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

CST-186 Chapter 5 Study Guide

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

____ 1. The `len()` function does not work with lists.

____ 2. You can assign an existing list element a new value.

____ 3. When you assign a value to a list position number that doesn't exist, a new list element is automatically created.

____ 4. When you delete a list element, the length of the list shrinks by one.

____ 5. It's possible to generate an error by invoking a list object's `remove()` method.

____ 6. `[(1, 2), (3, 4)]` is an example of a nested sequence.

____ 7. The dictionary is a type of sequence.

____ 8. A dictionary value must be immutable

____ 9. A dictionary key must be immutable.

____ 10. A dictionary must contain multiple items with the same key.

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

____ 11. Which of the following is a list?

a. `([1, 2, 3], [4, 5, 6])`
b. `[(1, 2, 3), (4, 5, 6)]`
c. `{"one" : 1, "two" : 2, "three" : 3}`
d. `"1, 2, 3, 4, 5, 6"`

____ 12. Which of the following is an immutable sequence?

a. `[1, 2, 3]`
b. `{"one" : 1, "two" : 2, "three" : 3}`
c. `(1, 2, 3)`
d. None of these

____ 13. What will the following code display?

```
inventory = ["sword", "shield", "gold", "gems"]
print "s" in inventory
```

a. `True`
b. `False`
c. `sword shield`
d. `None of these`

____ 14. What will the following code display?

```
inventory = ["sword", "shield", "gold", "gems"]
print "sword" in inventory
```

a. `True`
b. `False`
c. `sword shield`
d. None of these

____ 15. What will the following code display?

```
print len([(1, 2), (3, 4), (5, 6)])
```

a. `1`
b. `2`
c. `3`
d. `6`

____ 16. What will the following code display?

```
inventory = ["sword", "shield", "gold"]
print inventory[len(inventory)]
```

a. `sword`
b. `shield`
c. `gold`
d. None of these

____ 17. What will the following code display?

```
inventory = ["sword", "shield", "gold"]
print inventory[len(inventory) - 2]
```

a. `sword`
b. `shield`
c. `gold`
d. None of these

____ 18. What will the following code display?

```
inventory = ["sword", "shield", "gold"]
chest = ["gems", "rubies"]
inventory += chest
del inventory[2:3]
print inventory
```

a. `['sword', 'shield', 'gems', 'rubies']`
b. `['sword', 'shield', 'gold', 'rubies']`
c. `['sword', 'gold', 'gems', 'rubies']`
d. `['sword', 'shield', 'gold', 'gems']`

____ 19. What will the following code display?

```
scores = [100, 900, 500]
scores.append(100)
print scores
```

a. `[100, 900, 500]`
b. `[100, 100, 900, 500]`
c. `[100, 900, 100, 500]`
d. `[100, 900, 500, 100]`

____ 20. What will the following code display?

```
numbers = [1, (2, 3), [4, 5, 6]]
print numbers[2][1]
```

a. `6`
b. `5`
c. `4`
d. `3`

____ 21. What will the following code display?

```
scores = [("Moe", 1000), ("Larry", 1500), ("Curly", 3000)]
x = scores[1]
print x[1]
```

a. `Moe`
b. `1000`
c. `Larry`
d. 1500

____ 22. What will the following code display?

```
scores = [("Moe", 1000), ("Larry", 1500), ("Curly", 3000)]
x = scores[1]
print scores[0][0][0]
```

a. `M`
b. `L`
c. `C`
d. None of these

____ 23. What will the following code display?

```
a, b, c, d =  ("Moe", 1000, "Larry", 1500)
print a, d
```

a. `Moe 1000`
b. `Moe 1500`
c. `Larry 1000`
d. `Larry 1500`

____ 24. What will the following code display?

```
my_games = ["Crysis", "Spore", "Company of Heroes"]
your_games = my_games
del my_games[2]
print your_games
```

a. `['Crysis', 'Spore']`
b. `['Spore', 'Company of Heroes']`
c. `['Crysis', 'Company of Heroes']`
d. `['Crysis', 'Spore', 'Company of Heroes']`

____ 25. What will the following code display?

```
my_games = ["Crysis", "Spore", "Company of Heroes"]
your_games = ["Crysis", "Spore", "Company of Heroes"]
del my_games[2]
print your_games
```

a. `['Crysis', 'Spore']`
b. `['Spore', 'Company of Heroes']`
c. `['Crysis', 'Company of Heroes']`
d. `['Crysis', 'Spore', 'Company of Heroes']`

____ 26. What will the following code display?

```
my_games = ["Crysis", "Spore", "Company of Heroes"]
your_games = my_games[:]
del my_games[2]
print your_games
```

a. `['Crysis', 'Spore']`
b. `['Spore', 'Company of Heroes']`
c. `['Crysis', 'Company of Heroes']`
d. `['Crysis', 'Spore', 'Company of Heroes']`

____ 27. What will the following code display?

```
d = {1 : "one", 2 : "two", 3 : "three"}
print d.get(1)
```

a. `one`
b. `two`
c. `three`
d. `None`

____ 28. What will the following code display?

```
d = {1 : "one", 2 : "two", 3 : "three"}
print d.get("one")
```

a. `1`
b. `2`
c. `3`
d. `None`

____ 29. What will the following code display?

```
d = {1 : "one", 2 : "two", 3 : "three"}
if 1 in d:
    del d[1]
print d
```

a. `{1: 'one', 2:'two', 3: 'three'}`
b. `{2: 'two', 3: 'three'}`
c. `{1: 'one', 3: 'three'}`
d. `{1: 'one', 2: 'two'}`

____ 30. What will the following code display?

```
d = {1 : "one", 2 : "two", 3 : "three"}
if "one" in d:
    del d["one"]
print d
```

a. `{1: 'one', 2: 'two', 3: 'three'}`
b. `{2: 'two', 3: 'three'}`
c. `{1: 'one', 3: 'three'}`
d. `{1: 'one', 2: 'two'}`

Completion
Complete each statement.

31. Unlike a tuple, a list is _____, meaning its elements can be changed.

32. _____ is a list method that adds a value to end of a list.

33. _____ is a list method that deletes the first occurrence of a value from the list.

34. The _____ operator lets you test for the existence of a key in a dictionary.

35. _____ is a dictionary method that takes a key and retrieves its corresponding value from a dictionary.

Matching

Match each item with a statement below

a. Dictionary
b. Item
c. Key
d. List
e. Nested sequence
f. Sequence unpacking
g. Shared reference
h. Value
i. Mutability
j. Immutability

____ 36. In a dictionary, an object used to look up another object.

____ 37. A sequence inside another sequence.

____ 38. In a dictionary, an object that is returned when its corresponding key is looked up.

____ 39. A mutable collection of key-value pairs.

____ 40. Automatically accessing each element of a sequence.

____ 41. A reference to an object, which has at least one other reference to it.

____ 42. Quality that allows a list to be modified.

____ 43. A mutable sequence of any type.

____ 44. In a dictionary, a key-value pair.

____ 45. Quality that restricts a tuple from being modified.

Short Answer

46. How are lists and tuples similar and different?

47. Name three reasons you might use a tuple instead of a list.

48. Why should you limit how deeply you nest sequences?

49. What are the implications of a shared reference to immutable and mutable values?

50. What are two ways you can safely look up a key in a dictionary?