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

**Ans.** Boolean data has two type of Value **“TRUE” and “FALSE”.** In python to assign **a Value we can simply write “True” and “False”** (First letter Capital since python is case sensitive). For example if want to assign “true’ value to “a” variable and ‘False’ value to “b” variable we can write as : -

a = True

b = False

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

AND: The AND operator returns True if both operands are True, otherwise, it returns False. It can be simply use by keyword “and”.

OR: The OR operator returns True if at least one of the operands is True, otherwise, it returns False. It can be simply use by keyword “or”.

NOT: The NOT operator negates the value of the operand. If the operand is True, then NOT operator returns False, and if the operand is False, then NOT operator returns True. It can be simply use by keyword “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 ).

|  |  |  |  |
| --- | --- | --- | --- |
| **X** | **Operator** | **Y** | **Output** |
| True | And | False | False |
| True | And | True | True |
| False | And | True | False |
| False | And | False | False |
| True | or | False | True |
| True | or | True | True |
| False | or | True | True |
| False | or | False | False |
|  | Not | False | True |
|  | not | True | False |

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.**

== Equal

!= Not equal

> Greater than

< Less than

>= Greater than or equal to

<= Less than or 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.

**Ans.** In Python, Assignment operator is single “=”. And equal is double “=”. Let’s say if we want to assign a value to x variable we will simply write.

x = “abcd”

but if want to compare is left side is equal to right side we will use : -

“abc” == “abcd”

the above code will result False because “abc” is not equal to “abcd” and since both the text are quoted, so it’s string.

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')

In this indentation can not be seen. So as per my indentation assumption.

**First Block**

spam = 0

where assigning spam value to 0

**Second Block**

if spam == 10:

print('eggs')

if spam value is 0 then it will print eggs

**Third Block**

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

if spam is greater than 5. it will print bacon, else it will print ham spam and 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.

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. **“Cntrl + C “ in cmd**

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

Ans. “break” stops the loop. While continue loop skip all the code written below the “continue” with in loop and continue from next loop.

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

Ans. In output there will be no difference. But

range(10) = if only one attribute is given it starts from 0 by default and given attribute is end number excluding that number so output will be 0 to 9. And by default step is 1 so next number will be +1.

range(0,10) = if two attribute are given then first is considered as starting number including that number and second number is last number excluding that number. By default step is one

range(0,10,1) = if three attributes are given. First number is starting number including that number second number is end number excluding that number. 3rd number is step so here 1 is written than increment of 1 will be there.

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

x = 1

while x<11:

print(x)

x+=1

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

Ans.

spam.bacon()