Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

SKU: 9780357122754-TEST-BANK

Name:_____ Class:_____ Date:_____

Chapter 02: 2. An Overview of Collections

1. A collection contains at least one item.
   a. True
   b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

2. The use of collections is a Python programming requirement, but they are not very useful for working with real-world objects.
   a. True
   b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

3. A set is a built-in Python collection type.
   a. True
   b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

4. A tuple is an immutable collection type.
   a. True
   b. False

ANSWER: True
POINTS: 1

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

5. A line of customers waiting to get into a movie is an example of a hierarchical collection.
   a. True
   b. False
ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

6. Graph collections are organized in a parent/children relationship.
   a. True
   b. False
ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

7. A search operation is usually more efficient on a sorted collection than on an unsorted collection.
   a. True
   b. False
ANSWER: True
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

8. A sorted collection must be in a linear structure, ordered by position.
   a. True
   b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Collection Types
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

9. To traverse a collection's items, use the *for* loop.
   a. True
   b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

10. Use the & operator to concatenate two collections.
   a. True
   b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

11. To determine equality of two collections, use the == operator.
   a. True
   b. False

ANSWER: True
POINTS: 1

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

12. The *pop* method is used to add items to a Python list.
    a. True
    b. False
ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

13. All collections are also iterable objects.
    a. True
    b. False
ANSWER: True
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

14. If you clone an object using the = operator (as in *myList=list(yourList)*), the *is* operator returns True while the == operator returns False.
    a. True
    b. False
ANSWER: False
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

DATE MODIFIED: 7/17/2018 3:26 PM

15. When collections share mutable items, a deep copy using a *for* loop should be used to explicitly clone items before adding them to a new collection.

a. True

b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

16. To be considered equal, two lists must have the same length and the same items in each position, whereas the same sets must simply contain exactly the same items, but in no particular order.

a. True

b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

17. When using a *for* loop to iterate over a list, the items are visited in no particular order.

a. True

b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

18. The map, filter, and reduce functions can only be used on list collections.

a. True

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

19. By default, items in a sorted collection are visited in descending order when using a *for* loop iterator.
a. True
b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

20. When a shallow copy of a collection is made, only references to the items in the new collection are copied.
a. True
b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

21. In computer science, collections are also called objective data types (ODTs).
a. True
b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Implementations Of Collections
QUESTION TYPE: True / False

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

22. In computer science, abstraction is used for ignoring or hiding details that are nonessential.
    a. True
    b. False
ANSWER: True
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Implementations Of Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

23. In Python, modules and methods are the smallest units of abstraction, classes are the next in size, and functions are the largest.
    a. True
    b. False
ANSWER: False
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Implementations Of Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

24. Without abstraction, you would need to consider all aspects of a software system simultaneously.
    a. True
    b. False
ANSWER: True
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Implementations Of Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

25. Python includes two implementations of lists: arrays and linked lists.

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

a. True
b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Implementations Of Collections
QUESTION TYPE: True / False
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

26. What is a group of zero or more items that can be operated on as a unit?
a. grouping
b. collection
c. array
d. organization

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

27. Which of the following is true about Python collections?
a. most can be heterogeneous
b. all are homogeneous
c. they are typically static
d. all are immutable object types

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

28. Which object type is immutable?
a. list

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

b. set
c. dict
d. tuple

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

29. Which type of collection is ordered by position?
a. linear
b. hierarchical
c. graph
d. sorted

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

30. Which real-world item best represents a linear collection?
a. file system
b. organizational chart
c. stack of bricks
d. table of contents

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

31. Which real-world item best represents a hierarchical collection?

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

a. a queue of customers
b. wiring diagrams
c. a box of legos
d. a family tree

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

32. Which statement is true about a sorted collection?
a. must be ordered by position
b. they need not be linear
c. searching is inefficient
d. a box of donuts is an example

