

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

The two values are True or False. If the condition evaluates to true then True will be returned else False will be returned.

e.g.: if 2 == 2, then the result would be true.

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

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 evaluates).

AND:	OR:	NOT
True AND True = True.	True OR True = True.	NOT True = False
True AND False = False.	False OR True = True.	NOT False = True
False AND True = False.	True OR False = True.	
False AND False = False.	False OR False = False.	

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?

>, >=, <, <=, == and !=.

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) – used when assigning a value to a variable.

== (assignment operator) – used when in need to check a condition.

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 = int (input ())

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 – exists the current loop and goes to the next line for execution.

Continue – statement continues to the next iteration of the same loop until the condition evaluates to True.

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

In `range(10)` there is no start value so it takes 0 by default.

In `range(0,10)` – the iteration starts with 0 and ends with 9.

In `range(0,10,1)` – the step size is specifies with increments of 1.

The number of iterations for all three ranges specified is the same here.

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< 11):

print(i)

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

`spam.bacon()`.