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

Two values of Boolean data type are True and False

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

Three different types of Boolean operators are **and** , **or** and **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 ).

Truth table for and: If both are evaluates to True then output is True

a b a and b

True False False

True True True

False True False

False False False

Truth table for or: If any evaluates to True then output is True

a b a or b

True False True

True True True

False True True

False False False

Truth table for not: If expression evaluates to True then output is False, if it evaluates to False then it is True

a not a

True False

False True

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) => True and False, evaluates to False

not (5 > 4) => not True, evaluates to False

(5 > 4) or (3 == 5) => True or False, evaluates to True

not ((5 > 4) or (3 == 5)) => not ( True or False) , evaluates to not (True) => False

(True and True) and (True == False) => True and False => False

(not False) or (not True) => True or False => True

5. What are the six comparison operators?

Comparison operators are used to identify how the values are related between them.

< ( less than) operator => 4< 5 => True

<= (less than or equal to) operator => 4 <= 4 => True

> (greater than) operator => 4 > 3 => True

> = (greater than or equal to) operator => 4>=7 => False

== (equal to ) operator => 4 == 4 => True

!= (not equal to) operator => 4!= 4 => False

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 ( = ) is used to store the value into a variable.

Name= “iNeuron”

Equal to operator ( == ), is used to check the content between two variables, if content/ values are same then it returns True else False.

Result = 4 == 10 => False

First, we compared values 4 and 10 through == operator and then we stored the result to Result variable through = operator.

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')

**Answer**:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

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.

spam = int(input())

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?

We can stop the infinite loop by ctrl+ c

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

break is used to terminate the execution of a loop and continue is used to skip the current iteration of the loop.

i = 0

while i < 10:

if i == 9:

break

if i == 5:

continue

print(i, end= “ “)

output:

1 2 3 4 6 7 8

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

range () has three arguments, start, end and step, it specifies a range from start to end-1 by considering step value.

default value for start is 0 and for step is 1

if we specify only one arguments , that will be treated as end value.

range(10), in this 10 is treated as end value, and for start and step considers with default values.

range(10) => 0 1 2 3 4 5 6 7 8 9

range(0,10), in this 0 is treated as start value and 10 is end value, and step considers the default value (1).

range(0,10) => 0 1 2 3 4 5 6 7 8 9

range(0,10,1), in this 0 is treated as start value and 10 is end value and step as 1

range(0,10) => 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.

For loop:

for current in range(1,11):

print(current)

while loop:

end= 11

while current < end:

print(current)

current +=1

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

By using . we can call

Import spam

spam.bacon()