1. What is the result of the code, and explain?

>>> X = 'iNeuron'

>>> def func():

print(X)

>>> func()

Ans: Considering the indentations are correct: this will print the string 'iNeuron' to the console

2. What is the result of the code, and explain?

>>> X = 'iNeuron'

>>> def func():

X = 'NI!'

>>> func()

>>> print(X)

Ans: print statement will print the value 'iNeuron' as X outside the function I the global variable and value and the value does not changes unless it is mentioned global in the function

3. What does this code print, and why?

>>> X = 'iNeuron'

>>> def func():

X = 'NI'

print(X)

>>> func()

>>> print(X)

Ans: print() inside the function will print ‘NI’

Outside print() will print 'iNeuron' as it is the global variable and the value does not changes unless it is mentioned global in the function

4. What output does this code produce? Why?

>>> X = 'iNeuron'

>>> def func():

global X

X = 'NI'

>>> func()

>>> print(X)

Ans: prints ‘NI’, as the X variable has been mentioned global in the function, the value f the X has got changed globally

5. What about this code—what’s the output, and why?

>>> X = 'iNeuron'

>>> def func():

X = 'NI'

def nested():

print(X)

nested()

>>> func()

>>> X

Ans: it will print ’iNeuron ’ twice once in the comsole and 2nd as output

6. How about this code: what is its output in Python 3, and explain?

>>> def func():

X = 'NI'

def nested():

nonlocal X

X = 'Spam'

nested()

print(X)

>>> func()

Ans: Considering the proper alignment, this is an example of nested function, when a function is defined ans clled inside another function

Spam

The steps are as follows:

1. call func() function
2. I tgoes to the function and initialise X=’NI’
3. Then the nested function is defined.
4. In the next line when the nested function is called, it will enter the nested function
5. Nonlocal x, means that istead of creating a new variable X , it will use the X variable from rhe outer function and update the value in the variable
6. Thus when we print (X) it will display the value ‘Spam’