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

X **=** 'iNeuron'

**def** func():

print(X)

func()

**Output:** iNeuron

*#The global variables are accessible inside the functions in python.*

*#But we cannot access function variable outside function.*

*#Since x is global variable we are able to print it inside the function*

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

X **=** 'iNeuron'

**def** func():

X **=** 'NI!'

func()

print(X)

**Output:** iNeuron

*#The global variables are access inside the functions in python. But we cannot access function variable outside function.*

*# Since x is golbal variable we are able to print it out side of the function*

3. What does this code print, and why?

X **=** 'iNeuron'

**def** func():

X **=** 'NI!'

print(X)

func()

print(X)

**Output:**

NI!

iNeuron

*# The global variables are access inside the functions in python. But we cannot access function variable outside function.*

*# X is updated with 'NI' which is local to function and its immutable. its name space is within the function.*

4. What output does this code produce? Why?

X **=** 'iNeuron'

**def** func():

**global** X

X **=** 'NI!'

print(X)

func()

print(X)

*# since the X in side function is made Global, it will be accessible outside of the function too. Now X will have new value.*

*#solution : 'NI!', 'NI!'*

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

X **=** 'iNeuron'

**def** func():

X **=** 'NI'

**def** nested():

print(X)

nested()

func()

X

*#The nested() function will print 'iNeuron', Then func() does not display anything, and x ='NI' is not accessible outside the function*

**Output:**

iNeuron

'iNeuron'

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()

*#Nonlocal variables are used in nested functions whose local scope is not defined. This means that the variable can be neither in the local nor the global scope. it print the updated value from nested function*

**Output:**

*spam*