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

Ans. The two values of Boolean data type are True and False, Its written with the starting letter as capital. “True” and “False”.

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

Ans. AND, OR and NOT are the types of Boolean operators.

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 evaluates).

Ans.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **X** | **Y** | **~X (NOT)** | **X&&Y (AND)** | **X||Y (OR)** |
| False | False | True | False | False |
| False | True | True | False | True |
| True | False | False | False | True |
| True | True | False | True | 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: Less than (<), Less than or equal to (<=), Greater than (>), Greater than or equal to (>=), Equal to( == ), 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.

Ans. “=” operator is used to assign the value on the right to the variable on the left of the operator. E.g.; a=10.

“==” operator is used to check if the two operands on either side of the operator is equal or not. If so, it returns true or else false. Eg; a==20 (this will return False because the value of was assigned as 10.

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')

Ans. The first block is everything inside the first if statement, second block is print('bacon') and third block is print('ham').

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.

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. CTRL+C

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

Ans. When break keyword comes, it terminates the execution of the current loop and passes the control over the next loop or main body; whereas when continue keyword is encountered, it skips the current iteration and executes the very next iteration in the loop.

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

Ans. There is no difference between the 3 given range for loops because by default range function starts from 0, the by default increment value of range function is 1.

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(1,11):

print(i)

Using while loop:

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?

Ans. After importing spam, we have to import the function as well. “from spam import bacon”.