CIS 201 Chapter 11 Review Test

True/False

1. (1 point) Adding a use case controller to a sequence diagram is an example of applying a design pattern.
2. (1 point) The controller object is usually part of view layer.
3. (1 point) The starting point for the detailed design of a use case is always the SSD.
4. (1 point) The activation lifeline is depicted by a vertical dashed line under an object.
5. (1 point) The first-cut sequence diagram contains view layer and business layer.
6. (1 point) Design class diagrams and interaction diagrams should be developed independent of each other.
7. (1 point) The first-cut DCD includes method signatures.
8. (1 point) The perfect memory assumption means that there is always adequate memory to execute the program.
9. (1 point) The perfect technology assumption means not to worry about issues such as user security.
10. (1 point) The perfect solution assumption means that we do not worry about exception conditions.
11. (1 point) A loop or repeating message or messages in a sequence diagram is depicted by a rectangle box.
12. (1 point) Separation of responsibilities is a design principle which dictates that reading a database should not be done in a problem domain class.
13. (1 point) The best technique for accessing the database when multiple objects are needed is just to let the data access object instantiate objects.
14. (1 point) Dependency relationships cannot exist between classes within packages.
15. (1 point) The code “if (someObject == null)” is part of the factory pattern.

Multiple Choice

16. (1 point) System designers frequently create a class called a ____ that can serve as a collection point for incoming messages.
   a. switchboard
   b. message controller
   c. use case controller
   d. message collector

17. (1 point) What is the least cohesive approach in creating use case controllers in a system?
   a. Define a single controller for all use cases.
   b. Define several controllers, each with a specific set of responsibilities
   c. Create a single controller for a single subsystem
   d. Create one controller per use case
18. (1 point) Which is the correct notation for a message label on a sequence diagram?
   a. * [true/false]RetVal := name (param)
   b. [true/false]RetVal == name (param)
   c. [true/false]seq# RetVal := name (param)
   d. * [true/false] seq# Retval := name (param)

19. (1 point) Which of the following is NOT a valid technique to return data from an input message?
   a. A return object name
   b. A return message
   c. A return value on an input message
   d. A return condition name

20. (1 point) When a message is sent from an originating object to a destination object it means that ______.
   a. data is being passed from the origin object to the destination object
   b. a transition is occurring between the objects
   c. a method is being invoked on the originating object
   d. a method is being invoked on the destination object

21. (1 point) What is the first step in constructing a first-cut sequence diagram from the elements of the system sequence diagram (SSD)?
   a. Determine which messages must be sent
   b. Create a use case controller
   c. Replace the :System object with all the objects that must collaborate
   d. Select an input message from the use case

22. (1 point) Developing a(n) ____ diagram is a multistep process of determining which objects work together and how they work together.
   a. design class
   b. interaction
   c. state machine
   d. package

23. (1 point) When denoting a specific object in a sequence diagram, a ____ serves as the divider between the object name and the specific object identifier.
   a. double colon
   b. colon
   c. dash
   d. dot

24. (1 point) When a use case controller receives the initial request for an inquiry when the data access layer is added, it first ____.
   a. begins the process to initialize the necessary objects in memory
   b. sends a message to the database to see if it is available
   c. sends a message to the appropriate data access object to retrieve the data
   d. sends a return message to the view layer

25. (1 point) In a sequence when one assumes that the objects are already available to receive messages, that is considered to be the ________.
   a. perfect technology assumption
   b. perfect memory assumption
   c. perfect solution assumption
26. (1 point) The perfect technology assumption implies that _______.
a. the equipment will work without any problems  
b. the users understand the technology  
c. issues related to technology are ignored  
d. issues related to scalability (high volumes) are ignored

27. (1 point) User interface objects in a sequence diagram often are labeled with the stereotype _____.
a. entity  
b. view or boundary  
c. control  
d. persistent

28. (1 point) Which of the following is an example of an interaction diagram?
a. Design class diagram  
b. Data access diagram  
c. Package diagram  
d. Communication diagram

29. (1 point) The primary models used for OO detailed design are ____ diagrams.
   a. design class and statechart  
b. package and statechart  
c. package and deployment  
d. design class and interaction

30. (1 point) Which design model provides information for a design class diagram?
   a. Deployment diagram  
b. Interaction diagram  
c. Statechart diagram  
d. Package diagram

31. (1 point) Communication diagrams indicates the order of the messages with _____.
   a. sequence numbers  
b. activation lifelines  
c. arrows  
d. links

32. (1 point) ____ methods must be included in a design class diagram.
   a. Constructor  
b. Use case specific  
c. Getter  
d. Setter

33. (1 point) ____ diagrams partition a design class diagram into related functions.
   a. Statechart  
b. Sequence  
c. Interaction  
d. Package
34. (1 point) The following notation “anOrd:Order” can be interpreted as follows:
   a. Order is a class. anOrd is the identifier of an object in the class
   b. Order is an object. anOrd is the identifier for that order
   c. Order is a class. anOrd is an object in that class
   d. Order is an object. anOrd is the reference to that object

35. (1 point) Which of the following is NOT a component of the design pattern template?
   a. Problem that requires a solution
   b. Example of the pattern
   c. Description of when the pattern does not apply
   d. Consequences of the pattern

36. (1 point) Domain layer classes should ____.
   a. prepare persistent classes for storage to the database
   b. start up and shut down the system
   c. edit and validate input data
   d. establish and maintain connections to the database

37. (1 point) View layer classes should do all of the following EXCEPT ______.
   a. capture clicks and data entry
   b. start and shut down the system
   c. create problem domain classes
   d. display forms

38. (1 point) A different implementation of a function is required in an existing system. The best way to integrate this function into the system is ______
   a. to write the code in a new class
   b. to write the code in an existing class
   c. with the factory pattern
   d. with the adapter pattern

39. (1 point) The customer relationship system needs to instantiate a new customer object. How should this be done?
   a. Let the factory object do it.
   b. Let the view layer object do it.
   c. Let the controller object do it.
   d. Let another business object do it.

40. (1 point) Given the following code, identify the pattern.
    ```java
    class MyBuilder
    {
        static MyBuilder builder = null;
        if (builder == null)
        {
            builder = new MyBuilder();
            return builder;
        }
    }
    ```
    a. Factory Pattern
    b. Singleton Pattern
    c. Factory Method Pattern
    d. Adapter Pattern