**1. Which of the following statements is true about a prototype**

**system?**

a.A prototype system is always discarded before the final production system is built.

b. Rapid development tools are only used to build prototype systems.

c.A prototype system is incomplete or lacks the resilient construction of the final production system.

**2. Given:**

**import java.sql.\*;**

**public class ConnectClass**

**{ public Connection con; public Statement st; public ResultSet rs;**

**public ConnectClass()**

**{**

**try{**

**Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");**

**con = DriverManager.getConnection("jdbc:odbc:swingpro"); st = con.createStatement();**

**}catch(SQLException ex)**

**{**

**System out println("Connection error"):**

**When this program prints â€œConnection error2â€ ?**

a. if the Statement object is not created

b. if ResultSet interface is not imported

c. if executing statement does not find database table

d. if the JDBC driver is not loaded

**3. Both actions and activities may be tied to a state.**

a. The entry and exit actions, if present, are triggered.

b.The entry and exit actions are not triggered.

c.The entry and exit actions if present and the action tied to the internal transition are all triggered.

**5. Data about data is called**

a. Database

b.Data dictionary

c. Database catalog

**6. Which of the following best describes when primary operations should be shown on class diagrams?**

a. All primary operations are shown on class diagrams in design.

b. Primary operations are shown in class diagrams only if they modify attribute values.

c. Primary operations are shown on design class diagrams if they are part of the public interface of the class.

**7. Which of the following encapsulates an SQL statement which is passed to the database to be parsed, compiled, planned and executed**

a. DriveragerJD

b.BCdrive

c. Connection

d.Statement

**8. Which of the following syntax is correct to load JDBC-ODBC driver?**

a.Class.callName("sun.jdbc.odbc.JdbcOdbcDriver");

b.Class.callfunc("JdbcOdbcDriver");

c.Class.Name.init("sun.jdbc.odbc.JdbcOdbcDriver");

d.Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

**9. Which of the following are purposes for using Component**

**diagrams?**

a. Component diagrams can also be used as a static implementation view of a system

b. Component diagrams are used to represent the working and behavior of various components of a system.

c.a & b

d.none

**11. What is true about Software Maintenance?**

a. Modify and update after it has been delivered to the customer.

b. Modify and update before it has been delivered to the customer

c. All

**12. When a statechart is checked for consistency with other models of the system which of the following is true?**

a.Every operation in a class must appear as an event on a statechart.

b. Every action should correspond to the execution of an operation on the appropriate class.

c. Every event must appear on a sequence diagram.

**13. Which of the following is claimed as an advantage of iterative development processes?**

a.Risk mitigation — by identifying technical problems early on.

b. Logical design —by producing a design that is not tied to the physical implementation.

c. Diagram separation —by making it possible to use different kinds of diagrams in analysis from those used in design.

**15. Which of the following is correct about JDBC?**

a. The JDBC API provides the abstraction and the JDBC drivers provide the implementation.

b. new drivers can be plugged-in to the JDBC API without changing the client

code.

c. Both of the above.

**16. How many levels in Testing?**

a.Three

b. Two

c. Four

**17. Suppose a prepared statement is created as follows:**

**Statement preparedStatement = connection.prepareStatement ("insert into Student (firstName, mi, lastName) " +"values (?, ?, ?)");**

**To set a value John to the first parameter, use**

a. preparedStatement.setString(0, "John");

b.preparedStatement.setString(1, "John");

c. preparedStatement.setString(0, 'John');

d.preparedStatement.setString(1, 'John');

**18. Which of the following is more efficient than a statement due to pre-compilation of SQL?**

a. Statement

b. PreparedStatement

c.CallableStatement

d. None of the above.

**19. Choose the correct one relating to the PreparedStatement?**

a. We use it in compile time.

b.PreparedStatement is not an extension of Statement

c.We can perform the same operation multiple times using PreparedStatement.

**20. Which of the following is a beneficial consequence of good cohesion in a class?**

a. The attributes in the class will only be accessed by the operations of that class.

b.The class will exhibit high levels of encapsulation.

c.The operations in the class will be easier to maintain.

**21. What is the difference between a link and an association?**

a.A link connects two instances, while an association connects two classes

b. A link is a transient association

c.A link is an association between two entity classes.

**22. Which of the following statements is true about actions and activities?**

a. An activity may be tied to a transition.

b. An action may only be tied to transitions.

c.Both actions and activities may be tied to a state.

