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

True , False

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 ).

|  |  |  |  |
| --- | --- | --- | --- |
| **Value** | **Operator** | **Value** | **Result** |
| True | And | True | True |
| True | And | False | False |
| False | And | True | False |
| False | And | False | False |
| True | Or | True | True |
| True | Or | False | True |
| False | Or | True | True |
| False | Or | False | False |
| True | Not |  | False |
| False | Not |  | 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?

|  |  |
| --- | --- |
| Comparison Operator | Description |
| == | 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.

a = 10 ; Assignment Operator

b = 10 ; Assignment Operator

Sum = a + b ; Equal to sign

Here Sum holds value of 10 + 10 = 20 as a math operation it is equals to.

Now value of sum is assigned to Sum variable.

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 = 0

While Spam < 10:

If Spam == 1:

Print(‘Hello’)

Elif Spam == 2:

Print(‘Howdy’)

Else:

Print(‘Greetings!’)

Spam += 1

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 : Allows us to exit from the loop .

Continue: Allows us to stop current execution but control goes back to start of the Loop.

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

There is no difference –

Range(10) : By default, it starts with 0 and have 1 step .

Range(0,10): By default have 1 step .

Range(0,10,1): specified

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<= 10):

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?

**Spam.py**

def bacon():

print(“Bacon is called from Spam.py”)

**file1.ipynb**

import Spam

Spam.bacon()