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

Ans : **Boolean Data types are 1 True 2 False**

**Boolean Expressions are use when relational and logical operators.**

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

Ans : **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 ).

Ans : 2 Input and gate Operator :

|  |  |  |
| --- | --- | --- |
| A | B | C |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

2 INPUT OR Gate : The out put C is NOT True if Both input A and B are True (C= not(A AND B)).

|  |  |  |
| --- | --- | --- |
| A | B | C |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

2 input NOR Gate : The Out put “C” is True if Both input A,B aren’t True (C=not(A OR B)).

|  |  |  |
| --- | --- | --- |
| A | B | C |
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 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)

Ans : **True**

5. What are the six comparison operators?

Ans : **<,>,<=,>=,==,!=**

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

**Ans : The Assignment operator(=) is used to assign the Value on the right to the Variable on the left**

**Ex : x=5**

**Print(x)**

**Output : 5**

**The equal to operator(==) checks whether the two given operands are equal or not.**

**Ex : x== 10 checks if the variable x is equal to 10 or not.**

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')

Ans : **print(‘bacon’) and print(‘ham’)**

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 :

**if spam == 1:**

**print('Hello')**

**elif spam == 2:**

**print('Howdy')**

**else:**

**print('Greetings!')**

**1**

**Greetings!**

**2**

**Greetings!**

No

9.If your programme is stuck in an endless loop, what keys you’ll press?

Ans : **Ctrl+C**

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

Ans : **Break: Will be the close the loop Condition**

**Continue : will continue the loop condition until end of the sequence.**

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

Ans : **output will be o to 9 (0,1,2,3,4,5,6,7,8,9)**

**range (10) : Means indentation will be positive sign from 0 to 9, step size by default 1**

**range(0,10) : Means indentation will be positive sign from 0 to 9, step size by default 1**

**range (0,10,1) : Means indentation will be positive sign from 0 to 9, step size by default 1 here we have mentioned just step size.**

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 : **for i in range(1,10):**

**print(i)**

**output: 1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**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?

Ans : **NameError: name 'bacon' is not defined**