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

33. Which of the following is an unordered collection?
a. string
b. stack
c. dictionary
d. queue

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

34. Which Python function returns the total number of items in a collection?

a. sizeof
b. len
c. count
d. total

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

35. Which operator can you use to test for item membership in a collection?

a. in
b. ==
c. @
d. is

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

36. What is the value of *c* after the following code executes?

```
a = [10, 20, 30]
b = [40, 50, 60]
c = a + b
```

a. [50, 70, 90]
b. {[10, 20, 30], [40, 50, 60]}
c. [10, 20, 30, 40, 50, 60]
d. ([10, 40], [20, 50], [30, 60])

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

37. Which of the following is a special case of type conversion, where the two collections are of the same type?
    a. replacing
    b. copying
    c. duplicating
    d. cloning

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

38. What is the value of *aList* after the following code is executed?

```
aList = [10, 20, 30]
aList.pop()
```

    a. [10, 20, 30]
    b. [10,20]
    c. []
    d. [20, 30]

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

39. What is the value of *aList* after the following code is executed?

```
aList = [1, 2, 3]
aList.remove(2)
```

    a. [1, 2]

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

b. [1, 3]
c. [3]
d. [1]

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

40. What is the value of *myObject* after the following code executes?

```
yourObject = "Hi"
myObject = tuple(yourObject)
```

a. ('H', 'i')
b. ["H", "i"]
c. (Hi)
d. ("Hi")

ANSWER: a
POINTS: 1
DIFFICULTY: Difficult
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

41. What is the value of *newList* after the following code executes?

```
newList = list(range(9, 0, -3))
```

a. [8, 5, 2]
b. [9, 6, 3, 0]
c. [9, 6, 3]
d. []

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

42. What is the value of *newObject* after the following code executes?

```
newObject = tuple("Hello")
```

a. ('H', 'e', 'l', 'l', 'o')
b. ["Hello"]
c. ("Hello")
d. ['H', 'e', 'l', 'l', 'o']

ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

43. What is the value of *r* after the following code executes?

```
myList = [2, 3, 5, 7, 11]
yourList = list(myList)
r = yourList is myList
```

a. [2, 3, 5, 7, 11]
b. True
c. None
d. False

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

44. What is the value of *r* after the following code executes?

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

```
mySet = {2, 3, 5, 7, 11}
yourSet = {5, 7, 2, 11, 3}
r = yourSet == mySet
```

a. {5, 7, 2, 11, 3}
b. True
c. False
d. 0

ANSWER: b
POINTS: 1
DIFFICULTY: Difficult
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

45. What can a programmer do to prevent side effects from cloning mutable objects?
a. create a deep copy using a *for* loop
b. create a shallow copy using a type conversion
c. create a deep copy using a type conversion
d. use the assignment operator in stead of a type conversion

ANSWER: a
POINTS: 1
DIFFICULTY: Difficult
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

46. When a *for* loop is used to iterate over a collection, which statement is true?
a. list items are visited from last to first
b. items in a list are visited in a random order
c. items in a sorted collection are visited in ascending order
d. items in a dictionary are visited in descending order

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

47. Which of the following lists Python units of abstraction from smallest to largest?
    a. classes, methods, functions, modules
    b. functions, methods, classes, modules
    c. modules, functions, methods, classes
    d. modules, classes, methods, function

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Implementations Of Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

48. In what order are dictionary items visited during an iteration?
    a. the order in which they were added
    b. ascending, by key value
    c. descending, by item value
    d. no particular order

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
REFERENCES: Operations On Collections
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

49. Which operator is used to obtain a string representation of a collection?
    a. len
    b. char
    c. str
    d. in

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Operations On Collections

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank

Chapter 02: 2. An Overview of Collections

QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

50. In which type of collection does each item have many predecessors and successors, called neighbors?
    a. linear
    b. hierarchical
    c. graph
    d. unordered

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
REFERENCES: Collection Types
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 7/17/2018 3:26 PM
DATE MODIFIED: 7/17/2018 3:26 PM

Copyright Cengage Learning. Powered by Cognero.

Fundamentals of Python Data Structures 2nd edition Lambert Test Bank