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

**The two values of Boolean datatype are True, False.**

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

**Three different types of Boolean operators are 1. and**

**2. or**

**3. 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 ).

|  |  |  |  |
| --- | --- | --- | --- |
| **Operator** | **X** | **Y** | **Result** |
| **AND** | 1 | 1 | 1 |
| 1 | 0 | 0 |
| 0 | 1 | 0 |
| 0 | 0 | 0 |
| **OR** | 1 | 1 | 1 |
| 1 | 0 | 1 |
| 0 | 1 | 1 |
| 0 | 0 | 0 |
| **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?

**=, >, <, >=, <=, !=**

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

**‘ = ’ is used to assign the value, ‘ == ’ is used to compare the values(operands).**

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print(‘eggs’) **# Block 1**

if spam > 5: **# Block 1**

print('bacon') **# Block 2 in 1**

else: **# Block 1**

print('ham') **# Block 3 in 1**

print('spam') **# Block 1**

print('spam') **# Block 1**

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.

**Code:**

**Spam = input('spam: ')**

**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 – When break occurs in the code then it terminates in the existing loop and goes to the next step after the loop.**

**Continue – When continue keyword occurs in the code it skips the present iteration and continues the next iteration.**

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

**range(10) – in this form 10 is the final value where the default starting value is 0.**

**range(0, 10) – in this form we have entered both starting(0) and ending point(10) of the values.**

**range(0, 10, 1) – in this from we are entering (starting value, ending value, step size)**

**The above all three prints [0,1,2,3,4,5,6,7,8,9]**

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 LOOP** | **WHILE LOOP** |
| **for i in range(1,11):**  **print(i)** | **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?

**spam.bacon()**