

**Question 1**

1. What pattern does the Java event model resemble.

- Model-View-Controller
- Simple Factory
- Observer
- None of the above

1 points

**Question 2**

1. Which of the following statements about adapters is false.

- An adapter class implements an interface.
- An adapter class provides a default (empty) implementation of every method in the interface.
- Programmers override selected adapter methods.
- A ComponentListener is a ComponentAdaptor.

1 points

**Question 3**

1. Consider the following application:

```
1. class Q6 {
2.     public static void main(String args[]) {
3.         Holder h = new Holder();
4.         h.held = 100;
5.         h.bump(h);
6.         System.out.println(h.held);
7.     }
8. }
9.
10. class Holder {
11.     public int held;
12.     public void bump(Holder theHolder) { theHolder.held++; }
```

13. }

What value is printed out at line 6?

- 0
- 1
- 101
- 100

1 points

#### Question 4

1. Which of the following does not generate GUI events.

- Typing in a text field.
- Selecting an item from a menu.
- Viewing the text in a label.
- Moving the mouse.

1 points

#### Question 5

1. Assume that the class AcLis implements the ActionListener interface. The code fragment below constructs a button and gives it four action listeners. When the button is pressed, which action listener is the first to get its actionPerformed() method invoked?

1. Button btn = new Button("Hello");
2. AcLis a1 = new AcLis();
3. AcLis a2 = new AcLis();
4. AcLis a3 = new AcLis();
5. AcLis a4 = new AcLis();
6. btn.addActionListener(a1);
7. btn.addActionListener(a2);
8. btn.addActionListener(a3);
9. btn.addActionListener(a4);
10. btn.removeActionListener(a2);

11. btn.removeActionListener(a3);
12. btn.addActionListener(a3);
13. btn.addActionListener(a2);

- a1 gets its actionPerformed() method invoked first.
- a2 gets its actionPerformed() method invoked first.
- a3 gets its actionPerformed() method invoked first.
- a4 gets its actionPerformed() method invoked first.
- It is impossible to know which listener will be first.

1 points

### Question 6

1. You cannot access a database using a servlet.

- True
- False

1 points

### Question 7

1. A typical servlet would output \_\_\_\_\_.

- XML.
- XSL.
- HTML.
- none of these.

1 points

### Question 8

1. When you want to listen for an event, you can implement an appropriate \_\_\_\_\_ for your class.

- handler.

- listener.
- abstract class.
- superclass.

1 points

### Question 9

1. The catch block that begins catch (Exception ex) can catch Exceptions of type.

- IOException
- ArithmeticException
- both of these
- neither of these

1 points

### Question 10

1. Which of the following statements about JPanels is false.

- A JPanel is a JComponent.
- A JPanel is a Container.
- A JPanel does not have a content pane.
- A JPanel has a fixed size.

1 points

### Question 11

1. We can derive many of the operations of each class by examining the key \_\_\_\_\_ and \_\_\_\_\_ in the requirements documents.

- verbs, verb phrases.

- nouns, noun phrases.
- objectives, objective phrases.
- Both a and b.

1 points

### Question 12

1. Java data types are the same as the data types used in the database.

- True
- False

1 points

### Question 13

1. Using the protected keyword gives a member.

- public access.
- package access.
- private access.
- block scope.

1 points

### Question 14

1. SQL statements that are stored in a database can be invoked using an object that implements interface \_\_\_\_\_.

- Callable.
- StoredStatement.
- CallableStatement.
- Connection.

1 points

### Question 15

1. Which JFrame constant indicates that the program should terminate when the window is closed by the user.

- TERMINATE\_ON\_CLOSE.
- IMMEDIATELY\_CLOSE.
- EXIT\_ON\_CLOSE.
- All of the above.

1 points

### Question 16

1. You have been given a design document for a veterinary registration system for implementation in Java technology. It states: "A pet has an owner, a registration date, and a vaccination-due date. A cat is a pet that has a flag indicating if it has been neutered, and a textual description of its markings." Given that the Pet class has already been defined, which of the following fields would be appropriate for inclusion in the Cat class as members.

