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

**Answer:** True and False

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

**Answer:**  AND,OR and NOT are the three Boolean operators.

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 ).

**Answer:**  T represents **True**, F represents **False**

AND Operator: OR Operator: NOT Operator:

|  |  |  |
| --- | --- | --- |
| T AND T = T |  | T OR T = T |
| T AND F = F | T OR F = T |
| F AND T = F | F OR T = T |
| F AND F = F | F OR F = F |

|  |
| --- |
| NOT T = F |
| NOT F = T |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) : **Answer**- False

not (5 > 4) -: **Answer**- False

(5 > 4) or (3 == 5) : **Answer**- True

not ((5 > 4) or (3 == 5)) : **Answer**- False

(True and True) and (True == False) : **Answer**- False

(not False) or (not True) : **Answer**- True

5. What are the six comparison operators?

**Answer:** equal to (==), not equal to (!=) , greater than (>), greater than or equal to (>=), less than(<), and less than or 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.

**Answer**: Comparison operator of equal to is to be written as ‘==’

Example : 3 == 3 , ‘DSFS’ == ‘DSFS’ , 21.6 == 222

Assignment operator is to be written as ‘=’

Example: a=1 , b=’DSFS’

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')

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 = int(input())

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?

**Answer**: CTRL + C in Command line.

Restarting kernel in jupyter notebook.

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

**Answer:** Break statement will stop iterations , Continue statement will skip current iteration and jump to next iteration value.

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

**Answer:** There is no difference in the above mentioned three range functions. All three returns values from 0 to 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.

**Answer**:

Using For loop:

for i in range(1,11):

print(i)

Using while loop:

i=1

while i < 11:

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?

**Answer**: spam.bacon()