1. What are the Boolean data type's two values? How do you go about writing them?

**Answer:**

**Two Boolean data type values : True , False**

**example:**

**a=10**

**b=10**

**print(a ==b)**

**False**

**print(a!=b)**

**True**

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

**Answer:**

**AND operator -> this can be written as and or &&**

**OR operator -> this can be written as "or" or ||**

**NOT operator -> this an be written same as 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 ).

**Answer:**

**AND operator**

**true and true =true**

**true and false = false**

**false and false = false**

**false and true = false**

**OR operator**

**true or true =true**

**true or false = true**

**false or false = false**

**false or true = true**

**NOT operator**

**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 different types of reference operators?

**Answer:**

**1. Arthmetic operator**

**2. Assignment operator**

**3. logical operator**

**4. comparison operator**

**5. bitwise operator**

**6. identity operator**

6. How do you tell the difference between the equal to and assignment operators?

**Answer:**

**= -> is a assignment operator and is used to assign the value to the variables**

**exmaple:**

**a=20**

**b="ML"**

**== -> is a comparision operator to compare whether the two variable values are equal or not**

**example:**

**a=10**

**b=10**

**print(a == b)**

**output is "True" if both are equal else "False" if not equal**

7. Describe a condition and when you would use one.

**Answer:**

**== condition -> if condition is used to compare two values that stored in a variables**

**> & < condition -> is used to check which values is greater or lesser**

**boolean -> is used to whether the statement is true or false**

8. Recognize the following three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

**Answer:**

**1. if block**

**2. if block**

**3. else block**

9. Create a programme that prints. If 1 is stored in spam, prints Hello; if 2 is stored in spam, prints Howdy; and if 3 is stored in spam, prints Salutations! if there's something else in spam.

**Answer:**

**spam=1**

**if spam == 1:**

**print("Hello")**

**elif spam == 2:**

**print("Howdy")**

**elif spam == 3:**

**print("Salutations!")**

**else:**

**print(spam)**

10.If your programme is stuck in an endless loop, what keys can you press?

**Answer:**

**1. get the PID and kill the PID provided if the program is running in background**

**2. use Ctrl-C to abort the job if its running in foreground**

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

**Answer:**

**break ->** break command is used to discontinue the current loop in the program once the certain condition is met.

**example:**

for i in range(0,10):

if i == 5:

print("reached 5")

break;

**Output :** reached 5

once it reaches 5, program will break out of the loop

continue -> continue command is used to skip some statements if the certain condition is met and continue with the loop and program

**example:**

for i in range(0,10):

if i == 5:

continue;

print(i)

Here, it skips 5 and prints other outputs

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

**Answer:**

All three options gives output 0,1,2,3,4,5,6,7,8,9. prints 10 numbers

range(10) -> by default takes start range as 0

range(10) -> we are specifying the start range 0

range(0,10,1) -> it takes start range as 0 and end range 10 and step as 1

13. Using a for loop, write a short programme that prints the numbers 1 to 10 Then, using a while loop, create an identical programme that prints the numbers 1 to 10.

**FOR LOOP**

**for i in range(1,10+1):**

**print(i)**

**WHILE LOOP**

**i=1**

**while (i <= 10):**

**print(i)**

**i=i+1**

14. If you had a bacon() function within a spam module, what would you call it after importing spam?

**Answer**:

we will call spam as "package"