**23. â€œThe ability of different methods to implement the same operation in different ways those are appropriate to its classâ€ This statement is about**

a. Inheritance

b.Generalization

c. Specialization

d.Polymorphism

**24. Which of the following is a description of logical design?**

a. Design of aspects of the system without having to consider how they will physically be implemented.

b. Design of the logic used in operations, based on decision trees, decision tables or Object Constraint Language.

c. Design of the logic gates used in the implementation of the processor chips used in the system.

**25. Which of the following can be treated as Functional Requirements?**

a. Requirements those describe what a system must do

b.Requirements those are concerned with how well the system

c.Requirements those are concerned with matching the system to the way that people work

d. All of the above

**26. Which of the following is true?**

a. A state is never transitory, it always lasts for an interval of time.

b. A state is a condition during the life of an object or an interaction during which it satisfies some condition.

c. An object always has more than one potential state.

**29. Choose the correct one relating to the PreparedStatement ?**

a. We use it in compile time.

b.PreparedStatement is not an extension of Statement

c. We can perform the same operation multiple times using PreparedStatement.

**31. Which of the following might provide a measure of the usability of a system?**

a. The number of errors made by programmers.

b. The number of errors made by users.

c. The number of bugs found by system testers.

**32. If you want to see a list of all authors and the books, which of the following statements is correct?**

a. Select a.lastname, a.firstname,b.title from authors a, books b, auth\_books ab where a.authid=ab.auth\_books ab where a.authid=ab.authid

b. Select a.lastname, a.firstname,b.title from authors a, books b, auth\_books ab where a.authid=ab.auth\_books ab where a.authid-ab.authid and b.isbn=ab.isbn

c. None

**33. Which of the following is correct about JDBC?**

a. The JDBC API provides the abstraction and the JDBC drivers provide the implementation.

b. new drivers can be plugged-in to the JDBC API without changing the client code.

c. Both of the above.

**34. Which of the following statements is true about the Composite pattern?**

a. The pattern must be used in conjunction with the Singleton pattern.

b. The pattern makes it easier to add new leaf subclasses.

c. The pattern makes it easier to add new operations to each of the leaf subclasses.

**35. Which of the following is a description of logical design?**

a. Design of aspects of the system without having to consider how they will physically be implemented.

b. Design of the logic used in operations, based on decision trees, decision tables or Object Constraint Language.

c. Design of the logic gates used in the implementation of the processor chips used in the system.

**37. Which of the following is not a reason for separating the analysis stage from the design stage?**

a. Analysts and designers may be people with different skills and knowledge.

b. It is not possible to begin design until all the analysis has been completed.

c. clients will want clear decision points at which they can agree that the Go to Settings to activate Time Elapsed progress to the next stage and incur further costs.

**38. Which of the following best describes when primary operations should be shown on class diagrams?**

a. All primary operations are shown on class diagrams in design.

b. Primary operations are shown in class diagrams only if they modify attribute values.

c. Primary operations are shown on design class diagrams if they are part of the public interface of the class.

**39. Which of the following is not an advantage of the State pattern?**

a. State behavior is localized.

b. The Singleton pattern may be used with the State pattern.

c. State transitions are made explicit.

**40. When is a UML interface used?**

a. It describes boundary classes.

b. It describes an interface that a class may offer to another class.

c. It describes the human-computer interface

**41. UML consists mainly of \_\_\_\_\_\_\_\_ to represent concepts of an Object Oriented Information System. Pick the most appropriate one for the blank space.**

a. A icon

b. A symbol

c.A textual language

d.A graphical language

**42. Most JDBC methods handle errors by throwing exceptions of What type?**

a.ClassException

b.SQLException

c. SQLWARNING

**43. A statechart may have states that include substates. Which of the following is true?**

a.An object may occupy more multiple concurrent substates simultaneously.

b.An object may occupy only two concurrent substates simultaneously.

c.An object may only occupy one substrate at a time.

**44. Which of the following are UML implementation diagrams?**

a. Component diagrams

b.Deployment diagrams

c.All

**45. Which of the following is not part of detailed design?**

a. Screen and window layouts in the form of user interface classes.

b.Allocation of subsystems to processors.

c. Allocation of responsibilities to classes

**46. Which of the following is correct about connection pooling?**

a. Database vendor's help multiple clients to share a cached set of connection objects that provides access to a database.

b. Clients need not create a new connection

c.Both of the above.