- Pet thePet;
- Date registered;
- Date vaccinationDue;
- Cat theCat;
- boolean neutered;

1 points

### Question 17

1. Which of the following statements about anonymous inner classes is false?

- They are declared without a name.
- They typically appear inside a method declaration.
- They are declared with the anonymous keyword.
- They can access their top-level class's members.

1 points

### Question 18

1. Declaring a method final means.

- it will prepare the object for garbage collection.
- it cannot be accessed from outside its class.
- it cannot be overloaded.
- it cannot be overridden.

1 points

### Question 19

1. Which statement is false.

- A generic class can be derived from a non-generic class.
- A non-generic class cannot be derived from a generic class.
- A generic class can be derived from another generic class.
- A generic method in a subclass can override a generic method in a superclass if both methods have the same signatures.

1 points

### Question 20

1. In java, String concatenation is done using

- \_\_\_\_\_.
- String1.concat(String2).
  - String1 + (String2) .

- String1 & (String2) .
- Either a or b will perform String concatenation.
- Any of the above will perform String concatenation.

1 points

### Question 21

1. In the UML, public visibility is indicated by placing a \_\_\_\_\_ before an operation or an attribute, whereas a \_\_\_\_\_ indicates private visibility.

- letter p, letter n.
- letter n, letter p.
- plus sign (+), minus sign (-).
- minus sign (-), plus sign (+).

1 points

### Question 22

1. String literals in java, such as, "John Q. Doe".

- Are also known as anonymous String objects.
- Are not stored, but replaced at compile time.
- Are not String objects. They are only data.
- None of the above are true.

1 points

### Question 23

1. The BorderLayout manager will divide the screen into a maximum of \_\_\_\_\_.

- 2 components
- 4 components

- 6 components
- none of the above

1 points

### Question 24

1. All of the following methods are implicitly final except.

- a method in an abstract class.
- a private method.
- a method declared in a final class.
- static method.

1 points

### Question 25

1. How many bytes does the following code write to file destfile?

```
1. try {
2.   FileOutputStream fos = new
   FileOutputStream("destfile");
3.   DataOutputStream dos = new
   DataOutputStream(fos);
4.   dos.writeInt(3);
5.   dos.writeDouble(0.0001);
6.   dos.close();
7.   fos.close();
8. }
9. catch (IOException e) { }
```

- 2
- 8
- 12
- 16

1 points

### Question 26

1. You can get a list of the methods through which an Exception has traveled by using the method.

- getHistory().
- callStack().
- getPath().
- printStackTrace().

1 points

### Question 27

1. Which statement is false?

- A generic method may be overloaded.
- A class can provide two or more generic methods that specify the same method name but different method parameters.
- A generic method cannot be overloaded by nongeneric methods.
- When the compiler encounters a method call, it searches for the method declaration that most precisely matches the method name and the argument types specified in the call.

1 points

### Question 28

1. The Data Access Object pattern (DAO)

\_\_\_\_\_.

- helps with the design of GUI programs.
- abstracts the database access logic out of a domain class.
- is a Gang of Four pattern.
- is a simple way of creating a data access component.

1 points

### Question 29

1. A JSlider does not use a model.

- True
- False

1 points

### Question 30

1. When a superclass variable refers to a subclass object and a method is called on that object, the proper implementation is determined at execution time. What is the process of determining the correct method to call?

- early binding.
- non-binding.
- on-time binding.
- late binding.

1 points

### Question 31

1. The UML represents operations by listing the operation name, followed by a \_\_\_\_\_-separated list of parameters in parentheses, a \_\_\_\_\_ and the return type.

- colon, semicolon.
- colon, colon.
- comma, colon.
- comma, semicolon.

1 points

### Question 32

1. Consider the classes below, declared in the same file:

```
class A {  
    int a;  
    public A() {  
        a = 7;  
    }  
}
```

```

    }
}

class B extends A {
    int b;
    public B() {
        b = 8;
    }
}

```

- Both variables a and b are instance variables.
- After the constructor for class B executes, the variable a will have the value 7.
- After the constructor for class B executes, the variable b will have the value 8.
- A reference of type A can be treated as a reference of type B.

