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

Ans 1 : The two values of the Boolean data type are :

-> True ( whenever a condition is matched it returns true)

-> False ( whenever a condition is not matched it returns false )

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

Ans 2 : The three types of Boolean operators are :

-> or -> returns true, if any condition is true

-> and -> returns true, if all the conditions are true

-> not -> returns true, if the condition is not true.

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 3 : Consider 1 represents true and 0 represents false

AND table :

A B Result

1 1 1

1 0 0

0 1 0

0 0 0

OR table :

A B Result

1 1 1

1 0 1

0 1 1

0 0 0

NOT table :

A Result

1 0

0 1

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 4 : (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 5 : The six comparision operators are :

1. > : greater then. Eg : a > 2 -> compares value of variable a, if greater then 2.
2. > : less them . Eg : a < 2 -> compares value of variable a, if less then 2.
3. == : equals to. Eg : a == 2 -> check if value of a is eqauls to 2.
4. >= : greater then or equals to. Eg : a>=2 -> check if value of a greater then or equals to 2.
5. <= : less then or equals to. Eg : a<=2 -> check if value of a less then or equals to 2.

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

Ans 6 : equal to operator : it uses single = and it assign the value on the right side of = to the variable on left side of =.

Eg : a = 10 : means a holds value 10.

assignment operator : it uses double == and it compares value on right of == with value in variable in left of == and if both are same return true else false.

If we need to assign some value to a variable we use assignment and when we need to compare the data we use equals to 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 7 : First block : **if spam == 10:**

Second block : **if spam > 5:**

Third block : **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 8 : if spam == 1:

print(‘Hello’)

elif spam ==2:

print(‘Howdy’)

else :

print(‘Greeting!’)

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

Ans 9 : ctrl + c

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

Ans 10 : break : terminates the loop and exit from the loop

continue : skip the current step and move to the next step in the loop

Eg : **break**

for i in range(1,10):

if(i%2 == 0):

break

else:

print("Hello")

Output : Hello

When the first break is executed, the for loop is ended.

**Continue**

for i in range(1,10):

if(i%2 == 0):

continue

else:

print("Hello")

Output :

Hello

Hello

Hello

Hello

Hello

When first continue is executed it just skip that step in loop and move to next step.

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

Ans 11 : **range(10) :**  in the for loop will be executed 10 time where the value will be from 0 to 9.

For eg : for i in range(10):

print(i)

Output : 1

2

till 9

**range(0,10) :** it defines that the starting index will be 0/

Eg : for i in range(0,10):

print(i)

Output : 0 to 9

**range(0, 10, 1) :** starting index to be 0 and jump to next value by 1

Eg : for i in range(0,10,1):

print(i)

Output : 0 1 2 3 4 5 6 7 8 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 12 : **for loop :**

for i in range(1,11):

print(i)

**while loop :**

i =1

while i<11:

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 13 : import spam as sp

sp.bacon()