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

Booleans represent one of two values: True or False.

We assign Booleans viz. a= True

print(a)

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

We have 3 operators in Boolean: 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 ).

|  |  |  |
| --- | --- | --- |
| AND | False(0) | True(1) |
| False(0) | False | False |
| True(1) | False | True |

|  |  |  |
| --- | --- | --- |
| OR | False(0) | True(1) |
| False(0) | False | True |
| True(1) | True | True |

|  |  |
| --- | --- |
| A | ~A |
| True | False |
| False | 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?

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

= is assignment operator where as == or equal to is used as comparisonal operator.

Therefore while declaring variable x=10 assignment opearator.

While we compare using 5==4 returns false.

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') ===BLOCK 1

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.

Code:

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?

CTRL+C

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

Break terminates the loop while continue will switch to next iteration.

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

The range() function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and stops before a specified number.

We can see its syntax : range(start,stop,stepsize)

range(10) will iterate from 0 to 9 i.e 0,1,2,3…9

range(0,10) will iterate from0 to 9 i.e 0,1,2,3…9

range (0,10,1) will also iterate from 0 to 9 i.e 0,1,2,3…9

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.

for x in range(10):

print(x+1)

while x in range(0,10):

print(x+1)

x = x + 1

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

spam.bacon()