1 points

### Question 33

1. The two key tasks required to process an event are.

- Add ActionListener and ActionEvent to the program.
- Register an event listener and implement an event handler.
- Create an inheritance hierarchy and implement polymorphism.
- Create two different ButtonHandler classes.
- None of the above.

1 points

### Question 34

1. You can simulate atomicity by ensuring that \_\_\_\_\_.

- at least one thread carries out its operations on an object at a time.
- two threads carry out their operations on an object in parallel.

- only one thread carries out its operations on an object at a time.
- None of the above.

1 points

### Question 35

1. Overriding a method differs from overloading a method because.

- Overloaded methods have the same signature.
- Overridden methods have the same signature.
- Both of the above.
- Neither of the above.

1 points

### Question 36

1. Assigning a subclass reference to a superclass variable is safe.

- because the subclass object has an object of its superclass.
- because the subclass object is an object of its superclass.
- only when the superclass is abstract.
- only when the superclass is concrete.

1 points

### Question 37

1. An advantage of inheritance is that:

- All methods can be inherited.
- All instance variables can be uniformly accessed by subclasses and superclasses.
- Objects of a subclass can be treated like objects of their superclass.

- None of the above.

1 points

### Question 38

1. Which of the following statements about interfaces is false.

- An interface describes a set of methods that can be called on an object, providing a default implementation for the methods.
- An interface describes a set of methods that can be called on an object, not providing concrete implementation for the methods.
- Interfaces are useful when attempting to assign common functionality to possibly unrelated classes.
- Once a class implements an interface, all objects of that class have an is-a relationship with the interface type.

1 points

### Question 39

1. Which statement is false.

- A ListIterator accesses the elements of a List.
- Class ArrayList is a fixed-size array.
- A LinkedList is a linked list implementation of a List.
- ArrayLists execute faster than Vectors because they are not thread safe.

1 points

### Question 40

1. The classes and interfaces which comprise the collections framework are members of package \_\_\_\_\_.

- java.util.
- javax.swing.
- java.collections.
- java.collection.

1 points

### Question 41

1. Java applications and Java applets are similar because both \_\_\_\_\_.

- are compiled using the javac command
- are executed using the java command
- are executed from within an HTML document
- have a main() method

1 points

### Question 42

1. Which of the following statements for a JTextField is false.

- Can be used to display uneditable text.
- Can be used to display editable text.
- Enables users to enter data from the keyboard.
- Displays a list of fields.

1 points

### Question 43

1. In a PreparedStatement, parameters are counted from position \_\_\_\_\_.

- 0.
- 1.
- 2.
- 3.

1 points

#### Question 44

1. From which object do you ask for MetaData describing columns after you execute a prepared statement.

- Connection.
- ResultSet.
- DriverManager.
- Driver.

1 points

#### Question 45

1. Consider the `abstract` superclass below:

```
public abstract class Foo { private int
a; public int b; public Foo( int aVal, int
bVal ) { a = aVal; b = bVal; } // end
Foo constructor public abstract int
calculate(); } // end class Foo
```

Any *concrete* subclass that *extends* class `Foo`:

- Must implement a method called `calculate`.
- Will not be able to access the instance variable `a`.
- Both (a) and (b).
- Neither (a) nor (b).

1 points

#### Question 46

1. `PreparedStatement` method \_\_\_\_\_ returns a `ResultSet`.

- `executeUpdate`.
- `executeQuery`.
- `execute`.
- None of the above.

1 points

### Question 47

1. Which one statement below most accurately describes the following code listing?

```
1. class CustomException extends EOFException { }
2.
3. class Parent {
4.   void doSomething() throws CustomException {
5.     throw new CustomException ();
6.   }
7. }
8.
9. class Kid extends Parent {
10.  void doSomething() throws EOFException {
11.    throw new EOFException ();
12.  }
13. }
```

- Compiler error at line 4.
- Compiler error at line 5.
- Compiler error at line 10.
- Compiles without error.

1 points

### Question 48

1. Accessing a superclass method through a subclass reference is

- A syntax error.
- Straightforward
- Inheritance.
- Polymorphism.

1 points

### Question 49

1. ActionEvent is an interface in java.awt.event

- True.
- False.

