**Assignment Questions and Answers**

1. **Why are functions advantageous to have in your programs?**  
   Functions help in reusability, modularity, and readability of the code. They make the program more organized and help reduce redundancy by allowing code reuse.
2. **When does the code in a function run: when it's specified or when it's called?**  
   The code inside a function runs only when the function is called, not when it is defined.
3. **What statement creates a function?**  
   The def statement is used to create a function in Python.
4. def my\_function():
5. print("Hello, World!")
6. **What is the difference between a function and a function call?**  
   A function is a block of reusable code, while a function call executes the function.
7. def greet(): # Function definition
8. print("Hello!")sss
9. greet() # Function call
10. **How many global scopes are there in a Python program? How many local scopes?**  
    There is only **one global scope** in a Python program, but there can be multiple **local scopes**, one for each function call.
11. **What happens to variables in a local scope when the function call returns?**  
    Local variables are destroyed once the function call completes and returns. They cannot be accessed outside the function.
12. **What is the concept of a return value? Is it possible to have a return value in an expression?**  
    A return value is the result that a function sends back when it is called using the return statement. Yes, return values can be used in expressions.
13. def add(a, b):
14. return a + b
15. result = add(3, 4) \* 2 # Return value used in an expression
16. **If a function does not have a return statement, what is the return value of a call to that function?**  
    If a function does not have a return statement, it returns None by default.
17. **How do you make a function variable refer to the global variable?**  
    To modify a global variable inside a function, use the global keyword.
18. x = 10
19. def modify\_global():
20. global x
21. x = 20
22. modify\_global()
23. print(x) # Output: 20
24. **What is the data type of None?**  
    The data type of None is NoneType.
25. **What does the sentence import areallyourpetsnamederic do?**  
    It tries to import a module named areallyourpetsnamederic. If the module does not exist, Python will raise an ImportError.
26. **If you had a bacon() feature in a spam module, what would you call it after importing spam?**
27. import spam
28. spam.bacon()
29. **What can you do to save a program from crashing if it encounters an error?**  
    Use **exception handling** with try and except blocks to catch and handle errors gracefully.
30. **What is the purpose of the try clause? What is the purpose of the except clause?**
    * The try clause contains the code that may raise an exception.
    * The except clause handles the exception if one occurs.
31. try:
32. x = 1 / 0 # This will cause an error
33. except ZeroDivisionError:
34. print("Cannot divide by zero!")