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

Ans - The Boolean data type in Python represents one of the two values i.e. True or False.

In Python, you can write True or False as they are without quotes.

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

Ans - The three different types of Boolean operators in Python are: 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 ).

ANS - The truth tables for Boolean operators in Python are as follows:

AND

A B A AND B

0 0 0

0 1 0

1 0 0

1 1 1

OR

A B A OR B

0 0 0

0 1 1

1 0 1

1 1 1

NOT

A NOT A

0 1

1 0

4. What are the values of the following expressions?

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

ANS - The expression (5 > 4) and (3 == 5) will evaluate to False because the second condition (3 == 5) is not true.

Not (5 > 4)

ANS - The expression not (5 > 4) will evaluate to False because the condition (5 > 4) is true and the not operator will negate it.

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

ANS - The expression (5 > 4) or (3 == 5) will evaluate to True because the first condition (5 > 4) is true.

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

ANS - The expression not ((5 > 4) or (3 == 5)) will evaluate to False because the condition (5 > 4) or (3 == 5) is true and the not operator will negate it.

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

ANS - The expression (True and True) and (True == False) will evaluate to False because the second condition (True == False) is not true.

(not False) or (not True)

ANS-The expression (not False) or (not True) will evaluate to True because both conditions are true.

5. What are the six comparison operators?

ANS - The six comparison operators in Python are:

Less than <

Less than or equal to <=

Greater than >

Greater than or equal to >=

Equal to ==

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.

ANS - The equal to operator == is used to compare two values for equality while the assignment operator = is used to assign a value to a variable.

For example, you would use the equal to operator when comparing two variables or values while you would use the assignment operator when assigning a value to a variable.

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 - The output of the code will be:

ham

spam

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 - You can press Ctrl + C to stop the program.

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

ANS - The break statement is used to exit a loop prematurely while the continue statement is used to skip the current iteration of a loop and move on to the next iteration.

For example, you would use the break statement when you want to exit a loop early based on some condition while you would use the continue statement when you want to skip over some iterations of a loop based on some condition.

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

ANS - In a for loop, there is no difference between range(10), range(0, 10), and range(0, 10, 1) in Python. All three ranges print numbers from 0-9

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 - Python program that prints the numbers 1 to 10 using a for loop:

for i in range(1, 11):

print(i)

This program uses the range() function to generate a sequence of numbers from 1 to 10. The for loop then iterates over this sequence and prints each number in turn.

Python program that prints the numbers 1 to 10 using a while loop:

i = 1

while i <= 10:

print(i)

i += 1

This program initializes a variable i to 1 and then uses a while loop to print the numbers from 1 to 10. The loop continues as long as i is less than or equal to 10. Inside the loop, we print the current value of i and then increment it by 1.

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

After importing the spam module in Python, you can call the bacon() function using the following syntax:

import spam

spam.bacon()

This will call the bacon() function from the spam module.