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

There are two Boolean values: True and False. T and F should be capitalise and we can write them as True and False also we can write T and F.

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

There are three logical operators that are used to compare values. They evaluate expressions down to Boolean values, returning either True or False . These operators are **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 ).**

### AND Truth Table

|  |  |  |  |
| --- | --- | --- | --- |
| **x** | **and** | **y** | **Returns** |
| True | and | True | True |
| True | and | False | False |
| False | and | True | False |
| False | and | False | False |

### OR Truth Table

|  |  |  |  |
| --- | --- | --- | --- |
| **x** | **or** | **Y** | **Returns** |
| True | or | True | True |
| True | or | False | True |
| False | or | True | True |
| False | or | False | False |

### NOT Truth Table

|  |  |  |
| --- | --- | --- |
| **not** |  | **Returns** |
| not | True | False |
| not | 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?**

|  |  |
| --- | --- |
| Operator | What it means |
| == | Equal to |
| != | Not equal to |
| < | Less than |
| > | Greater than |
| <= | Less than or equal to |
| >= | 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.**

The '=' is the so-called assignment operator and is used to assign the result of the expression on the right side of the operator to the variable on the left side. The '==' is the so-called equality comparison operator and is used to check whether the two expressions on both sides are equal 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')**

**1st block :**

if spam == 10:

print('eggs')

**2nd block :**

if spam > 5:

print('bacon')

**3rd block**

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())**

**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?**

To exit out of infinite loops on the command line press **CTRL + C** .

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

The main difference between break and continue is that break is used for immediate termination of loop. On the other hand, continue terminate the current iteration and resumes the control to 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)?**

range(10) – It will produce integers from 0 to 9 i.e

range(n) – It will produce integers from 0 to n-1

range(0, 10) – It will produce integers from 0 to 9 i.e

range(m, n) – It will produce integers from m to n-1

range(0, 10, 1) – It will produce integers from 0 to 9 in steps of 1 i.e

range(m, n, 1) – It will produce integers from m to n-1 in steps of 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.**

for i in range(1,11):

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?**

This function can be called with spam.bacon()