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

**0 and 1 , True and 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 ).

**OR TRUTHTABLE**

|  |  |  |
| --- | --- | --- |
| **IP1** | **IP2** | **RESULT(IP1+ IP2)** |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

**AND TRUTHTABLE**

|  |  |  |
| --- | --- | --- |
| **IP1** | **IP2** | **RESULT(IP1 DOT IP2)** |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

**NOT TRUTHTABLE**

**OR TRUTHTABLE**

|  |  |
| --- | --- |
| **IP1** | **RESULT (IP1^)** |
| 0 | 1 |
| 1 | 0 |

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?

And , or , not ,nand , xor , xnor

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

**Let’s take a variable named as spam , now with single equals will assign the variable with the right part data type and with double equals will be a statement to check wheather the left value is equal to right value and as an output True or False.**

**spam = 10**

**print(spam)**

**output:**

**10**

**spam == 11**

**output:**

**False**

**Spam == 10**

**output:**

**Tr ue**

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs')# **indentation error**

if spam > 5: **# need to use elif**

print('bacon') # **indentation error**

else:

print('ham') **indentation error**

print('spam') **indentation error**

print('spam') **indentation error**

**# to print spam ni need to wrap it in quotes**

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("Please select a whole number in range:\n "))**

**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?

**Interrupt / restart kernel**

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

**Break statement simply breaks any loop or flow of statement on the programme line we are using it.**

**Continue allows any loop to continue further on the programme line we are using it.**

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

**Basically there is no differences between these 3 types of range declaration ,**

**Range(start=0, stop , stepsize=1) this is the basic function**

**So range(10) means range(0,10,1) and range (0,10) means range (0,10,1)**

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.

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

**print(i)**

**a = 0**

**while not a == 10:**

**a += 1**

**print (a)**

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

**import spam**

**spam.bacon()**