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

Ans.- True and False, using first letter capital T and F, with the rest of the word in lowercase

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

Ans.- Or, And and 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.-

* True and True = True.
* True and False = False.
* False and True = False.
* False and False = False.
* True or True = True.
* True or False = True.
* False or True = True.
* False or False = False.
* not True = False.
* not False = True.

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.- ==, !=, <, >, <=, and >=

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

Ans.- “==” is the equal to operator that compares two values and evaluates to a Boolean, while “=” is the assignment operator that stores a value in a variable.

7. Identify the three blocks in this code:

Ans.- The three blocks are everything inside the if statement.

spam = 0

if spam == 10:

print('eggs')

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.

if spam == 1:

print('Hello')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')

9. If your program is stuck in an endless loop, what keys you’ll press?

Ans. – We have to press CTRL-C to stop a program stuck in an endless loop

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

Ans.- The break statement will move the execution outside and just after a loop. The continue statement will move the execution to the start of the loop.

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

Ans.- They all do the same thing. The range(10) call ranges from 0 up to 10 (Excluding 10), range(0, 10) explicitly tells the loop to start at 0, and range(0, 10, 1) tells the loop to increase the variable by 1 on each iteration.

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 loop: -**

for i in range(1, 11):

print(i)

**While loop: -**

i = 1

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?

Ans.- spam.bacon()