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

**Ans:-** The two values of the boolean data type are, True, and False. In python, True and False are written without quotes because these are the reserved keywords in python and can not be used as a variable name.

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

**Ans:-** ‘AND’, ‘OR’, and ‘NOT’ are the basic boolean operators.

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:-**

4. What are the values of the following expressions?

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

not (5 > 4)

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

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

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

(not False) or (not True)

**Ans:-** (5 > 4) and (3 == 5) will evaluates to false.

not (5 > 4) will evaluates to False.

(5 > 4) or (3 == 5) will evaluates to False.

not ((5 > 4) or (3 == 5)) will evaluates to False.

(True and True) and (True == False) will evaluates to False.

(not False) or (not True) will evaluates to True.

5. What are the six comparison operators?

**Ans:-** The 6 comparison operators are:-

1. (==) equal to
2. (>) greater than
3. (<) less than
4. (!=) not equal to
5. (>=) greater than or equal to
6. (<=) 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, whereas on the other hand the assignment operator equal(=) is used to assign values to a variable.

Exa:- variable = 10

if variable % 2 == 0:

print(“this is a sum number”)

else:

print(“this is an odd number”)

In the above example code, In the first line of code, I am assigning a value of 10 to a variable named ‘variable’ using a assignment operator(=) and then in the second line of code I am comparing that whether a remainder of the value of a variable after dividing it by 2 is equal to 2 or not using comparison operator(==).

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:-** (spam = 0) this is a first block of code in which we’re assigning a value of 0 to a variable named ‘spam’

( if spam == 10:

print('eggs')) this is a second block of code in which we’re comparing that whether a value of variable named spam is 10 or not.

(if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

) this is a third block of code in which we’re comparing that the value of a variable named spam is greater than 5, and an else condition if the conditions inside both the if block turns out to be false then the else block will execute.

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 = input("enter num: ")

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:-** If a program got stuck in an endless loop or an infinite loop, it can only stop through an external intervention otherwise the loop will not stop and keep on executing, to stop the loop we can press CTRL + C command to stop an infinite or endless loop.

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

**Ans:- Break:-** Break statement is used to break or terminate the loop.

**Continue:-** Continue statement is used to skip a current iteration of the loop and move 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:-** In all three mentioned ways, the range function will print the numbers from 0 to 9 when used with for loop. Although they are giving as the same output but all three are slightly different from each other. In range(10), we’re only giving the ending point to the range function and we’re aren’t giving the starting point to the range function but the range function will take 0 as its starting point by default.

second, range(0,10) in this we’re providing a starting point to 0 and ending point to 10 to the range function.

third, range(0, 10, 1) in this we’re providing an starting and ending point to 0, and 10 to the range function but we’re providing a one additional factor to the range function that how many steps he needs to take in every iteration and we’re telling him to take 1 step in every 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:-** Using for loop:- for i in range(1, 11):

print(i)

using while loop:- start = 1

while start <= 10:

print(start)

start += 1

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

**Ans:-** If we had a function named bacon() inside a module named spam, then we can call it as spam.bacon() after importing spam module.