

1. Why are functions advantageous to have in your programs?

### Solution-

- 1) Avoid repetition of codes.
- 2) Reduces chances of error.
- 3) Modifying a program becomes easier by using function.

2. When does the code in a function run: when it's specified or when it's called?

### Solution-

When it is called

3. What statement creates a function?

### Solution-

Def and return statements creates function -

```
In [27]: def rn():
    a=1
    return a
```

```
In [28]: rn()
Out[28]: 1
```

4. What is the difference between a function and a function call?

### Solution-

A function is a block of code that does a particular operation and returns a result. It usually accepts inputs as parameters and returns a result. The parameters are not mandatory. A function call is the code used to pass control to a function.

5. How many global scopes are there in a Python program? How many local scopes?

### Solution-

There's only one global Python scope per program execution. This scope remains in existence until the program terminates and all its names are forgotten.

There is one local scope these are the variables which are defined inside a program

6. What happens to variables in a local scope when the function call returns?

### Solution-

**Local Scope variable is the variable defined inside the function. Variable may change or remains the same as per the function**

7. What is the concept of a return value? Is it possible to have a return value in an expression?

### Solution-

**Yes, Return value can come in expression –**

```
In [36]: def a():
    a=20
    return a
```

```
In [37]: c = a()
```

```
In [38]: c
```

```
Out[38]: 20
```

8. If a function does not have a return statement, what is the return value of a call to that function?

### Solution-

Print Statement can be used then

```
In [40]: def a():
    a=20
    print(a)
```

```
In [41]: a()
```

8. How do you make a function variable refer to the global variable?

In [5]: `x = "awesome"`

```
def myfunc():
    global x
    x = "fantastic"
```

```
myfunc()
print("Python is " + x)
```

Python is fantastic

9. What is the data type of None?

In [42]: `a = None`

In [43]: `type(a)`

Out[43]: `NoneType`

10. What does the sentence `import areallyourpetsnamederic` do?

It is importing the module `areallyourpetsnamederic`.

11. If you had a `bacon()` feature in a `spam` module, what would you call it after importing `spam`?

Import `spam` as `s`  
`s.bacon()`

12. What can you do to save a programme from crashing if it encounters an error?

When it encounters an error, the control is passed to the except block, skipping the code in between. As seen in the above code, we have moved our code inside a try and except statement. Try running the program and it should throw an error message instead of crashing the program.

14. What is the purpose of the try clause? What is the purpose of the except clause?

**Solution-**

```
In [7]: x = 'Tatin'  
click to scroll output; double click to hide
```

```
In [9]: try:  
         print(x+1)  
     except:  
         print("An exception occurred")
```

An exception occurred

Try block, the program will crash and raise an error

Try block raises an error, the except block will be executed.