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

**>>> X = 'iNeuron'**

**>>> def func():**

**print(X)**

**>>> fu nc()**

**ANS:-**

**X = 'iNeuron'**

**def func():**

**print(X)**

**func()**

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

***#But we can not access function variable out side function.***

***#Since x is global variable we are able to print it in side the function solution : 'iNeuron'***

**iNeuron**

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

**>>> X = 'iNeuron'**

**>>> def func():**

**X = 'NI!'**

**>>> func()**

**>>> print(X)**

**ANS:-**

**X = 'iNeuron'**

**def func():**

**X = 'NI!'**

**func()**

**print(X)**

***#Ans. The global variables are access in side the functions in python. But we can not access #function variable out side function.***

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

**iNeuron**

**3. What does this code print, and why?**

**>>> X = 'iNeuron'**

**>>> def func():**

**X = 'NI'**

**print(X)**

**>>> func()**

**>>> print(X)**

**ANS:-**

**X = 'iNeuron'**

**def func():**

**X = 'NI!'**

**print(X)**

**func()**

**print(X)**

***#Ans. The global variables are access in side the functions in python. But we can not access #function variable out side function.***

***# X is updated with 'NI' which is local to function and its immutable. its name space is with in the #function solution = 'NI!', 'iNeuron'***

**NI!**

**iNeuron**

**4. What output does this code produce? Why?**

**>>> X = 'iNeuron'**

**>>> def func():**

**global X**

**X = 'NI'**

**>>> func()**

**>>> print(X)**

**ANS:-**

**X = 'iNeuron'**

**def func():**

**global X**

**X = 'NI!'**

**print(X)**

**func()**

**print(X)**

***#Ans. since the X in side function is made Global, it will be accesible out side of the function too.***

***#now X will have new value.***

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

**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**

**ANS:-**

**X = 'iNeuron'**

**def func():**

**X = 'NI'**

**def nested():**

**print(X)**

**nested()**

**func()**

**X**

***#Ans. the nested() function will print 'iNeuron', Then func() does not display anything,***

***# and x ='NI' is not accessible out***

***#side the function.***

***#Solution : 'iNeuron'***

**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()**

**ANS:-**

**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***

***#Sol : 'spam'***

**spam**