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**Grade** 82 out of 100

**Question 1**

Correct

Mark 1 out of 1

Which method would you use to obtain the string "1234567890" from the ...[html] Which method would you use to obtain the string "1234567890" from the string "123-456-7890"?

Select one:

- a. length
- b. replace ✓
- c. trim
- d. isEmpty

The correct answer is: replace

**Question 2**

Correct

Mark 1 out of 1

When you declare a method, you also need to provide the method \_\_\_, which consists of statements that are executed when the method is called.

Select one:

- a. body ✓
- b. return type
- c. header
- d. access specifier

The correct answer is: body

**Question 3**

Correct

Mark 1 out of 1

Which of the following statements about palindromes is correct?

Select one:

- a. The string "l" is not a palindrome.
- b. All strings of length 0 or 1 are palindromes. ✓
- c. The empty string is not a palindrome.
- d. The string "rascal" is a palindrome.

The correct answer is: All strings of length 0 or 1 are palindromes.

Question 4

Correct

Mark 1 out of 1

Consider the following recursive code snippet:

```
public int mystery(int n, int m)
{
    if (n == 0)
    {
        return 0;
    }
    if (n == 1)
    {
        return m;
    }
    return m + mystery(n - 1, m);
}
```

What value is returned from a call to `mystery(1,5)`?

Select one:

- a. 5 ✓
- b. 1
- c. 11
- d. 6

Your answer is correct.

The correct answer is: 5

Question 5

Correct

Mark 1 out of 1

When reading words using a Scanner object's next method, \_\_\_\_.

Select one:

- a. any characters that are considered to be white space within the word become part of the word.
- b. the program must discard white space characters at the beginning of the input before calling the next method.
- c. any characters at the beginning of the input that are considered to be white space are consumed and become part of the word being read.
- d. any characters at the beginning of the input that are considered to be white space are consumed and do not become part of the word being read. ✓

The correct answer is: any characters at the beginning of the input that are considered to be white space are consumed and do not become part of the word being read.

Question 6

Correct

Mark 1 out of 1

Which of the following statements about comparing objects is correct?

Select one:

- a. The equals method is used to compare whether two objects have the same contents. ✓
- b. The == operator is used to compare whether two objects have the same contents.
- c. The equals method and the == operator are perform the same actions.
- d. The equals method is used to compare whether two references are to the same object.

The correct answer is: The equals method is used to compare whether two objects have the same contents.

Question 7

Correct

Mark 1 out of 1

Complete the following code snippet, which is intended to be a recursive method that reverses a String value:

```
public static String reverselt(String s)
{
    if (s.length() <= 1)
    {
        return s;
    }
    else
    {
        _____
    }
}
```

Select one:

- a. return reverselt(s.substring(0)) + s.charAt(0);
- b. return reverselt(s.substring(0)) + s.charAt(1);
- c. return reverselt(s.substring(1)) + s.charAt(0); ✓
- d. return reverselt(s.substring(1)) + s.charAt(1);

Your answer is correct.

The correct answer is: return reverselt(s.substring(1)) + s.charAt(0);

Question 8

Correct

Mark 1 out of 1

A class that represents a more specific entity in an inheritance hierarchy is called a/an \_\_\_\_.

Select one:

- a. Superclass
- b. Default class
- c. Subclass. ✓
- d. Inheritance class.

The correct answer is: Subclass.

Question 9

Correct

Mark 1 out of 1

A search technique where, in each step, you split the size of the search in half is called a\_\_\_\_ search.

Select one:

- a. binary ✓
- b. merging
- c. random
- d. linear

The correct answer is: binary

Question **10**

Correct

Mark 1 out of 1

How many times does the following loop execute?

```
int i = 0;
boolean found = false;
while (i < 100 && !found)
{
    i++;
    System.out.print(i + " ");
    int j = i * i;
    if ((i * i * i) % j == j)
    {
        found = true;
    }
}
```

Select one:

- a. 20 times
- b. 10 times
- c. 100 times ✓
- d. An infinite number of times

Your answer is correct.

The correct answer is: 100 times

Question **11**

Correct

Mark 1 out of 1

Which of the following statements is generally true regarding static methods and variables?

Select one:

- a. A lot of static methods and variables indicate a well-designed object-oriented system.
- b. The use of static variables and methods should be maximized.
- c. Always choose static methods and variables over similar object-based implementations.
- d. The use of static variables and methods should be minimized. ✓

The correct answer is: The use of static variables and methods should be minimized.

