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

Numbers can be used as bool values by using Python's built-in bool() method. Any integer, floating-point number, or complex number having zero as a value is considered as False, while if they are having value as any positive or negative number then it is considered as True.

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

There are three basic Boolean search commands: AND, OR and NOT. AND searches find all of the search terms. For example, searching on dengue AND malaria AND zika returns only results that contain all three search terms.

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 ).

Truth tables show the result of combining any two expression boolean expressions using the AND operator and the OR operator (or the NOT operator).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **condition 1 (e.g., X)** | **condition 2 (e.g., Y)** | **NOT X ( ~ X )** | **X AND Y ( X && Y )** | **X OR Y ( X || Y )** |
| false | false | true | false | false |
| false | true | true | false | true |
| true | false | false | false | true |
| true | true | false | true | true |

4. What are the values of the following expressions?

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

not (5 > 4) - TRUE

(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?

A comparison operator compares two values and returns a boolean value, either True or False . Python has six comparison operators: less than ( < ), less than or equal to ( <= ), greater than ( > ), greater than or equal to ( >= ), equal to ( == ), and not 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.

The “=” is an assignment operator is used to assign the value on the right to the variable on the left. The '==' operator checks whether the two given operands are equal or not. If so, it returns true. Otherwise it returns false

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')

The three blocks are everything inside the if statement and the lines print('bacon') and print('ham').

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

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?

An infinite loop occurs when a program keeps executing within one loop, never leaving it. To exit out of infinite loops on the command line, press CTRL + C

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

The main difference between both the statements is that when the break keyword comes, it terminates the execution of the current loop and passes the control over the next loop or main body, whereas when the continue keyword is encountered, it skips the current iteration and executes the very next iteration in the loop.

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

All the three will do the same functions however the only difference is the way we tell python to do so.

All the above range options will loop through all the integers starting from 0 to 9.

Range function has these parameters: (start,stop[,step])

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.

Using for loop:

for i in range(10):

print (i)

Using while loop:

i = 0

while i < 10:

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?

This function can be called with spam.bacon().