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

A). True and False are the two values of Boolean data type. We will write T and F are capital and remain in lower case.

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

A). ‘and’, ‘or’ and ‘not’ these are the main three Boolean operators used for logical operations

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 ).

A).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Condition-X | Condition- Y | NOT X (!X) | X AND Y (X && Y) | X OR Y (X || Y) |
| T | T | F | T | T |
| T | F | T | F | T |
| F | T | T | F | T |
| F | F | T | F | F |

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)

A).

(5 > 4) and (3 == 5) 🡺 T and F 🡪 F

not (5 > 4) 🡺 not (T) 🡪 F

(5 > 4) or (3 == 5) 🡪(T) or (F) 🡪T

not ((5 > 4) or (3 == 5)) 🡪 not(T) or (F) 🡪 T

(True and True) and (True == False) 🡪 T and F 🡪 F

(not False) or (not True) T or F 🡪 T

**5. What are the six comparison operators?**

A). We have 6 comparison operators. Those are

Greater than 🡪 >,

Less than 🡪 <,

Equals to 🡪 ==,

Not equals to 🡪 !=,

Less than or equal to 🡪 <=,

Greater than or 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.

A). equal to( ==) is a comparison operator which results a Boolean value used to compare two statements/values.

Eg: 5==7, ‘raj’==’ram’

Assignment (=) operator is used to assign a value to a variable.

Eg. X=’ram’, sal= 2000.

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')

A).

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')

}

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.

A).

spam = int(input)

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?

A). Whenever to interrupt an execution of program/loop immediately then will press **“Ctrl + C”**

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

A). Break will interrupt and exit from the current entire loop whereas ‘Continue’ is just skip the execution of that particular iteration of loop and will continue next iteration of that loop.

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

A). for range(10) 🡪 will take 0-9 values, starting with 0 and end value is 9.

Range(0,10) 🡪 will take 0-9 values, starting with 0 and end value is 9.

Range(0,10,1) 🡪 will take 0-9 values, starting with 0 and end value is 9 with +1 increment.

By observing above 3 range() there is no difference in generated values for ‘For’ loop.

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.

A).

for i in range(1,11):

print(i)

n=1

while n<=10:

print(n)

n+=1

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

A). from spam import bacon