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).

AND

Input 1	Input 2	output
0	0	0
0	1	0
1	0	0
1	1	1

OR

Input 1	Input 2	output
0	0	0
0	1	1
1	0	1
1	1	1

NOT

Input	Output
1	0

0	1

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?

< less than

> greater than

== is equal

<= less or equal

>= greater or equal

!= not equal

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

Assignment operator: denoted as single '=' sign, used to assign or update the value of a variable, returns nothing.

X=2, y=3

Is equal to : denoted as double '=' sign, used to compare the value of a variable to others, returns Boolean.

X==2, y==3

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?

CTRL + C

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

break : used to **jump out of the loop once execute**

```
for i in range(5):
    print(i)
    break
    print(“hello”)
```

output = 0

loop run for single time after that it jumped out of the loop and didn’t print hello

continue : doesn’t allow the next statements of a loop to execute and **starts executing from the beginning of the loop**

```
for i in range(5):
    print(i)
    continue
    print(‘hello’)
```

output = 0

to

5

Loop run for five times, didn’t print hello

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

range(10) : it returns a sequence of integers starting from 0 to 9, starting from zero by default, stepping by 1 by default.

range(0,10) : it returns a sequence of integers starting from 0 to 9, starting from zero(given argument), stepping by 1 by default.

range(0,10,1): it will return the same as above but here starting and stepping is 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.

```
#using for loop

        for i in range(1,11):

                print(i)

#using while loop

        i=1

        while (i <=11):

                print(i)

                i++
```

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

```
import spam

spam.bacon()
```