

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

Two values of Boolean data type are True and False.

if True:

```
print("The statement is true")
```

else:

```
print("The statement is 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 OPERATOR

Operand 1	Operand2	Result
True	True	True
True	False	False
False	True	False
False	False	False

OR OPERATOR

Operand 1	Operand2	Result
True	True	True
True	False	True
False	True	True
False	False	False

NOT OPERATOR

Operand 1	Result
True	False
False	True

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?

1. EQUAL TO: " == "
2. NOT EQUAL TO: " != "
3. GREATER THAN: " > "
4. LESS THAN: " < "
5. GREATER EQUAL TO: " >= "
6. LESSER EQUAL TO: " <= "

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 : " = "

Equal to: " == "

Eg:

student = 0 # assigning value

if student == 50: # example for equal to operator
 print("start the class")

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')
```

the three blocks in this code are:

Block 1:

```
spam = 0
```

```
if spam == 10:
```

```
    print('eggs')
```

Block 2:

```
if spam > 5:
```

```
    print('bacon')
```

Block 3:

```
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 = 0
```

```
if Spam==1:
```

```
    print("Hello")
```

```
if Spam==2:
```

```
    print("Howdy")
```

```
else:
```

```
    print("Greetings!")
```

9.If your programme is stuck in an endless loop, what keys you'll press?

Ctrl+C for windows/linux

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

After “break” keyword in code, iterations stops and exist from loop while continue just skip the current iteration and continue the next iterations till condition satisfies.

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

Range(start limit, end limit, steps) ... all representation results same output

Only the way of representation is different.

range(10) ----- indicates only end limit

range(0, 10)----- indicates start and end limit

range(0, 10, 1)----- indicates start ,end limit and steps to take for next range value.

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 loop:

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

```
    print(i)
```

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 as sp
```

```
sp.bacon()
```