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

**Ans : 1. True & 2. False**

**We can write based on the condition applying in Boolean operators,**

**Ex : a=True, b=False**

**Type(a) = bool**

**Type(b)=bool**

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

**Ans : AND, OR, 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** | **RESULT** |  | **OR** | **RESULT** |
| TRUE AND TRUE | TRUE |  | TRUE AND TRUE | TRUE |
| TRUE AND FALSE | FALSE |  | TRUE AND FALSE | TRUE |
| FALSE AND TRUE | FALSE |  | FALSE AND TRUE | TRUE |
| FALSE AND FALSE | FALSE |  | FALSE AND FALSE | FALSE |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) = **True and False = False**

not (5 > 4) = **False**

(5 > 4) or (3 == 5) = **True or False = True**

not ((5 > 4) or (3 == 5)) = **Not (True or False) = Not(True) = False**

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

(not False) or (not True) = **True or False = True**

5. What are the six comparison operators?

Ans : **Less than (<)**

**Less than or equal to (<=)**

**Greater than (>)**

**Greater than or equal to (>=)**

**Equal or Equals to (==)**

**Not Equals to (!=)**

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

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') 🡺Block 1 Indented block

if spam > 5:

print('bacon') 🡺Block 2 Indented block

else:

print('ham') 🡺 Block 3 Indented block

print('spam') 🡺 Block 3 Indented block

print('spam') 🡺 Block 3 Indented block

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.

spam= int(input("Please enter your input: "))

if spam ==1:

print("Hello")

elif spam ==2:

print("Howdy")

else:

print("Greetings! if anything else is stored in spam")

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?

**Break : It break the current loop and move on to the next statement.**

**Continue : It reject the all remaining statement and moved to the top of the loop to execute again.**

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

**And :**

**Range (10) = 0 1 2 3 4 5 6 7 8 9 - It will give 10 numbers from 0 excluding 10.**

**Range (0,10) = 0 1 2 3 4 5 6 7 8 9 – It will give same o/p but it will execute the mentioned range only i:e it will start from 0 to and end with 9, because 9 is 10th number.**

**Range (0,10,1) = 0 1 2 3 4 5 6 7 8 9 – It will also give the same result but the difference is it will jump the index value mentioned in block i:e**

**if we mention (0,10,1)—it will start with 0 and jumping value is 1, as per instruction it will give us o/p,**

**if we mention (0,10,2)-- it will start with 0 and jumping value is 2, as per instruction it will give us o/p as 0 2 4 6 8**

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 : ***#Program to print 1 to 10 number using for loop:***

n=10

for i in range(n):

i=i+1

if n >=i:

print(i)

i=i+1

***#Program to print 1 to 10 number using while loop:***

n=10

i=1

while n>=i:

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 : spam.bacon()