

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

Sol :- True or False are the two Boolean values. If (user == true)

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

Sol :- 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).

Sol :-

AND Column

A	B	A & B
TRUE	TRUE	TRUE
TRUE	FALSE	FALSE
FALSE	TRUE	FALSE
FALSE	FALSE	FALSE

OR Column

A	B	A OR B
TRUE	TRUE	TRUE
TRUE	FALSE	TRUE
FALSE	TRUE	TRUE
FALSE	FALSE	FALSE

NOT Column

A	Not A
TRUE	FALSE
FALSE	TRUE

4. What are the values of the following expressions?

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

not (5 > 4)

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

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

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

(not False) or (not True)

Sol :- False, False, True, False, False, True

5. What are the six comparison operators?

Sol :- > < >= <= == and !=

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

Sol :- Assignment operator will assign a value to any variable whereas equal to operator checks the condition is true or false.

```
A = 3
if (A == 3):
    pass
```

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')
```

Sol :- if spam == 10 , if spam >5 , else: are the 3 blocks in the above code.

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.

Sol :-

```
spam = [ 1, 2, 3, 4 ]
for i in spam:
    if i == 1 :
        print('Hello')
    elif i == 2 :
        print('Howdy')
    else:
        print ('Greetings!')
```

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

Sol :- Ctrl ^C

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

Sol:- Break will stop the code execution if the condition is satisfied whereas Continue will not stop the execution even if the condition is met and it will move on to next line.

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

Sol:- All three will give the same result as 0 - 9 numbers.

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.

Sol :-

```
for i in range(1, 11):  
    print(i)  
a = 1  
while a <= 10:  
    print(a)  
    a += 1
```

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

Sol :- `from spam import bacon`