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:

a)True b)False

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

Ans.: Three different types of Boolean operators are:

a)and b)or c)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.: a) and, A and B

|  |  |  |
| --- | --- | --- |
| A | B | Result (A and B) |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

b) or, A or B

|  |  |  |
| --- | --- | --- |
| A | B | Result (A or B) |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

c) not, not A

|  |  |
| --- | --- |
| A | Result (not A) |
| True | False |
| False | True |

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)

Ans.:(5 > 4) and 3 == 5 returns False

not (5 > 4) returns False

(5 > 4) or (3 == 5) returns True

not ((5 > 4) or (3 == 5)) returns False

(True and True) and (True == False) returns False

(not False) or (not True) returns True

5. What are the six comparison operators?

Ans.: Six comparison operators are

>, Greater Than

<, Less Than

==, Equal To

>=, Great Than or Equal To

<=, Less Than or 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.: We use == for equal to and = for assignment operators, use of different operator shows the difference.

Conditions:

To check if the variable ‘a’ has an equal value to ‘b’ we use ==

a == b returns True or False depending on their values

To assign the value (memory reference in python) of a to b

b = a, when b is used it will give the same value as a

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.: Three blocks of code are:

a)spam = 0

if spam == 10:

print('eggs')

b)if spam > 5:

print('bacon')

c) 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.

Ans.: The following code works:

*print(*" Press\n "  
 "1. for Hello"  
 "2. for Howdy"  
 *)*  
spam = *int(input())*  
if spam == 1:  
 *print(*"Hello"*)*

else:  
 *print(*"Greetings!"*)*

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

Ans.:If the programme is stuck in infinite loop you can press ctrl + c key together to send an interrupt and stop the processing of the program when run in command prompt or terminal

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

Ans.:The break statement when used in a loop brings the focus of the program out of the loop and proceeds to perform the rest of the execution of the program

Continue statement is just used in loops to skip the content that comes after it in the current iteration of the loop.

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

Ans.:In a for loop range method is used to define the iteration range

in a typical for loop like

for i in range(10), range(10) is range(stop) that is to stop iteration when i == 10

similarly range(0,10) means start i == 0 and stop at i == 10, and range(0,10,1)

means start at 0 stop at 10 and increase value of i by 1 after each iteration.

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.: We use two keywords to call a particular function from a module, namely from and import

in this case:

from spam import bacon