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

Ans. Two values of Boolean data type are True and False.

x = 3

y = 4

print(bool(x==y))

output: False

x = 4

y = 5

print(bool(x!=y))

output: True

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

Ans: Three different types of Boolean operators are :

1. not
2. and
3. or
4. Comparison Operators like: ==, !=,<=,>=,<,>
5. is
6. in

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 ).

|  |  |
| --- | --- |
| not |  |
| input | output |
| TRUE | FALSE |
| FALSE | TRUE |
| and |  |  |
| input\_1 | input\_2 | output |
| TRUE | TRUE | TRUE |
| TRUE | FALSE | FALSE |
| FALSE | TRUE | FALSE |
| FALSE | FALSE | FALSE |
| or |  |  |
| input\_1 | input\_2 | output |
| TRUE | TRUE | TRUE |
| TRUE | FALSE | TRUE |
| FALSE | TRUE | TRUE |
| FALSE | FALSE | FALSE |

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.

Equal to operator is defined by the symbol ==, where as assignment operator is defined by = sign only.

Let a=3 and b=5

If we want to assign variable a’s value to be we use b=a,

Output b=3

where as if we want check whether a and b are equal , we do

a==b

output : False

‘

7. Identify the three blocks in this code:

spam = 0

if spam == 10: Block1

print('eggs') Block1

if spam > 5: Block2

print('bacon') Block2

else: Block3

print('ham') Block3

print('spam') Block3

print('spam') Block3

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 = 3

if spam == 1:

print('Hello')

if spam ==2:

print('Howdy ')

elif spam not in [1,2]:

print('Greetings!')

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

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

The main difference between both the statements is that 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)?

No difference. All three loops will iterate through the values 0,1,2,3,4,5,6,7,8,9.

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.

l=[i for i in range(1,11)]

for i in l:

print(i)

while loop:

l=[i for i in range(1,11)]

a=len(l)

while a>0:

print(l[-a])

a=a-1

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

from spam import bacon

bacon()