**page 1175**

**19.2 What are the three general tpes of collections?**

*There are three general types of collections: Lists, Sets, and Maps.*

**19.3 Describe the differences between a list and a set.**

*List: 1) stores elements in an ordered sequence. 2) Elements have indexes. 3) You can append elements to the end, or insert to specified position. 4)Do has duplicates*

*Set 1) Elements in an unordered sequence. 2)Do no allow duplicates*

**19.4 A map's elements are comprised of how many parts? What are they?**

*Each element in a map is* *comprised of two parts: a key and a value*.

**19.5 The List and Set interfaces extend what other interface?**

*<<Interface>> Collection*

1**9.6 Name two methods in the Iterable interface.**

*Boolean hasNext()*

*Returns true if the iteration has more elements. (In other words, returns true if next()would return an element rather than throwing an exception.)*

*E next()*

*Returns the next element in the iteration.*

**page 1184**

**19.9 What kind of** **memory allocation is used by the LinkedList class?**

*The LinkedList class internally stores its elements in a linked list. A linked list a is a data structure made of a series of connected nodes.*

**19.14 When stepping through the elements of a list with a list iterator's next method, how do you determine whether there are more elements in the list to visit?**

*The next method is called again and again, until it return a reference to the object that contains object. This process continues until the last element in the ArrayList has been returned by the next method. At that point, the list iterator will be positioned just beyond the last element in the ArrayList. When the list iterator is in this position, a call to hasNext will return false, causing the loop to terminate.*

**19.17 What element does the set method (in the ListIterator interface) change?**

*The set method replaces an existing element with a new element. The element that os replaced is the last element that was returned from the iterator, using either the next or previous method.*

**19.18** **What is the difference between the size and capacity of an ArrayList?**

* *The capacity is the total number of cells.*
* *The size is the number of cells that have data in them.*

**19.20 Which concrete list class would be a good choice to use when your application will be storing a large amount of data in a list, and a lot of insertions and/or deletions in the middle of the list are likely to take place?**

*The LinkedList class internally stores its elements in a linked list. This is a good choice when the list will contain a large amount of data and numerous insertions and deletions will take place.*