**47. Which of the following statements is correct?**

a. You may load multiple JDBC drivers in a program.

b. You may load only single JDBC drivers in a program.

c. Both A and B

**48. Which of the following is a list of characteristics of good design?**

a. Consistency, efficiency, effectiveness and correct scope.

b.Efficiency, reliability, security and flexibility.

c. Efficiency, redundancy, functionality and usability.

**49. What is meant by an economical design?**

a. The design itself was produced at a low cost.

b.The fixed costs and running costs of the system will be low.

c. The system will use inexpensive disks.

**53. Which of the following statements is true about a prototype system?**

a.A prototype system is always discarded before the final production system is built.

b.Rapid development tools are only used to build prototype systems.

c.A prototype system is incomplete or lacks the resilient construction of the final production system.

**54. Which of the following best describes how composition differs from aggregation?**

a.A part cannot be removed from a composition, whereas a part can be removed from an aggregation.

b. A part can belong to only one composition, whereas a part can belong to more than one aggregation.

c.A part that belongs to a composition cannot have associations with any other classes, whereas a part that belongs to an aggregation can have associations with other classes

**56. Which of the following is a beneficial consequence of good cohesion in a class?**

a.The attributes in the class will only be accessed by the operations of that class.

b. The class will exhibit high levels of encapsulation.

c. The operations in the class will be easier to maintain.

**59. Which of the following syntax is correct to load JDBC-ODBC drivers?**

a.Class.callName("sun.jdbc.odbc.JdbcOdbcDriver"); b.Class.callfunc("JdbcOdbcDriver");

c.Class.Name.init("sun.jdbc.odbc.JdbcOdbcDriver"); d.Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

**60. What is meant by a secure design?**

a.The design is held in encrypted format in a CASE tool repository.

b.The models are backed up nightly and the back-up stored off-site.

c.The design includes measures to protect the system from deliberate or inadvertent damage.

**61. UML consists mainly of representing concepts of an Object Oriented Information System. Pick the most appropriate one for the blank Q space.**

a.A icon

b. A symbol

c.A textual language

d.A graphical language

**63. Which of the following encapsulates an SQL statement which is passed to the database to be parsed, compiled, planned and executed**

a. Driverager

b.JDBCdriver

c.Connection

d. Statement

**64. Choose the correct one relating to the PreparedStatement ?**

a.We use it in compile time.

b. PreparedStatement is not an extension of Statement

c.We can perform the same operation multiple times using PreparedStatement.

**65. Which of the following is a list of characteristics of good analysis?**

a. Completeness, consistency, correct scope and correct content.

b.Consistency, security, reliability and completeness.

c. Consistency, efficiency, effectiveness and correct scope.

**67. Which of the following is more efficient than the statement due to pre-compilation of SQL?**

a. Statement

b.PreparedStatement

b.CallableStatement

c. None of the above.

**72. What is meant by the term â€ ̃measurable objectivesâ€TM?**

a.Aims of the system that are vague and difficult to assess.

b. Objectives that can be quantified and have a specific numeric target.

c.Strategic aims of the organization that is getting a new system.

**74. Which of the following is more efficient than the statement due to pre-compilation of SQL?**

a. Statement

b.PreparedStatement

c.CallableStatement

d.None of the above.

**75. What is system design?**

a. Designing the architecture of the system and setting standards, for example for user interface design.

b.Designing the inputs and outputs of the system, processes and data storage.

c.Designing classes that will implement the system in an object-oriented language.

**76. What is the Final stage of Testing?**

a. Alpha Testing

b.User Acceptance

c. Beta Testing

**78. Which of the following is not a characteristic of a maintainable design?**

a.The developed program code and the design model are kept in sync.

b.The design and program code are well documented.

c.The code is designed to require maintenance work equivalent to 60% of all staff time

**79. Encapsulation is best enforced by which of the following decisions regarding object visibility?**

a. All attributes and operations are private.

b.All attributes are private and all operations are public.

c.All attributes are private and public operations are kept to a minimum.

