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

Ans - The Boolean data type has two values: True and False. In Python, these values are written exactly as shown, with the first letter capitalized: True and False.

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

Ans - The three types of Boolean operators are: AND (and), OR (or), and NOT (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- AND (and):

A B A and B

T T T

T F F

F T F

F F F

OR (or):

A B A or B

T T T

T F T

F T T

F F F

NOT (not):

A not A

T F

F T

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 to (==)

Not equal to (!=)

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 - 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. Use == when you want to compare values, and use = when you want to assign 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 -

Block 1: if spam == 10:

Block 2: if spam > 5:

Block 3: else:

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 = 1

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

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

Ans - Break terminates the loop prematurely, while continue skips the current iteration and moves to the next iteration.

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

Ans - range(10): This form starts the sequence from 0 by default and generates numbers up to, but not including, 10.

range(0, 10): This explicitly specifies the starting point (0) and generates numbers up to, but not including, 10.

range(0, 10, 1): This explicitly specifies the starting point (0), the ending point (10), and the step size (1). However, since the default step size for range() is 1, specifying 1 as the step size does not change the behavior.

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 - for i in range(1, 11):

print(i)

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 - After importing the module named spam, you can call the function bacon() using dot notation