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

The Python Boolean type has only two possible values:

True

False

a=True

b=false

print(type(a))

print(type(b))

Output –

Class ‘bool’

Class ‘bool’

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

AND –

True and True = True

True and False = False

False and True = False

False and False = False

OR –

True or True = True

True or False = True

False or True = True

False or False = False

NOT –

not(True) = False

not(False) = True

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 –

True and True = True

True and False = False

False and True = False

False and False = False

OR –

True or True = True

True or False = True

False or True = True

False or False = False

NOT –

not(True) = False

not(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?

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.

= - Assignment operator

It is used for assigning the value to a variable.

Constant term cannot be placed on left hand side.

Example: 1=x; is invalid.

== - Relational / Comparison operator

It is used for comparing two values. It returns 1 if both the values are equal otherwise returns 0.

Constant term can be placed in the left hand side.

Example: 1==1 is valid and returns 1.

7. Identify the three blocks in this code:

spam = 0

if spam == 10: #Block1

print('eggs')

if spam > 5: #Block2

print('bacon')

else: #Block3

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 number"))

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?

Ctrl+c

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

break

It terminates the current working loop and passes the control to the next statement, and if the break statement resides inside the nested loop, it passes control to the outer loop. It can be used with both while and for loops.

Continue

It is the second form of the Loop Control Statement, very similar to the break statement. But when it comes to the working of the continue statement, it works just opposite to the break statement. Instead of terminating certain conditions, it jumps off to the very next condition. But it will continue the execution of the loop statement as per its name.

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

Range(10) – It means that range(stop)

When we pass only one argument to the range(), it will generate a sequence of integers starting from 0 to stop -1.

Range(0,10) – it means that range (start,stop)

When we pass two arguments to the range(), it will generate integers starting from the start number to stop -1.

Range(0,10,1) – it means that range (start,stop,step)

When we pass all three arguments to the range(), it will return a sequence of numbers, starting from the start number, increments by step number, and stops before a stop number.

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 a in range(1,11):

print(a)

i = 1

while i<11:

print(i)

i=i+1

1

2

3

4

5

6

7

8

9

10

1

2

3

4

5

6

7

8

9

10

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