

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

TRUE (or 1) and FALSE (or 0)

We/system can write with 1<sup>st</sup> letter is initial, as below.

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).

Value1	Operator	Value2	Result
1	AND	1	1
1	AND	0	0
0	AND	1	0
0	AND	0	0
1	OR	1	1
1	OR	0	1
0	OR	1	1
0	OR	0	0
1	NOT		0
0	NOT		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?

<  
>  
==  
<=  
>=  
!=

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

Equal to:	==	# Example: variable1 == 200
Assignment:	=	# Example: variable1 = 50 *4

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')

block1: If spam equal to 10, then print 'eggs'

block2: If spam equal >5, then print 'bacon'

block3: else print 'ham', 'spam' and 'bacon'

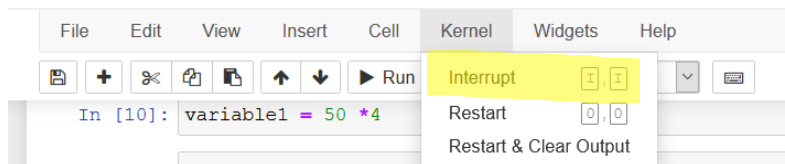
#Here block 1 also applies.

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?

Double I (i.e. ii)



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

Break stops the continuous loop immediately (with satisfied condition) or terminates the program. Whereas as continue ends a specific loop (or situation or process) and move to another or follow-up process.

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

All 3 cases the loop will run for 10 times only.

range(10)	# loop runs 10 times
range(0, 10)	# loop runs 10 times starting from 0.
range(0, 10, 1)	# loop runs 10 times starting from 0 for 1 cycle.

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<=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()
```