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

**Answer – True and False are two values. It can be written in binary form 0 or 1.**

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

**Answer – 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 ).

**Answer –**

**AND operator**

|  |  |  |
| --- | --- | --- |
| **0** | **0** | **0** |
| **0** | **1** | **0** |
| **1** | **0** | **0** |
| **1** | **1** | **1** |

**OR operator**

|  |  |  |
| --- | --- | --- |
| **0** | **0** | **0** |
| **0** | **1** | **1** |
| **1** | **0** | **1** |
| **1** | **1** | **1** |

**NOT operator**

|  |  |
| --- | --- |
| **0** | **1** |
| **1** | **0** |

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?

**Answer – 6 Operators are –**

**1. Equal to (==),**

**2. Greater than (>),**

**3. Smaller than (<),**

**4. Greater than Equal to (>=),**

**5. Smaller than Equal to (<=),**

**6. Not 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.

**Answer - In case of assignment operator we assign a value by using single equal to sign(=). In case of checking the equality, we use double equal to sign(==).**

7. Identify the three blocks in this code:

spam = 0

1st block -

if spam == 10:

print('eggs')

2nd block -

if spam > 5:

print('bacon')

3rd block -

else:

print('ham')

print('spam')

print('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.

**Answer –**

**Spam=0**

**If spam==1:**

**Print(“Hello”)**

**If spam==2:**

**Print(“Howdy”)**

**Else:**

**Print(“Greetings!”)**

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

**Answer – Ctrl + C**

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

**Answer – Break is used to come out of loop.**

**Continue is used to skip a particular entry in a loop.**

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

**Answer – range(10) – by default starts with 0 and goes up to 9.**

**range(0, 10) – starts with 0 and goes up to 9.**

**range(0, 10, 1) – starts with 0 and ends at 9 without skipping any value.**

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.

**Answer –**

**For i in range(1, 11):**

**print(i)**

**-------------------------------------------------------------**

**i=1**

**While i<11:**

**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?

**Answer –**

**import spam**

**spam.bacon()**