**81. Which of the following methods is used to move the cursor to the next position?**

a.first()

b.last()

c.movecursor()

d.next()

**82. Most JDBC methods handle errors by throwing exceptions of What type?**

a.ClassNotFoundException

b.SQLException

c.SQLWARNING

**83. Which one is considered a strong association?**

a.Composition

b. Aggregation

**84. Patterns are grouped into-**

a.Catalogues

b. Languages

c.Framework

d.A & B

**85. Which of the following is correct about connection pooling?**

a.Database vendor's help multiple clients to share a cached set of connection objects that provides access to a database.

b.Clients need not create a new connection every time to interact with the database.

c.Both of the above.

d.None of the above.

**86. Which of the following is Behavioural Patterns?**

a. Singleton Pattern

b.State Pattern

c. Composite Pattern

**88. Choose the correct answer?**

a. executeQuery method is used for create, insert and modify statements

b.executeUpdate method is used for Select statement

c.None.

**89. What do boundary classes represent?**

a.Customers and suppliers of the business.

b.People who will use the system.

c.Interaction between the system and its actors.

d.None of the above.

**90. Which of the following is Creational Patterns?**

a.Singleton Pattern

b.State Pattern

c.Composite Pattern

**95. Which of the following is correct about JDBC?**

a. The JDBC API provides the abstraction and the JDBC drivers provide the implementation.

b.New drivers can be plugged-in to the JDBC API without changing the client code.

c.Both of the above.

**96. Which can reduce the time required to develop and test a design?**

a.Software components

b.Design components

c.Analysis components

d. All of the above

**97. A guard condition may be associated with a transition. Which of the following statements best applies to guard conditions?**

a. A guard condition may only involve attributes of the object that owns the statechart.

b. A guard condition may involve attributes and links of the object that owns the statechart.

c. A guard condition may only involve parameters from the triggering event.

**99. When an object exits a composite state which of the following is true.**

a. Each of the submachines in the composite state must enter their final state.

b.At least one of the submachines in the composite state must enter its final state.

c. Whatever combination of substates the composite is in, all those substrates are excited.

**102. How does generalization differ from inheritance?**

a. It doesn't - they are the same thing.

b. Inheritance is a mechanism by which some OO languages implement generalization.

c. With generalization each class has only one super class, whereas with inheritance each class has two or more super classes.

**103. Given:**

**import java.sql.\*;**

**public class ConnectClass**

**{ public Connection con;**

**public Statement st;**

**public ResultSet rs;**

**public ConnectClass()**

**{**

**try{**

a.if object is not created

b.if ResultSet interface is not imported

c. if executing statement does not find database table

d.if the JDBC driver is not loaded

**104. The transition from one state to another is triggered by an event. One type of event is a change event. Which of the following statements is true?**

a.A change event occurs when a condition becomes true.

b.A change event occurs when a condition changes.

c.A change event occurs when an attribute value changes in an object.

**107. Good coupling is best characterized by which of the following?**

a. Keeping the number of message types between objects to a minimum.

b. Ensuring that sub-classes are not strongly linked to their superclass.

c.Ensuring that operations in the same class are linked.

**109. How many collection classes could sensibly be used to implement a two-way many-to-many association?**

a.Two or more.

b.Two.

c.One.

**111. What is â€œestateâ€ of an object?**

a.The condition of an object at a given moment

b.What the object can do

c.How an object responds to events

d.Uniqueness of an object

**114. Which of the following is not an advantage of the State pattern?**

a.State behavior is localized.

b.The Singleton pattern may be used with the State pattern.

c.State transitions are made explicit.

**117. What is the purpose of Testing?**

Identifying any errors

Check gaps or missing requirement

All

**119. Suppose a prepared statement is created as follows:**

Statement preparedStatement = connection.prepareStatement

("insert into Student (firstName, mi, lastName) " +"values (?, ?, ?)");

To set a value John to the first parameter, use

preparedStatement.setString(0, "John");

preparedStatement.setString(1, "John");

preparedStatement.setString(0, 'John');

preparedStatement.setString(1, 'John');

**120. Which statement is an example of logical design?**

1. Communication between the Agate system and the company accounts system will be by passing messages.
2. There will be a message sent to the accounts system called NewInvoice, which will be formatted in XML, and each invoice will have a six-digit invoice number allocated by the accounts system.
3. Communication between the Agate system and the company accounts system will use the OpenJMS Java message server with persistent storage of messages provided by the MySQL

database.

