Name: _____ **Class:** _____ **Date:** _____ **ID: A**

CST-186 Chapter 6 Study Guide

True/False
Indicate whether the statement is true or false.

____ 1. Function docstrings aren't required but are a good idea.

____ 2. A function must receive at least one value and return at least one value.

____ 3. The execution of a function always ends after a `return` statement.

____ 4. A variable created in a function can be directly accessed outside of the function.

____ 5. Once you use a keyword argument in a function call, all the remaining arguments must be keyword arguments.

____ 6. Once you assign a default value to a parameter in a function header, you have to assign default values to all the parameters after it in the header.

____ 7. Global variables can be accessed in any part of a program, but global constants can only be accessed in specified functions.

____ 8. A local variable can be accessed in any part of a program.

____ 9. Each function has its own scope.

____ 10. It's impossible to change the value of a global variable inside a function.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 11. What does the following code do?

```
def func():
    print "A function at your service."
```

a. define a function
b. call a function
c. invoke a function
d. reserve a function

____ 12. What will be displayed by the following code?

```
def display():
    print "Hello",
print "there!"
```

a. `Hello there!`
b. `there! Hello`
c. `Hello`
d. `there!`

____ 13. What will be displayed by the following code?

```
def display():
    print "Hello",
print "there!",
display()
```

a. `Hello there!`
b. `there! Hello`
c. `Hello`
d. `there!`

____ 14. What will be displayed by the following code?

```
def display():
    print "Hello",
display()
print "there!"
```

a. `Hello there!`
b. `there! Hello`
c. `Hello`
d. `there!`

____ 15. What is `def func():` in the following code?

```
def func():
    print "A function at your service."
```

a. function header
b. function definition
c. function call
d. function parameter

____ 16. Where must the docstring of a function be placed?
a. before the function
b. as the first line of the function definition
c. as the last line of the function definition
d. in a separate file

____ 17. What can a programmer-created function do?
a. receive values
b. return values
c. All of these
d. None of these

____ 18. What do programmer created functions receive values through?
a. arguments
b. parameters
c. strings
d. integers

____ 19. In the following code, what is message?

```
def display(message):
    print message
```

a. function header
b. function body
c. argument
d. parameter

____ 20. What does the following code display?

```
def rate(score):
    if score < 500:
        message = "Weak"
    elif score < 1000:
        message = "Not bad"
    else:
        message = "Nice score"

rate(score = 750)
print message
```

a. `Weak`
b. `Not bad`
c. `Nice score`
d. None of these

____ 21. What does the following code display?

```
def rate(score):
    if score < 500:
        message = "Weak"
    elif score < 1000:
        message = "Not bad"
    else:
        message = "Nice score"

    return message

rate(score = 750)
print message
```

a. `Weak`
b. `Not bad`
c. `Nice score`
d. None of these

____ 22. What does the following code display?

```
def rate(score):
    if score < 500:
        message = "Weak"
    elif score < 1000:
        message = "Not bad"
    else:
        message = "Nice score"

    return message

print rate(score = 750)
```

a. `Weak`
b. `Not bad`
c. `Nice score`
d. None of these

____ 23. In the following code, what is assigned to `more`?

```
def triple(x):
    return x * 3

some = 10
more = triple(some)
```

a. a return value
b. a parameter
c. an argument
d. a function

____ 24. Which of the following is a valid function header?

a. `def init_graphics(width, height, depth=32):`
b. `def init_graphics(width, height=600, depth):`
c. `def init_graphics(width=800, height, depth):`
d. `def init_graphics(800, 600, 32):`

____ 25. What will the following code display?

```
def announce(name, score):
    print name, "got a score of", score

announce(1000, "Mike")
```

a. `Mike got a score of 1000`
b. `name got a score of score`
c. `1000 got a score of Mike`
d. None of these

____ 26. What will the following code display?

```
def announce(name="Chris", score=0):
    print name, "got a score of", score

announce(1000)
```

a. `Chris got a score of 1000`
b. `Chris got a score of 0`
c. `1000 got a score of Chris`
d. `1000 got a score of 0`

____ 27. In the following code, which variables are in the same scope?

```
def func1():
    a = 1
    b = 2

def func2():
    c = 3
    d = 4

e = 5
```

a. a and b
b. a and c
c. b and d
d. d and e

____ 28. How many local variables are in the following code?

```
def func1():
    a = 1

def func2():
    b = 2

c = 3
```

a. 0
b. 1
c. 2
d. 3

____ 29. What will the following code display?

```
def func():
    x = 50
    print x,

x = 100
func()
print x
```

a. `50 50`
b. `50 100`
c. `100 50`
d. `100 100`

____ 30. What will the following code display?

```
def func():
    global x
    x = 50
    print x,

x = 100
func()
print x
```

a. `50 50`
b. `50 100`
c. `100 50`
d. `100 100`

Completion
Complete each statement.

31. A function _____ is code that defines what a new function does.

32. A(n) _____ is a string that documents a function.

33. A function _____ is the first line of code that defines a function.

34. Software _____ is leveraging existing software in a new project.

35. A(n) _____ parameter value is a value that a parameter gets if no value is passed to it.

Matching

Match each item with a statement below

a. Abstraction
b. Argument
c. Parameter
d. Encapsulation
e. Return value
f. Keyword argument
g. Scope
h. Global variable
i. Local variable
j. Shadow

____ 36. A value returned by a function.

____ 37. To hide a global variable inside a scope by creating a local variable of the same name.

____ 38. A mechanism that lets you think about the big picture without worrying about the details.

____ 39. A name inside the parentheses of a function header that can receive a value.

____ 40. A variable that can be accessed in any part of a program.

____ 41. An argument passed to a specific parameter using the parameter name.

____ 42. An area of a program that's separate from other areas.

____ 43. A value passed to a function parameter.

____ 44. A variable that can be accessed only in the scope in which it was created.

____ 45. A technique of keeping independent code separate by hiding the details.

Short Answer

46. Describe a real-life example of abstraction.

47. Describe a real-life example of encapsulation.

48. Name four ways that software reuse helps programmers.

49. How can default parameter values help programmers?

50. How can global constants help programmers?