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

Ans : True (1) and False (0)

Both values start with upper case and rest of the letters will be in lower cases.

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

Logical Operators are also referred as Boolean operators. AND/OR/NOT

* **AND :** True if both of the operands are true
* **OR :** True if either of the operands are true
* **NOT :** True if operand is false

**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 ).**

|  |  |  |  |
| --- | --- | --- | --- |
| **Operand (A)** | **Operand (B)** | **Operator** | **Result** |
| True | True | **AND** | True |
| True | False | **AND** | False |
| False | True | **AND** | False |
| False | False | **AND** | False |
| True | True | **OR** | True |
| True | False | **OR** | True |
| False | True | **OR** | True |
| False | False | **OR** | False |
| True | --- | **NOT** | False |
| False | --- | **NOT** | 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 : the six comparison operators are.

1. **==** Check if two values are equal or not , if yes, condition becomes True
2. **!=** Check if two values are equal or not , if yes, condition becomes FALSE
3. **>**  Check if left value is greater than right value, if yes, condition becomes True
4. **<**  Check if left value is less than right value, if yes, condition becomes True
5. **>=** Check if left value is greater than or equal to right value, if yes, condition becomes True
6. **<=** Check if left value is lessor than or equal to right value, if yes, condition becomes True

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

Ans :  **Assignment Operator :** It is an operator that is used to assign a new value to a variable. It is represented by one equal operator (=)

Example: A= 10 (Value of A is 10 here)

**Equal to Operator:** This operator is used to check the equality between two operands, if they are equal then condition becomes True. It is represented by two equal operator(==)

Example: A = 10, B = 5

A == B (Value will be False)

**7. Identify the three blocks in this code:**

spam = 0

if spam == 10: **(Block 1)**

print('eggs')

if spam > 5: **(Block 2)**

print('bacon')

else: **(Block 3)**

print(‘ham’)

print(‘spam’)

print(‘spam’)

**Ans:** ham

Spam

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.**

**Ans:**

spam = int(input(“Enter the value of spam”))

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: We can press **CTRL + C**

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

Ans: **Break** will terminate the code once specified condition is met and **continue** is used to skip the remaining code inside a loop for the current iteration only

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

Ans: **range (10) :** It is length. It will print the index where last value is excluded. It will show the index from (0 to 9) only.

**range (0, 10):** It will also the index from 0 i.e starting index and 10 means ending index. Last index is excluded here.

**range (0,10,1):** Here 0 = Starting Index, 10 = Ending Index, 1: Step to skip

**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(0,10):

print(i+1)

**Using While loop :**

i = 0,

while i < 10:

i = i + 1

print(i)

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

**Ans :** Function will be called as spam.bacon()