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

True and False, using capital T and F, with the rest of the word in lowercase.

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

The three basic Boolean 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).

2 Input AND gate

A	B	A.B
0	0	0
0	1	0
1	0	0
1	1	1

2 Input OR gate

A	B	A+B
0	0	0
0	1	1
1	0	1
1	1	1

NOT gate

A	$\overline{A}$
0	1
1	0

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?

==

!=

<

>

<=

>=

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

= is an assignment operator for example x=5 will assign a vale of 5 to x

== is a comparison operator for example 1==1 will return True.

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')

```
print('eggs')
if spam > 5:
print('bacon')
else:
print('ham')
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.

The code:

```
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?

Both "break" and "continue" are the 'jump' statements, that transfer control of the program to another part of the program. 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) = defines range upto 10
range(0, 10) = defines the range as between 0 and 10.
range(0, 10, 1) defines the range as between 0 and 10 with 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.

i = 0

for i in range(0,11):

   print(i)

   i=i+1

```
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?

import spam
spam.bacon()