1. What are the Boolean data type's two values? How do you go about writing them?

Boolean data types have two values True and False.

Boolean data types are used in case of condition statements, to check whether a given condition is getting correct or wrong and provide a output in Boolean data values.

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

The three Boolean operators are 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 operator

x	y	output
1	1	1
0	1	0
1	0	0
0	0	0

OR operator

x	y	output
1	1	1
1	0	1
0	1	1
0	0	0

NOT operator

x	x’
0	1
1	0

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) = False

not (5 > 4) = True

(5 > 4) or (3 == 5) = False

not ((5 > 4) or (3 == 5)) = True

(True and True) and (True == False) = False

(not False) or (not True) = True

5. What are the six different types of reference operators?

== (Equal) returns a boolean value if a equal to b.

!= (Not Equal) returns a Boolean value if a not equal to b.

< (Less than) checks variable a is lesser than variable b.

<= (Less than or equal to) Checks variable a is lesser than or equal to variable b.

> (Greater than) Check the variable a is greater than variable b.

>= (Greater than or equal to) Check the variable a is greater than or equal to variable b.

6. How do you tell the difference between the equal to and assignment operators?

== (Equal to) This checks whether two values are equal or not.

= (Assignment operator) This assigns value to a variable.

7. Describe a condition and when you would use one.

Condition is a line of code which checks the program is meeting the given condition . In case the program is meeting a condition line, it moves forward in that condition loop.

8. Recognize the following three blocks in this code:

```
spam = 0
if spam == 10:
print('eggs')
if spam > 5:
print('bacon')
else:
```

```
print('ham')
print('spam')
print('spam')
```

Block 1 :

```
if spam == 10:
print('eggs')
```

Block 2:

```
if spam > 5:
print('bacon')
```

Block 3:

```
else:
print('ham')
print('spam')
print('spam')
```

9. Create a programme that prints. If 1 is stored in spam, prints Hello; if 2 is stored in spam, prints Howdy; and if 3 is stored in spam, prints Salutations! if there's something else in spam.

Input:

```
spam=1
if spam==1:
   print("Hello")
elif spam==2:
   print("Howdy")
else:
   print("Greetings")
```

Output:

```
Hello
```

10.If your programme is stuck in an endless loop, what keys can you press?

If programme gets stuck, press Ctrl +C.

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

Break is used to break a loop when a condition is satisfied, but continue is used, when a condition is met and if programmer needs to still continue with the remaining portions of the programme.

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

In for loop range(10), range(0,10) and range(0,10,1), all are same. It all provides same output as numbers from 0 to 9.

13. Using a for loop, write a short programme that prints the numbers 1 to 10 Then, using a while loop, create an identical programme that prints the numbers 1 to 10.

FOR LOOP:

INPUT:

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

OUTPUT:

```
1
2
3
4
5
6
7
8
9
10
```

WHILE LOOP:

INPUT:

```
i=1
while i<11:
    print(i)
    i+=1
```

OUTPUT:

```
1
2
3
4
5
6
7
8
9
10
```

14. If you had a bacon() function within a spam module, what would you call it after importing spam?

It is called as object after importing the spam module.