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

a. Functions reduce the need for duplicate code. This makes programs shorter, easier to read, and easier to update.

b. Functions can be reused in different parts of your program. This makes it easier to maintain your code and to keep it consistent.

c. Functions can be used to encapsulate code. This makes your code easier to understand and to test.

d. Functions can be used to improve the readability of your code. This makes it easier for other people to understand what your code is doing.

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

The code in a function runs when it is called.

3. What statement creates a function?

The def statement creates a function in Python.

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

A function is a block of code that performs a specific task. A function call is the act of executing a function.

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

There is only one global scope in a Python program. The global scope is the top-level scope of the program. All variables that are not declared within a function are in the global scope.

There can be any number of local scopes in a Python program. A local scope is created whenever a function is called. All variables that are declared within a function are in the local scope of that function.

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

When a function call returns, the local variables in the function are destroyed. This means that they are no longer accessible and their memory is reclaimed.

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

In programming, a return value is the value that is returned by a function when it finishes executing. The return value can be any type of value, such as an integer, a float, a string, or an object.

In Python, a function returns a value by using the return keyword. The return keyword can be followed by any expression, and the value of the expression will be the return value of the function.

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

None

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

To make a function variable refer to the global variable in Python, you can use the global keyword. The global keyword tells the Python interpreter that the variable is a global variable and not a local variable.

10. What is the data type of None?

The data type of None is NoneType. None is a special object in Python that represents the absence of a value. It is often used to indicate that a variable does not have a value, or that a function has not returned a value.

11. What does the sentence import areallyourpetsnamederic do?

The sentence "import areallyourpetsnamederic" imports a module named "areallyourpetsnamederic". This module does not exist, so importing it will raise an error.

The import statement is used to import modules into the current Python environment. A module is a collection of Python code that can be reused in other Python programs. Modules are typically stored in files with the .py extension.

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

spam.bacon()

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

Use exception handling. Exception handling is a way of gracefully handling errors in your program. When an error occurs, the Python interpreter will raise an exception. You can catch this exception and handle it in a way that doesn't cause the program to crash.

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

The try clause is used to execute a block of code that might raise an error. The except clause is used to handle the error that is raised by the try clause.