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

**Ans:**

**Two values of Boolean data type are True and False.**

**We write them as:**

**a = True**

**b = False**

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

**Ans:**

**AND, OR and NOT are the three.**

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 ).

0 = False, 1 = True

|  |  |  |  |
| --- | --- | --- | --- |
| X | Y | AND | OR |
| 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 |

|  |  |
| --- | --- |
| X | NOT |
| 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?

**Ans:**

**Equal to (==), Not equal to(!=), Less than(<), Less than or equal to(<=), Greater than(>), Greater 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.

**Ans:**

**For a ‘equal to’ operator we use two equal(=) sign while for a assignment operator we use one equal(=) sign.**

**Conditon:**

**a = 2 -> 2 is assigned to a.**

**b = 3 -> 3 is assigned to b.**

**a == b -> here a is compared with b to check if both contains same value or not.**

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

**Here 1st block ends**

if spam > 5:

print('bacon')

**Here 2nd block ends**

else:

print('ham')

print('spam')

print('spam')

**And this is the 3rd block.**

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()**

**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:**

**break**

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

**Ans:**

**break stops the execution of a loop and comes out of the loo while continue just skip the current iteration and goes to next iteration in the loop it does not stop the loop.**

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

**Ans:**

**range(10): Here only the end index is defined so by default it will start from 0.**

**range(0,10) : Here a starting index and a end index is defined so it will take values from 0 to 9.**

**range(0, 10, 1) : Here starting index, end index as well as step size is also defined so every time it will step 1 ahead.**

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:**

**#Using for**

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

**print(i)**

**#Using while**

**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?

**Ans:**

**from spam import bacon**

**bacon()**