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

**Two values of Boolean data type are True and False**

**True is 1**

**False is 0**

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

**AND, OR, 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** | **Description** | **Representation** |
| **AND** | **True if both are True** | **X AND Y** |
| **OR** | **True if atleast one is True** | **X OR Y** |
| **NOT** | **True if X is 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?

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

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 == Comparison operator used for comparing two values. Returns 1 if values are equal else 0**

**Assignment Operator = It is used for assigning the value to a variable**

7. Identify the three blocks in this code:

spam = 0

**Block1**

if spam == 10:

print('eggs')

**Block2**

if spam > 5:

print('bacon')

else:

print('ham')

**Block 3**

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.

**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 is used to exit from a loop in which it is present (if the condition is satisfied the loop ends)**

**Continue is used to execute the next iteration 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() function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and stops before a specified number**

**range(start, stop, step)**

**range(10) -> starts from 0 (by default) and ends in 9 and increments by 1 (by default)**

**range(0, 10) -> Starts from 0 and ends in 9 and increments by 1 (by default)**

**range(0, 10,1)-> Starts from 0 ends in 9 and increments by 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.

**x = range(1,11)**

**for i in x:**

**print(i)**

**i=1**

**while i in x:**

**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?

**def bacon():**

**print(‘bacon’);**

**save the file as spam.py**

**import spam**

**bacon()**