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

**BP: There are two Boolean. values: True and False.**

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

BP: **These operators are 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 ).

|  |  |  |
| --- | --- | --- |
| **And** | **True if both are true** | **x and y** |
| **Or** | **True if at least one is true** | **x or y** |
| **not** | **True only if false** | **not x** |

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?

1. **== Equal to**
2. **!= Not equal to**
3. **< Less than**
4. **> Greater than**
5. **<= Less than or equal to**
6. **>= 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.

**The “=” is an assignment operator is used to assign the value on the right to the variable on the left. The '==' operator checks whether the two given operands are equal or not**

**Example:**

1. **name=’brijesh pandey’ (assignment operator)**
2. **customer=customer[customer[‘name’]==’brijesh pandey’] (equal operator)**

7. Identify the three blocks in this code:

spam = 0

if spam == 10: - Block1

print('eggs')

if spam > 5: - Block 2

print('bacon')

else: - Block 3

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=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?

**Ctrl + C**

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

* **break statement stops the loop in which the statement is placed.**
* **continue statement skips a single iteration in a loop**

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

* Range(10) - Number of integers (whole numbers) to generate, starting from zero [0,1,2,3,4,5,6,7,8,9]
* Range(0,10) -  Starting number of the sequence to Generate numbers up to, but not including this number [0,1,2,3,4,5,6,7,8,9]
* Range(0,10,1) – [0,1,2,3,4,5,6,7,8,9] : 3rd option gives difference between each number in the sequence.

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(10):**

**print(i+1)**

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

**Import spam as spam**

**Spam.bacon()**