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

**Solution: True and False are two values of Boolean data type. The first letter of Boolean data type should be in uppercase i.e. True and False**

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

**Solution: 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 ).

**Solution:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Condition of X** | **Condition of Y** | **NOT Condition X** | **NOT Condition Y** | **Condition X AND Condition Y** | **Condition X OR Condition Y** |
| True | True | False | False | True | True |
| False | False | True | True | False | False |
| True | False | False | True | False | True |
| False | True | True | False | False | True |

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?

**Solution: Comparison operators are :**

**1. == (Equal to)**

**2. >= (Greater than equal to)**

**3. <= (Less than equal to)**

**4. > (Greater than )**

**5. < (Less than )**

**6. != (Not 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.

**Solution: Assignment is done with single equal to (=) sign and equal to comparison operator with double equal to sign(==). Assignment operator used to assign data to variable and equal to operator used to check weather two data are equal or not. Equal to condition are used for palindrome words.**

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')

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.

**Solution:**

**spam=int(input('Input the number : '))**

**if spam ==1:**

**print('Hellow')**

**elif spam==2:**

**print('Howdy')**

**else:**

**print('Greetings!')**

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

**Solution: restart the Kernal**

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

**Solution: Break statement use to break the loop and come out of the loop but in continue statement the code below the continue statement not executed and send the cursor for next iteration**

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

**Solution: In for loop there are not difference in output for range(10), range(0, 10), and range(0, 10, 1)**

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.

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

**print(i)**

**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?

**Solution: spam.bacon()**