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

**Ans:**

The two values of Boolean data type are

True and False

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

**Ans:**

The three different 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 ).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| A | B | A **and** B  Evaluates to | A | B | A **or** B  Evaluates to |
| False | False | False | False | False | False |
| False | True | False | False | True | True |
| True | False | False | True | False | True |
| True | True | True | True | True | True |

|  |  |
| --- | --- |
| A | **not A**  Evaluates to |
| True | False |
| False | True |

4. What are the values of the following expressions?

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

not (5 > 4)

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

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

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

(not False) or (not True)

**Ans:**

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

not (5 > 4) **=> not(True) => False**

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

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

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

(not False) or (not True) **=> True or False => True**

5. What are the six comparison operators?

**Ans:**

== (equal)

!= (not equal)

>(greater than)

>=(greater than or equal)

<(less than)

<=(less than or equal)

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

**Ans:**

== (Equal) operator checks if operand on the left side is equal to operand on the right side. Evaluates to True if both are equal other wise False.

Ex :

A = 5

B= 5

A == B Evalutes to True

A = 5

B= 6

A == B Evalutes to False

= (assignment operator) used to assign a value to a variable on the left side.

Ex : A = 8

Value 8 is assigned to A

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

**Ans :**

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.

**Ans :**

spam=5

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?

**Ans:**

Ctr+C

Jupyter notebook , stop the kernel and restart it.

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

**Ans:**

Break statement terminate the loop iteration before condition goes false and execution skip to the line after the loop block.

Continue statement used to continue the loop iteration without executing the rest of the lines after the continue statement , inside the loop block.

11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

**Ans:**

All the three type of range function results the same.

for I in range(10):

print(i)

for I in range(0,10):

print(i)

for I in range(0,10,1):

print(i)

Results print 0,1,2,3,4,5,6,7,8,9

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.

**Ans :**

Using for loop :

for i in range(1,11) :

print(i)

using while loop :

i =1

while i < 11:

print(i)

i = i+1

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