1 points

### Question 50

1. In UML diagrams, abstract methods are \_\_\_\_\_.

- displayed in italics.
- displayed in bold.
- not shown, as they have yet to be implemented.
- displayed, but without the parentheses following the method name.

1 points

### Question 51

1. Which of the following is the superclass constructor call syntax?

- keyword super, followed by a dot (.).
- keyword super, followed by a set of parentheses containing the superclass constructor arguments.
- keyword super, followed by a dot and the superclass constructor name.
- None of the above.

1 points

### Question 52

1. Which of the following declarations are illegal.

- transient int i = 41;
- public final static native int w();
- final static double d;

1 points

### Question 53

1. What is the base case for the recursive merge sort algorithm.

- Any array that is already sorted.
- A two-element array.
- A one-element array.
- A zero-element array.

1 points

### Question 54

1. For which of the following would polymorphism not provide a clean solution.

- A billing program where there is a variety of client types that are billed with different fee structures.
- A maintenance log program where data for a variety of types of machines is collected and maintenance schedules are produced for each machine based on the data collected.
- A program to compute a 5% savings account interest for a variety of clients.
- An IRS program that maintains information on a variety of taxpayers and determines who to audit based on criteria for classes of taxpayers.

1 points

### Question 55

1. Which statement is false.

- When declaring a generic method, the type parameter section is placed before the return type of the method.
- Each type parameter section contains only one type parameter.
- A type parameter is an identifier that specifies a generic type name.
- Type parameters can represent only reference types.

1 points

### Question 56

1. Refactoring refers to \_\_\_\_\_.

- the separation of presentation logic from domain logic.
- a process of refining a design to make it more flexible, expandable, and reusable
- adding functionality to a design
- the use of the Java™ Reflection API

1 points

### Question 57

1. A typical Servlet follows the \_\_\_\_\_, \_\_\_\_\_ model when communicating with a client.

- Request, Response.
- Model, View.
- HTML, HTTP.
- Request, dispatch.
- None of the above.

1 points

### Question 58

1. The == operator with the String class returns a true value if \_\_\_\_\_.

- lengths are unequal or the characters do not match if lengths are equal
- lengths are equal and the characters match exactly
- lengths are equal and the characters match except for case
- lengths are equal and the characters do not match
- none of the above

1 points

### Question 59

1. Java performs automatic \_\_\_\_\_ of objects that are no longer referenced in a program.

- memory distribution.
- garbage collection.
- storage compression.
- trash aggregation.

1 points

### Question 60

1. A catch block is executed.

- after all of the statements in a try block have been executed
- if a method executed in the try block throws any exception
- if a method executed in the try block throws the exception that is specified (in brackets) after the catch keyword
- both a and c are true

1 points

### Question 61

1. A(n) \_\_\_\_\_ allows a program to walk through the collection and remove elements from the collection.

- Set.
- Queue.
- Iterator.
- List.

1 points

### Question 62

1. In lab 4 you implemented what design pattern with the queue implementation.

- Model-view-controller.
- Singleton.
- Builder.
- Adapter.

1 points

### Question 63

1. Classes and methods are declared final for all but the following reasons.

- final methods allow inlining the code.
- final methods and classes prevent further inheritance.
- final methods are static.
- final methods can improve performance.

1 points

### Question 64

1. The code below draws a line. What color is the line?

```
1. g.setColor(Color.red.green.yellow.red.black);  
2. g.drawLine(0, 0, 100, 100);
```

- Red
- Black
- Green
- Yellow

1 points

### Question 65

1. Which statement best describes the relationship between superclass and subclass types.

- A subclass reference cannot be assigned to a superclass variable and a superclass reference cannot be assigned to a subclass variable.
- A subclass reference can be assigned to a superclass variable and a superclass reference can be assigned to a subclass variable.
- A superclass reference can be assigned to a subclass variable, but a subclass reference cannot be assigned to a superclass variable.
- A subclass reference can be assigned to a superclass variable, but a superclass reference cannot be assigned to a subclass variable.

1 points

### Question 66

1. It is a UML convention to denote the name of an abstract class in \_\_\_\_\_.

- bold.
- italics.
- a diamond.
- there is no convention of the UML to denote abstract classes—they are listed just as any other class.

