | x != y |
| > | Greater than | x > y |
| < | Less than | x < y |
| >= | Greater than or equal to | x >= y |
| <= | Less than or equal to | x <= y |

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

Assignment is done with a single = sign. Whereas equal to is done using double == signs.

Eg. A = 12 is assignment

Whereas 22==22 is equal to

7. Identify the three blocks in this code:

Block 1

spam = 0

if spam == 10:

print('eggs')

Block 2

if spam > 5:

print('bacon')

Block 3

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.

if spam == 1:

print(‘Hello’)

if 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?

The main difference between both the statements is that when break keyword comes, it terminates the execution of the current loop and passes the control over the next loop or main body, whereas when continue keyword is encountered, it skips the current iteration and executes 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)?

With regards to the output there is no difference in any of the above 3 functions. They will all generate numbers from 0-9.

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 Loop program

for i in range(11):

print(i)

While loop program

i = 0

while i < 11:

print(i)

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

from spam import bacon