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

The two values of the Boolean data type are True and False.

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

The three Boolean operators re 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	Input 1	Input 2
AND	True	True
AND	True	False
AND	False	True
AND	False	False
OR	True	True
OR	True	False
OR	False	True
OR	False	False
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?

1. <(less than)

2. <=(less than or equal to)

3. >(greater than)

4. >=(greater than or equal to)

5. ==(equal to)

6.!=(not 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 assignment operator(=) is used to assign a value to a variable whereas equal to operator(==) is used to compare the equality of the values. The == operator returns a Boolean value.

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')
```

```
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.

```
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?

If my Python program is stuck in an endless loop, I will press Ctrl+C to interrupt the execution of the program. This will stop the program from running and return me to the Python prompt.

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

The break and continue statements are both used to control the flow of a loop in Python. However, they have different purposes.

The break statement is used to exit a loop completely. This means that the loop will terminate immediately, and the next statement after the loop will be executed.

The continue statement is used to skip the current iteration of a loop. This means that the loop will continue with the next iteration, without executing any of the code in the current iteration.

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

1. range(10) returns a sequence of numbers from 0 to 9.

2. range(0, 10) returns a sequence of numbers from 0 to 9, but the 10 is not included.

3. range(0, 10, 1) returns a sequence of numbers from 0 to 9, with a step size of 1. This means that each number in the sequence is 1 greater than the previous number.

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 Loop:

```
for i in range(1,11):
  print(i)
```

While Loop:

```
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.bacon()
```