1 points

### Question 67

1. Suppose Stack is a generic class that has one type parameter. The following assignment `Stack< Integer > integerStack = new Stack( 10 );` is \_\_\_\_\_.

- illegal.
- permitted and safe.
- permitted but unsafe, the compiler issues a warning message.
- permitted but unsafe, the runtime environment issues a warning message.

1 points

### Question 68

1. Which method changes the text the label displays.

- changeText.
- setText.
- changeLabel.
- setLabel.

1 points

### Question 69

1. Recursion can be less efficient than iteration because.

- it can cause an explosion of method calls.
- it is not as intuitive.
- recursive methods are harder to debug.
- recursive methods take longer to program.

1 points

### Question 70

1. Servlet get input from a client (browser) using an HTML form. The servlet accesses the form fields using \_\_\_\_\_.

- the ServletResponse object method getParameter().
- the ServletRequest object method getParameter().
- the ServletRequest object method getFormField().
- None of the above.

1 points

### Question 71

1. Which of the following statements about abstract superclasses is true.

- abstract superclasses may contain data.

- Abstract superclasses may not contain implementations of methods.
- abstract superclasses must declare all methods as abstract.
- abstract superclasses must declare all data members not given values as abstract.

1 points

### Question 72

1. The UML specifies a relationship called a(n) to model inheritance.

- inheritization.
- specialization.
- generalization.
- All of the above.

1 points

### Question 73

1. One generic Stack class could be the basis for creating many Stack classes, e.g., Stack, Stack and Stack. These classes are known as \_\_\_\_\_.

- subclasses.
- generic subclasses.
- concrete classes.
- parameterized classes.

1 points

### Question 74

1. An interface may contain.

- private static data and public abstract methods.
- only public abstract methods.

- public static final data and public abstract methods.
- private static data and public final methods.

1 points

### Question 75

1. Using layout managers \_\_\_\_\_.

- provides the greatest level of control over a GUI's appearance.
- can be faster than creating a GUI with absolute positioning.
- allows the programmer to specify the exact location of each GUI component with respect to the upperleft corner of the Container.
- allows the programmer to specify the exact location of each GUI component with respect to the lowerleft corner of the Container.

1 points

### Question 76

1. True or False: A protected method may not be overridden by a public method.

- True
- False

1 points

### Question 77

1. Which of the following sorting algorithms is the fastest.

- Selection sort.
- Insertion sort.
- Merge sort.
- They all run at roughly the same speed.

1 points

### Question 78

1. Which of the following is not possible.

- A class that implements two interfaces.
- A class that inherits from two classes.
- A class that inherits from one class, and implements an interface.
- All of the above are possible.

1 points

### Question 79

1. Consider classes A, B and C, where A is an abstract superclass, B is a concrete class that inherits from A and C is a concrete class that inherits from B. Class A declares abstract method `originalMethod`, implemented in class B. Which of the following statements is true of class C.
  - Method `originalMethod` cannot be overridden in class C—once it has been implemented in concrete class B, it is implicitly final.
  - Method `originalMethod` must be overridden in class C, or a syntax error will occur.
  - If method `originalMethod` is not overridden in class C but is called by an object of class C, an error occurs.
  - None of the above.

1 points

### Question 80

1. Which one of the following will not get the data from the first column of `ResultSet rs`, returned from executing the following SQL statement: `SELECT name, rank, serialNo FROM employee.`
  - `rs.getString(0);`
  - `rs.getString("name");`
  - `rs.getString(1);`
  - None of the above

1 points

### Question 81

1. Consider the following class definition:

```
1. public class Test extends Base {  
2.     public Test(int j) {  
3.     }  
4.     public Test(int j, int k) {  
5.         super(j, k);  
6.     }  
7. }
```

Which of the following forms of constructor must exist explicitly in the definition of the Base class?

- Base() { }
- Base(int j) { }
- Base(int j, int k) { }
- Base(int j, int k, int l) { }
- None of the above

1 points

### Question 82

1. Which of the following could be used to declare abstract method method1 in abstract class Class1 (method1 returns an int and takes no arguments).