**122. What are the three analysis class stereotypes?**

1. Boundary
2. Control
3. Entity
4. Interface
5. A, B & C

**123. Which of the following encapsulates an SQL statement which is passed to the database to be parsed, compiled, planned and executed**

DriveragerJD

BCdrive

Connection

Statement

**124. When objects are being designed in detail the signature of each operation has to be specified. Which of the following statements is consistent with the term operation signature?**

1. Each operation in a class has the same signature.
2. The operation name and the number of parameters are part of the operation signature.
3. A class may not have two operations with the same name.

**125. Which of the following is not one of the categories defined for the GOF patterns?**

1. Creational
2. Static
3. Behavioral

**127. Most JDBC methods handle errors by throwing exceptions of What type?**

ClassNotFoundException

SQLException

SQLWARNING

**128. If you want to see a list of all authors and the books, which of the following statements is correct?**

Select a.lastname, a.firstname,b.title from authors a, books b, auth\_books ab where a.authid-ab.auth\_books ab where a.authid=ab.authid

Select a.lastname, a.firstname,b.title from authors a, books b, auth\_books ab where a.authid-ab.auth\_books ab where a.authid-ab.authid and b.isbn=ab.isbn

None

**133. When is a UML interface used?**

1. It describes boundary classes.
2. It describes an interface that a class may offer to another class.
3. It describes the human-computer interface

**134. Data about data is called**

Database

Data dictionary

Database catalog

**135. Which of the classes store the logical set of columns and rows of data returned by executing a statement?**

a. Statement

b. Meta data

c. Connection

d. Resultset

**136. Choose the correct one relating to the PreparedStatement?**

**We use it in compile time.**

PreparedStatement is not an extension of Statement

We can perform the same operation multiple times using PreparedStatement.

**137. Which of the following is not part of detailed design?**

1. Screen and window layouts in the form of user interface classes.
2. Allocation of subsystems to processors.
3. Allocation of responsibilities to classes

**138. How many levels in Testing?**

1. Three
2. Two
3. Four

**142. What is meant by design trade-offs?**

1. A way of resolving conflicts between requirements and design constraints.
2. A way of achieving measurable objectives in design.
3. A way of producing reusable code.

**143. Which of the following best describes when primary operations should be shown on class diagrams?**

1. All primary operations are shown on class diagrams in design.
2. Primary operations are shown in class diagrams only if they modify attribute values.
3. Primary operations are shown on design class diagrams if they are part of the public interface of the class.

**145. Which of the following statements is true about actions and activities?**

An activity may be tied to a transition.

An action may only be tied to transitions.

Both actions and activities may be tied to a state.

**147. When this program prints â€œConnection error2â€?**

if the Statement object is not created

if ResultSet interface is not imported

if executing statement does not find database table

if the JDBC driver is not loaded

**148. What is â€œestateâ€ of an object?**

The condition of an object at a given moment

What the object can do

How an object responds to events

Uniqueness of an object

**153. Which of the following is not one of the categories defined for the GOF patterns?**

1. Creational
2. Static
3. Behavioural

**155. Which combination of cohesion and coupling is desirable in a design?**

1. High cohesion and low coupling.
2. High cohesion and high coupling.
3. Low cohesion and high coupling.

**156. Choose the correct answers? (Choose all that apply)**

1. To commit a transaction, call the method commit on appropriate connection.
2. Use the method rollback to remove changes since the last commit
3. By default all new connections are in auto commit mode.
4. All of the above.

**158. Which of the following are purposes for using Component diagrams?**

1. Component diagrams can also be use as a static implementation view of a system
2. Component diagrams are used to represent the working and behavior of various components of a system.
3. a & b
4. none

**164. The behavioral approach to constructing statecharts involves which of the following?**

a) All collaboration sequence diagrams should be analyzed first.

b)All interaction sequence diagrams involving classes that have heavy messaging should be analyzed.

c)One interaction sequence diagram for each class must be analyzed.

**166. Which of the following statements best describe the application of referential integrity during object design?**

a)An object may only refer to another object if they share a link.

b)when an object is deleted all objects to which it refers must be deleted.

c)Referential integrity only applies for one-to-one associations.

**170. Which of the following is the best description of a design model?**

a)It shows what the system will do.

b)It shows how the system will work.

c)It shows why the system is required.

**176. Which of the following might provide a measure of the usability of a system?**

a) The number of errors made by programmers.

b) The number of errors made by users.

c)The number of bugs found by system testers.

**184. Deployment diagrams are used to show the configuration of run â€“ time processing and physical architecture of the system.**

a) True

b)False