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

CST-186 Chapter 4 Study Guide

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

____ 1. A sequence is an unordered group of elements.

____ 2. A string is a sequence of integers.

____ 3. The length of a sequence will be greater than the position number of its last element.

____ 4. The second line in the following code is illegal.
```
CONSTANT = "unchangeable"
CONSTANT = "changed"
```

____ 5. The expression `not None` evaluates to True.

____ 6. The second line in the following code is illegal.
```
word = "Python"
print word[2:1]
```

____ 7. Tuples are mutable sequences.

____ 8. All elements in a tuple must be of the same type.

____ 9. Indexing of sequences begins at position number 0.

____ 10. You can index sequences using negative position numbers.

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

____ 11. Given that `i` is an integer greater than 0, what does `range(i)` return?
a. an empty sequence
b. a sequence `0` through `i`, inclusive
c. a sequence `1` through `i`, inclusive
d. a sequence `0` through `i - 1`, inclusive

____ 12. Which of the following will return the value `[10, 9, 8, 7, 6, 5, 4, 3]`?
a. `range(11,2,-1)`
b. `range(10,3,-1)`
c. `range(10, 2, -1)`
d. `range(3,10, 1)`

____ 13. What does the following code display?

```
print len("Game" + "Over")
```

a. 9
b. 8
c. 7
d. None of these

____ 14. What does the following code display?

```
print "e" in "Game"
```

a. `True`
b. `False`
c. `e`
d. `Gam`

____ 15. What does the following code display?

```
print "g" in "Game"
```

a. `True`
b. `False`
c. `g`
d. `ame`

____ 16. What kind of access does Python allow for sequences?

a. sequential access
b. random access
c. both sequential access and random access
d. neither sequential access nor random access

____ 17. What does the following code display?

```
word = "abc"
print word[len(word)]
```

a. `a`
b. `b`
c. `c`
d. None of these

____ 18. What does the following code display?

```
word = "abc"
for i in range(len(word)):
    print word[-i]
```

a. `a b c`
b. `a c b`
c. `b c a`
d. `b a c`

____ 19. What does the following code display?

```
word = "Game"
word[0] = "S"
print word
```

a. `Game`
b. `Same`
c. `SGame`
d. None of these

____ 20. What does the following code display?

```
dessert = "cake"
print dessert[1:3]
```

a. `cake`
b. `cak`
c. `ca`
d. `ak`

____ 21. What does the following code display?

```
dessert = "cake"
print dessert[0:len(dessert)]
```

a. `cake`
b. `cak`
c. `ca`
d. `ak`

____ 22. What does the following code display?

```
dessert = "cake"
print dessert[0:] + dessert[:len(dessert)]
```

a. `cake`
b. `cakecake`
c. `cakecakecake`
d. `cakecakecakecake`

____ 23. Which of the following returns a copy of `seq`? (Assume `seq` is a valid sequence)

a. `seq[]`
b. `seq[:]`
c. `seq[1:]`
d. `seq[:1]`

____ 24. What does the following code display?

```
for element in ("Enemy1", "Enemy2", "Enemy3"):
    print "e" in element,
```

a. `True True True`
b. `False False False`
c. `True`
d. `False`

____ 25. What does the following code display?

```
print "e" in ("Enemy1", "Enemy2", "Enemy3")
```

a. `True`
b. `False`
c. `"e"`
d. `"Enemy"`

____ 26. What does the following code display?

```
inventory = ("ax", "armor", "amulet")
for item in inventory:
    print len(item),
```

a. `2 5 6`
b. `3 3 3`
c. `0 1 2`
d. `2 1 0`

____ 27. What does the following code display?

```
inventory = ("ax", "armor", "amulet")
for item in inventory:
    if len(item) > len(inventory) and "a" in item:
        print item
```

a. `ax armor amulet`
b. `ax armor`
c. `armor amulet`
d. `ax amulet`

____ 28. What does the following code display?

```
inventory = ("sword", "shield", "gold")
print inventory[1]
```

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

____ 29. What does the following code display?

```
inventory = ("sword", "shield", "gold")
print inventory[-1]
```

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

____ 30. What does the following code display?

```
treasure = ("gold", "gems")
rations = ("boar meat", "raptor egg")
inventory = treasure + rations
print inventory
```

a. `("gold", "gems")`
b. `("boar meat", "raptor egg")`
c. `('gold', 'gems', 'boar meat', 'raptor egg')`
d. `('boar meat', 'raptor egg', 'gold', 'gems')`

Completion
Complete each statement.

31. _____ access is access to elements of a sequence in order.

32. _____ access is direct access to any element of a sequence.

33. A(n) _____ is an element of a sequence.

34. The _____ operator tests for element membership in a sequence.

35. The _____ function returns the length of a sequence.

Matching

Match each item with a statement below

a. Constant
b. Element
c. Immutable
d. Indexing
e. Iterate
f. Mutable
g. `None`
h. Sequence
i. Slice
j. Tuple

____ 36. Unchangeable.

____ 37. To move through a sequence, in order.

____ 38. An immutable sequence of values of any type.

____ 39. A name that is associated with a value not meant to be changed

____ 40. A single item in a sequence.

____ 41. A copy of a continuous section of a sequence.

____ 42. The process used to access a specific element of a sequence.

____ 43. An ordered list of elements.

____ 44. Value that represents nothing.

____ 45. Changeable.

Short Answer

46. How are the `while` loop and `for` loop similar and different?

47. Must you use the loop variable in the body of a `for` loop?

48. How are constants helpful to programmers?

49. What is `None` and how can it be helpful to a programmer?

50. How are strings and tuples similar and different?