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

**Ans :** Boolean data types gives either 0 (False) or 1 (True) values.

type(True) and type(False)

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

**Ans :** The three types of Boolean operators are :

I. AND

II. OR

III. 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 ).

**Ans :** For AND operator -

|  |  |  |
| --- | --- | --- |
| **Input A** | **Input B** | **Result** |

|  |  |  |
| --- | --- | --- |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

FOR OR OPERATOR -

|  |  |  |
| --- | --- | --- |
| **Input A** | **Input B** | **Result** |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

For NOT operator -

|  |  |
| --- | --- |
| **Input A** | **Result** |
| 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 :** I. False

ii. False

iii. True

iv. False

v. False

vi. True

5. What are the six comparison operators?

**Ans :** The six comparison operators are :

< , > , <= , >= , == , !=

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 compares the values between two variables either they are equal or not.

Assignment (=) operator assigns a value to a variable at the left.

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 (First Block)

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 = input("Enter a number :")

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: Ctrl+C** will end the loop.

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

**Ans : Break-** it breaks the whole iteration of the loop.

**Continue-** it skips the current iteration and continues with the next loop.

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

**Ans :** range(10) and range(0,10) are both same the first one by default starts from zeroth index and in the second one we are giving the starting and ending index. In range(0,10,1) here the last 1 is stating the number of characters to be skipped.

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

print(i)

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

**Ans :** spam.bacon().