1.What are the two values of the Boolean data type? How do you write them? : **True & False.**

**Example : 10>9 will print True however 9>10 will print False**

2. What are the three different types of Boolean operators? : **AND, NOT, OR**

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 table**

|  |  |  |
| --- | --- | --- |
| **True 1** | **True 1** | **True 1** |
| **True 1** | **False 0** | **False 0** |
| **False 0** | **False 0** | **False 0** |
| **False 0** | **True 1** | **False 0** |

**OR Table**

|  |  |  |
| --- | --- | --- |
| **False 0** | **False 0** | **False 0** |
| **True 1** | **False 0** | **True 1** |
| **True 1** | **False 0** | **True 1** |
| **True 1** | **True 1** | **True 1** |

**Not True/False**

|  |  |
| --- | --- |
| **Not True** | **False** |
| **Not False** | **True** |

4. What are the values of the following expressions?

(5 > 4) : **True** 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. **Less than <**
2. **Greater than >**
3. **Equal to ==**
4. **Not equal to !=**
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. : **Equal to operator is used while defining a variable or assigning a value to a variable but assignment operator is mostly used during a conditional statement.**

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.

**spam = int(input("enter a number : "))**

**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 will move out of the loop and continue statement will the execution to the start of the loop.**

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

**The range(10) calls ranges from 0 upto 10 but not including 10, range(0,10) mentions the loop to start at 0 and end upto 10 & range(0, 10, 1) mentions the loop to start at 0 and end upto 10 while increasing the variable by 1 on each iteration, also called as jump 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.

**1) i=1**

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

**print(i)**

2) **i = 1**

**while i <= 10:**

**print(i)**

**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()**