

1. Because an `ArrayList<E>` is an indexed collection, you can access its elements using a subscript.
2. The actual object type stored in an object of type `CollectionClassName<E>` is specified when the object is created.
3. Array reallocation is effectively an $O(1)$ operation.
4. The Node class for a double-linked list has references to the data and to the next and previous nodes.
5. The `ArrayList<E>` has the limitation that the add and remove methods operate in $O(n^2)$ time.
6. A Node is generally defined inside another class, making it a(n) _____ class.
7. The language feature introduced in Java 5.0 called *generic collections* is also known as _____.
8. Give an example of an unboxing statement in Java 5.0.
9. `Character ch = 'x'` in Java 5.0 is equivalent to `Character ch = new Character('x')` in earlier Java versions.
10. The _____ interface is used to pass collections of data as a method parameter in the most general way.
11. The `ArrayList<E>` class is part of the package called _____.
12. Iterator objects throw a(n) _____ if they are asked to retrieve the next element after all elements have been processed.
13. If a call to `remove` (java.util.Iterator interface) is not preceded by a call to `next`, `remove` will throw a(n) _____.

14. _____ types allow us to define a collection such as an ArrayList of a specific type.
15. If you want to remove two consecutive elements in a list, a separate call to _____ must occur before each call to remove.
16. To obtain a ListIterator, you call the _____ method of the LinkedList class.
17. The Collection interface is the root of the collection hierarchy.
18. A(n) _____ is an indexed data structure, which means you can select its elements in arbitrary order as determined by the subscript value.
- A) String
 - B) stack
 - C) array
 - D) list
19. Which of the following can be done with an array object?
- A) Traverse the list structure without having to manage a subscript.
 - B) Increase or decrease its length, which is fixed.
 - C) Add an element at a specified position without shifting the other elements to make room.
 - D) Remove an element at a specified position without shifting the other elements to fill in the resulting gap.
20. The simplest class that implements the List<E> interface is the _____ class.
- A) ListIterator<E>
 - B) Collection<E>
 - C) ArrayList<E>
 - D) AbstractList<E>

21. The ____ method, of the ArrayList<E> class, creates a new array that is twice the size of the current array and then copies the contents of the current array into the new one.
- A) remove
 - B) add
 - C) reallocate
 - D) vector
22. In the java.util.ArrayList<E> class, which of the following returns a reference to the element at position index?
- A) add(E anEntry)
 - B) indexOf(E target)
 - C) E remove(int index)
 - D) E get(int index)
23. Which of the following is a subclass of Vector?
- A) Stack
 - B) LinkedList
 - C) Iterator
 - D) Collection
24. A(n) ____ is a data structure that contains a data item and one or more links.
- A) collection
 - B) node
 - C) iterator
 - D) interface
25. You could create a circular list from a single-linked list by executing the statement ____.
- A) tail.next = head;
 - B) head.prev = tail;
 - C) tail.head = next;
 - D) head.tail = prev;
26. In the Java API documentation, inner classes are called ____ classes.
- A) collection
 - B) interface
 - C) nested
 - D) iterator

27. The `LinkedList<E>` class implements the `List<E>` interface using a(n) ____.
- A) iterator
 - B) interface
 - C) collection
 - D) double-linked list
28. A(n) _____ is a statement of any assumptions or constraints on the method data before the method begins execution.
29. _____ testing tests the software element (method, class, or program) with the knowledge of its internal structure.
30. The replacement for a method that has not yet been implemented or tested is called a(n) _____.
31. A(n) _____ declares any necessary object instances and variables, assigns values to any of the method's inputs, calls the method, and displays the values of any outputs returned by the method.
32. ____ testing refers to testing the smallest testable piece of software.
- A) Integration
 - B) System
 - C) Unit
 - D) Acceptance
33. ____ testing involves testing the interactions among units.
- A) Unit
 - B) System
 - C) Integration
 - D) Acceptance
34. ____ testing is the testing of the whole program in the context in which it will be used.
- A) Acceptance
 - B) Integration
 - C) Unit
 - D) System

35. ____ testing is system testing designed to show that the program meets its functional requirements.
- A) Unit
 - B) Acceptance
 - C) System
 - D) Integration

Answer Key

1. False
2. True
3. True
4. True
5. False
6. inner
7. Generics
8. `char nextChar = ch; //where ch is of type Character`
9. True
10. Collection
11. `java.util`
12. `NoSuchElementException`
13. `IllegalStateException`
14. Generic
15. next
16. `listIterator`
17. False
18. C
19. A
20. C
21. C
22. D
23. A
24. B
25. A
26. C
27. D
28. precondition
29. White-box
30. stub
31. driver
32. C
33. C
34. D
35. B