

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

True and 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 evaluates).

AND Truth Table,

| X | Y | Returns |
|-------|-------|---------|
| True | False | False |
| False | True | False |
| False | False | False |
| True | True | True |

OR Truth Table,

| X | Y | Returns |
|-------|-------|---------|
| True | False | True |
| False | True | True |
| False | False | False |
| True | True | True |

NOT Truth Table,

| X | Returns |
|-----------|---------|
| not True | False |
| not 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?

> , >=, <, <=, ==, %

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

Assignment operators are used to assign a particular value to a variable. E.g.: - x = 2

Equal to operator compares/checks a value with another value.

E.g.: - if x ==2:

print("Correct!")

else:

print("Wrong!")

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')

Answer: -

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.

```

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 statement will terminate execution of current loop. continue statement will skip current iteration of a loop and executes the very next.

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

For all the above-mentioned range functions, the for loop will be executed 10 times i.e., from 0 to 9.

E.g.: -

```

for i in range(10):
    print("Hello!")

```

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 | WHILE LOOP |
|--|---|
| <pre>for n in range(1, 11): print(n)</pre> | <pre>n = 0 while n < 10: n += 1 print(n)</pre> |

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

from spam import bacon

bacon()