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

**Ans1. 0 &1 we can write it as true and false**

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

**Ans2. And, Or and 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 ).

**Ans3.**

**And**

|  |  |  |
| --- | --- | --- |
| **0** | **0** | **0** |
| **0** | **1** | **0** |
| **1** | **0** | **0** |
| **1** | **1** | **1** |

**OR**

|  |  |  |
| --- | --- | --- |
| **0** | **0** | **0** |
| **0** | **1** | **1** |
| **1** | **0** | **1** |
| **1** | **1** | **1** |

**NOT**

|  |  |  |
| --- | --- | --- |
| **0** | **0** | **0** |
| **0** | **1** | **1** |
| **1** | **0** | **1** |
| **1** | **1** | **0** |

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)

**Ans4.**

**(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):-**

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

5. What are the six comparison operators?

**Ans5. “<” less than**

**“>” greater than**

**“==” equal**

**“!=” not equal to**

**“<=” less than equal to**

**“>=” greater than 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.

**Ans6. The equal to operator is “==”, it only used for check**

**Eg. I=2**

**If(i==2):**

**Print(yes)**

**2. and the assignment operator is“=”**

**Eg i=2 now the value of i is 2**

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')

Ans7.

**spam = 0**

**1st block**

**if spam == 10:**

**print('eggs')**

**2nd block**

**if spam > 5:**

**print('bacon')**

**else:**

**print('ham')**

**3rd block**

**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.

**Ans8. Spam=1**

**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?

**Ans9. Ctrl+C**

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

**Ans10.**

|  |  |
| --- | --- |
| **Break** | **Continue** |
| **Leaves the loop** | **Jumps for the next iteration** |
| **Skips remaining execution of complete loop** | **Skips execution of remaining statement inside the loop for current iteration** |
|  |  |

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

**Ans11. Range(10):- the loop will run from 0 to 10 by default**

**Range(0,10):- the loop will run specifically from 0 to 10**

**Range(0,10,1):- the loop will run from 0 to 10 with a gap/difference/step of 1**

**Range (start, stop ,step)**

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.

**Ans12. For loop:-**

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

**Print(i)**

**2. 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?

**Ans13.**

**Import spam**

**Spam.bacon()**