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

**Ans:** Two values: true & false

In python: **True**, **False**

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

**Ans:** “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 ).

|  |  |
| --- | --- |
| **not** A | |
| A | O/P |
| 0 | 1 |
| 1 | 0 |

|  |  |  |
| --- | --- | --- |
| A **or** B | | |
| A | B | O/P |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

|  |  |  |
| --- | --- | --- |
| A **and** B | | |
| A | B | O/P |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

**Ans:**

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?

**Ans:** >, <, >=, <=, ==,!=

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

**Ans:** equal to operator 🡪 ==

Assignment Operator 🡪 =

Condition: If we need to assign a value to a variable we will use ‘=’ (Assignment Operator) and if we need to compare some value to another value (if they are equal) we would use ‘==’.

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.

**Ans:**

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?

**Ans:** ctrl + c

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

**Ans:** **break** is used to come out of loop whereas **continue** is sued to skip that particular iteration and move to next one.

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

**Ans: range(10)** and **range(0,10)** is same, the for loop will run 10 times with value starts from 0 and ends at 9 whereas in **range(0,10,1),** for loop will run 5 times with values 0,2,4,6,8

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.

**Ans:**

for i in range(10):

print(i+1)

i = 1

while(i<=10):

print(i)

i++

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

**Ans:** spam.bacon()