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

**Two values of Boolean data type is 0 and 1.**

**Represented as**

**True**

**False**

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 ).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **AND** | | |  | **OR** | | |  | **NOT** | |
| **i/p1** | **i/p2** | **o/p** | **i/p1** | **i/p2** | **o/p** | **i/p** | **o/p** |
| **True** | **True** | **True** | **True** | **True** | **True** | **True** | **False** |
| **True** | **False** | **False** | **True** | **False** | **True** | **False** | **True** |
| **False** | **True** | **False** | **False** | **True** | **True** |  | |
| **False** | **False** | **False** | **False** | **False** | **False** |

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?

**>**

**<**

**>=**

**<=**

**==**

**!=**

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

**Equal to is a comparison operator, which will be used to compare two values whether they are equal or not.**

**Eg: if x & y are two variables storing two values and to know whether these two variables same or not equal operator will be used. i.e. x==y.**

**Assignment operator will be used to assign a value to a variable.**

**Eg: if z is variable and need to assign value 5 to it then assignment operator can be used as z=5.**

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')

**block 1:**

**if spam == 10:**

**print('eggs')**

**block2:**

**if spam > 5:**

**print('bacon')**

**block3:**

**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=3**

**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?

**While using jupyter notebook, will press interrupt the kernel to stop the program execution, no other keys are working.**

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

**Break will stop the program execution while program executing a loop and execution will start from next block.**

**Continue will keep on executing the loop.**

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

**There is no difference among mentioned above, all will print numbers from 0 to 9 with step size 1.**

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.

**Using for loop:**

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

**print(i)**

**using while loop:**

**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?

**Bacon function can be called as**

**bacon()**