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

Sol) The two values for Boolean data type is True(1) and False(0). For example

X=5

Y=10

Print (bool(x==y))

It will return false

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

Sol) The three types of Boolean operators are AND, OR, and NOT

* AND (True if both is true) (Print (5>4) and (4>3))
* OR (True if one is true) Print ((5==5) or (4!=4)
* NOT (True only if false) print (not(3<=1))

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 ).

True= 1 and False=0

|  |  |  |
| --- | --- | --- |
| AND |  |  |
| A | B | C |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |
|  |  |  |
| 0r |  |  |
| A | B | C |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |
|  |  |  |
| Not |  |  |
| 0 (not true) | 1 |  |
| 1 (not false) | 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) False =True

1. False
2. False
3. True
4. False
5. False
6. True

5. What are the six comparison operators?

Sol) The 6 comparison operator are:

1. <
2. >
3. ==
4. !=
5. <=
6. =>

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

‘=’ operator is used to assign value or store a value in a variable whereas ‘==’ is a comparison operator to compare the values in a Boolean

For ex

X=5 (stores the values)

Y=6

Print (x==y) (compares the values)

Returs False(Boolean)

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')

Sol)

**Block 1**

spam = 0

if spam == 10:

print('eggs')

**Block 2**

if spam > 5:

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.

spam = int(input("Enter a no."))

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?

Sol)Press CTRL+C

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

Break statement breaks the loop in execution while continue statement will start a loop from the execution

For i in range(10):

If (i==5):

Break

Print (i)

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

Range(10) print the value from 0 to 0

Range(0,10)- starts a value from 0 to 9

Range (0,10,1)- adding 1 on variable on every iteration. It will print the value from 0 to 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 loop

For i in range(1,11)

Print (i)

While loop

X=1

While X<10:

Print(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()