🛠️ Python Functions, Modules, and Libraries Quiz

1. Which keyword is used to define (create) a function in Python?

   A. function

   B. def

   C. fun

   D. define

   Answer: B

2. What is the purpose of the parentheses () after a function name (e.g., my_function())?

   A. They hold the function's name.

   B. They hold the code block.

   C. They are used to pass arguments or parameters to the function.

   D. They are used to start a comment.

   Answer: C

3. What is a function parameter?

   A. The code inside the function.

   B. A value returned by the function.

   C. A variable listed inside the function's parentheses in the def statement.

   D. The name of the function.

   Answer: C

4. Which keyword is used inside a function to send a result back to the place where the function was called?

A. send

B. output

C. print

D. return

Answer: D

5. What value does a function return if you do not include a return statement?

A. 0

B. An error message.

C. None

D. The last variable created.

Answer: C

6. A local variable is defined:

A. Outside of any function.

B. Inside a function and can only be used within that function.

C. Only in the main program file.

D. Inside a module.

Answer: B

7. A global variable is defined:

A. Inside a function.

B. Outside of any function and can be used anywhere in the file.

C. Only in another program.

D. Only in a loop.

Answer: B

8. What is a Module in Python?

   A. A single function in a file.

   B. A file containing Python code (functions, variables, classes) that can be imported.

   C. A special type of list.

   D. A comment in a program.

   Answer: B

9. Which keyword is used to bring a module's functions and variables into your current Python file?

   A. include

   B. bring

   C. load

   D. import

   Answer: D

10. If you import the math module, how would you call the square root function?

   A. sqrt(16)

   B. math.sqrt(16)

   C. square_root(16)

   D. import.math.sqrt(16)

   Answer: B

11. What is the output of the following code:

```Python
def greet(name):
    return "Hello, " + name
print(greet("Bob"))
```

A. Hello, name

B. Bob

C. Hello, Bob

D. Error

Answer: C

12. What command would you use to import only the pi constant from the math module?

A. import math.pi

B. from math import pi

C. import pi from math

D. load pi from math

Answer: B

13. When you use from module import function, how do you call the function?

A. module.function()

B. function()

C. import.function()

D. module::function()

Answer: B

14. What is a Python Library?

    A. A single, short Python file.

    B. A large collection of modules and packages that provide extensive functionality.

    C. A text file used for documentation.

    D. A folder where all your Python files are stored.

    Answer: B

15. What function from the built-in random module is used to get a random integer within a specified range (e.g., 1 to 10)?

    A. randint()

    B. random_int()

    C. rand()

    D. integer_choice()

    Answer: A

16. What is the purpose of the built-in time module?

    A. To perform complex math operations.

    B. To handle time-related tasks like getting the current time or pausing code execution.

    C. To manage file operations.

    D. To create graphics.

    Answer: B

17. What will be the output of a function that contains only print("Done") and no return statement?

    A. The text "Done" will be displayed, and the function will return None.

    B. The text "Done" will be displayed, and the function will return 0.

    C. Only the text "Done" will be displayed.

    D. An error will occur because return is missing.

    Answer: A

18. What do you call the values you pass into a function when you call it (e.g., the 5 in calculate(5))?

    A. Parameters

    B. Definitions

    C. Arguments

    D. Local variables

    Answer: C

19. Why do programmers use modules and libraries?

    A. To make their code longer and more complex.

    B. To avoid rewriting code that already exists and to organize large programs.

    C. To make all variables global.

    D. To force the code to run slower.

    Answer: B

20. What is the purpose of a Docstring (a string literal inside a function/module)?

    A. It is used as a comment that Python ignores.

    B. It provides built-in documentation and explanations for the function/module.

    C. It defines the return value.

    D. It must contain the author's name.

    Answer: B

21. Which function is used to convert a string (like "123") into an integer so it can be used in mathematical calculations?

A. str()

B. float()

C. int()

D. list()

Answer: C

22. What does the as keyword do when importing a module (e.g., import pandas as pd)?

A. It checks the module version.

B. It renames the module for easier, shorter use in the current script.

C. It makes the module mandatory.

D. It deletes the original module name.

Answer: B

23. If you want a function to be able to change a global variable, which keyword must be used inside the function before changing the variable?

A. local

B. global

C. static

D. main

Answer: B

24. A function that takes no arguments must still include empty parentheses in both its definition and call.

A. True

B. False

Answer: A

25. What is the output of the following code:

Python
```python
def power_of_two(x):
    return x * x
result = power_of_two(3)
print(result)
```

A. 6

B. 9

C. x * x

D. 3

Answer: B