

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

ANS:-

Two values of the Boolean data type are: True and False.

Example: is_eligible = true

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

ANS:-

The three different types of Boolean operators are: not, and, or

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).

ANS:-

and operator		
Input 1	Input 2	Output
FALSE	FALSE	FALSE
FALSE	TRUE	FALSE
TRUE	FALSE	FALSE
TRUE	TRUE	TRUE
or operator		
Input 1	Input 2	Output
FALSE	FALSE	FALSE
FALSE	TRUE	TRUE
TRUE	FALSE	TRUE
TRUE	TRUE	TRUE
not Operator		
Input 1	Input 2	Output
FALSE	FALSE	TRUE
TRUE	TRUE	FALSE

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)

ANS:-

(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:-

The six comparison operators are: >, <, =, ==, >=, <=

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

ANS:-

The equal to (==) operator is used to check the equality, i.e., whether the left side is equal to the right side. The assignment (=) operator is used to assign the value to the left of the operator.

Equality operator can be used in a condition when we have to check if the two values are equal or not. And assignment operator can be used when we have to assign the value.

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:-

(i) spam = 0

```
(ii)
if spam == 10:
    print('eggs')
(iii)
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.

ANS:-

```
spam = 5
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:-

Ctrl, C to interrupt the kernel.

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

ANS:-

Break is used to come out of the loop whereas continue is used to skip the iteration.

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

ANS:-

range(10): All the numbers from 0 to n-1 (9).

range(0, 10): All the numbers including starting index (0) to n-1 (9).

range(0, 10, 1): All the numbers including starting index (0) to n-1 (9) with incrementing value 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:-

Using for loop:

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

Using 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`?

ANS:-

We can call the `bacon()` function using the dot notation.
example: `spam.bacon()`