

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

Ans: True and False

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

Ans: OR NOT and AND

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).

A	B	A or B
0	0	0
1	0	1
0	1	1
1	1	1

A	B	A and B
0	0	0
1	0	0
0	1	0
1	1	1

A	NOT(A)
0	1
1	0

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?

Ans: >, <, <=, >=, ==, !=

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

Ans: Equals to is comparison operator(==) and Assignment operator(=) is used when we need to assign a value to a variable.

For example

var_1 = 10

var_2 = 20

Here, the assignment operator is one equal sign

var_1 == var_2?? The answer is False. Here, (==) is a comparison operator with two equal signs

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')
```

Ans:

First block:

```
spam = 0
```

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

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

Second block:

```
if spam > 5:
```

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

```
else:
```

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

Third block:

```
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.

Ans:

```
spam = 1
```

```
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?

Ans: For Windows/Linux: Press Ctrl + C

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

Ans: break statements

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

Ans:

range(10): It indicates a range 0 to 9. By default, it will start from 0 and increment by 1

range(0, 10): It indicates a range 0 to 9. By default, it will increment by 1

range(0, 10, 1): It indicates a range 0 to 9. Start from 0 and iterate the loop till 9. Increment by 1

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.

Ans:

for i in range(1, 11):

print(i)

i = 1

while(i < 11):

print(i)

i = i + 1

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

Ans:

import spam as sp

sp.bacon()