- public int method1();.
- public int abstract method1();.
- public abstract int method1();.
- public int nonfinal method1();.

1 points

### Question 83

1. The code within a finally block executes when a try block.

- identifies one or more Exceptions
- does not identify any Exceptions
- either a or b
- neither a nor b

1 points

### Question 84

1. Which one of the following is not a region constant for the BorderLayout manager.

- CENTER.
- EAST.
- RIGHT.
- NORTH.

1 points

### Question 85

1. From which object do you ask for DatabaseMetaData.

- Connection.
- ResultSet.
- DriverManager.
- Driver.

1 points

### Question 86

1. The default implementation of method clone of Object performs a \_\_\_\_\_.

- empty copy.
- deep copy.
- full copy.
- shallow copy.

1 points

### Question 87

1. Java programs communicate with databases using what API.

- DBMS.
- JDBC.
- RDBMS.
- Database.

1 points

### Question 88

1. Write the code to implement a thread safe Singleton design pattern. Then name of you class should be SafeSingleton.

*Press Tab to enter the content editor. For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).*

Mashups

Path:

Words: 21

10 points

### Question 89

1. To place an element on a queue you call the \_\_\_\_\_ method of the Queue ADT.

- dequeue().

- push().
- setElement().
- None of the above.

1 points

### Question 90

1. The equals() method in the String class returns a true value if \_\_\_\_\_.

- lengths are unequal or the characters do not match if lengths are equal
- lengths are equal and the characters match exactly
- lengths are equal and the characters match except for case
- lengths are equal and the characters do not match
- none of the above

1 points

### Question 91

1. What is the minimal modification that will make the code below compile correctly?

1. final class Aaa
2. {
3.     int xxx;
4.     void yyy() { xxx = 1; }
5. }
- 6.
- 7.
8. class Bbb extends Aaa
9. {
10.     final Aaa finalref = new Aaa();
- 11.
12.     final void yyy()
13.     {
14.         System.out.println("In method yyy()");
15.         finalref.xxx = 12345;

16. }

17. }

- On line 1, remove the final modifier
- On line 10, remove the final modifier
- Remove line 15
- On lines 1 and 10, remove the final modifier
- The code will compile as is. no modification is needed

1 points

### Question 92

1. Servlets run under the control of a(n) .

- applet.
- owner class
- web browser
- web server or servlet engine

1 points

### Question 93

1. Which of the following keywords allows a subclass to access a superclass method even when the subclass has overridden the superclass method?

- protected
- this
- public
- super

1 points

### Question 94

1. In Lab 03, the implementation of Shannon's Theorem in a GUI program used the pattern.

- Value Object.
- Dependent Object.
- Model-View-Controller.
- Simple Factory.

1 points

### Question 95

1. Design patterns \_\_\_\_\_.

- are proven ways for implementing behavior that help increase cohesion and reduce coupling.
- are elegant ways for writing code.
- cannot be implemented in Java.
- only apply to C++.

1 points

### Question 96

1. What exception is thrown if the class loader cannot locate the driver class.

- NoSuchClassException.
- ClassCastException.
- ClassNotFoundException.
- IllegalClassException.

1 points

### Question 97

1. When a subclass constructor calls its superclass constructor, what happens if the superclass's constructor does not assign a value to an instance variable.

- A syntax error occurs.
- A compile-time error occurs.
- A run-time error occurs.
- The program compiles and runs because the instance variables are initialized to their default values.

1 points

### Question 98

1. Which of the following statements about recursion are true.

- Recursion can occur infinitely.
- Recursion uses a termination test.
- Both a and b.
- Neither a nor b.

1 points

### Question 99

1. Use AWT components for a greater level of portability and flexibility.

- True
- False

1 points

### Question 100

1. Which layout manager is the default for JFrame.

- FlowLayout.
- BorderLayout.
- GridLayout.

- None of the above.

1 points

### Question 101

1. Generics provide \_\_\_\_\_ that allows programmers to catch invalid types at compile time.

- compile-time type safety.
- compile-time exception handling.
- compile-time error checking.
- run-time type safety.

1 points

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### Save and Submit

*Click Save and Submit to save and submit. Click Save All Answers to save all answers.*

Save and Submit