Question **12**

Correct

Mark 1 out of 1

Which one of the following statements is a valid initialization of an array named somearray of ten elements?

Select one:

- a. int somearray[] = { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 };
- b. int[10] somearray = { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 };
- c. int somearray[10] = { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 };
- d. int[] somearray = { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 }; ✓

The correct answer is: int[] somearray = { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 };

**Question 13**

Correct

Mark 1 out of 1

Which of the following is an example of an immutable class?

Select one:

- a. Scanner.
- b. System.
- c. String. ✓
- d. Math.

The correct answer is: String.

**Question 14**

Correct

Mark 1 out of 1

Which of the following code statements creates a graphical button which has "Calculate" as its label ?

Select one:

- a. Button JButton = new Button("Calculate").
- b. button = new Button(JButton, "Calculate").
- c. button = new JButton("Calculate").
- d. JButton button = new JButton("Calculate"). ✓

The correct answer is: JButton button = new JButton("Calculate").

**Question 15**

Incorrect

Mark 0 out of 1

You have created a class named Motor that implements an interface named Measurable. You have declared a variable of type Measurable named motorTemperature. Which of the following statements is true?

Select one:

- a. The object to which motorTemperature refers has type Motor.
- b. The object to which motorTemperature refers has type Measurable. ✗
- c. You must construct a motorTemperature object from the Measurable interface.
- d. This declaration is illegal.

The correct answer is: The object to which motorTemperature refers has type Motor.

**Question 16**

Incorrect

Mark 0 out of 1

Which of the following does NOT describe a particular side effect related to standard output?

Select one:

- a. Messages printed in a particular language may be of limited usefulness.
- b. Programmers may need values for purposes other than informational messages.
- c. Methods that rely on standard output have limited usefulness in embedded systems.
- d. Programmers may be surprised by unexpected method actions. ✗

The correct answer is: Methods that rely on standard output have limited usefulness in embedded systems.

**Question 17**

Correct

Mark 1 out of 1

Which of the following statements generally describes the scope of a variable?

Select one:

- a. The region of a program in which the variable can be accessed. ✓
- b. The amount of data in bytes that the variable can contain.
- c. The range of data types that the variable can legally be cast into.
- d. The ability of a variable to access other variables in the same program.

The correct answer is: The region of a program in which the variable can be accessed.

**Question 18**

Correct

Mark 1 out of 1

What type of algorithm places elements in order?

Select one:

- a. deletion
- b. searching
- c. insertion
- d. sorting ✓

The correct answer is: sorting

**Question 19**

Correct

Mark 1 out of 1

Assume the following variables have been declared and given values as shown:

```
String str = "0123456789";
```

```
String sub = str.substring(3, 4);
```

Which is the value of sub?

Select one:

- a. 3 ✓
- b. 3456
- c. 34
- d. 345

Your answer is correct.

The correct answer is: 3

**Question 20**

Correct

Mark 1 out of 1

Which statement about handling exceptions is true?

Select one:

- a. Statements that may cause exceptions should be placed inside a catch clause.
- b. If an exception has no handler, the program will be terminated. ✓
- c. If an exception has no handler, the error will be ignored.
- d. Statements to handle exceptions should be placed inside a try clause

The correct answer is: If an exception has no handler, the program will be terminated.

**Question 21**

Correct

Mark 1 out of 1

Which package is automatically imported in any Java program? [html] Which package is automatically imported in any Java program?

Select one:

- a. java.language
- b. java.system
- c. java.lang ✓
- d. java.util

The correct answer is: java.lang

**Question 22**

Correct

Mark 1 out of 1

If a class has an abstract method, which of the following statements is NOT true?

Select one:

- a. All non-abstract subclasses of this class must implement this method.
- b. You cannot inherit from this class.
- c. You cannot construct an object from this class. You can have an object reference whose type is this class.
- d. You can construct an object from this class. ✓

The correct answer is: You can construct an object from this class.

**Question 23**

Correct

Mark 1 out of 1

Which of the following statements about interfaces is true?

Select one:

- a. You can instantiate an object from an interface class.
- b. You can define an interface variable that refers to an object of any class in the same package.
- c. You can define an interface variable that refers to an object only if the object belongs to a class that implements the interface. ✓
- d. You cannot define a variable whose type is an interface.

The correct answer is: You can define an interface variable that refers to an object only if the object belongs to a class that implements the interface.

Question **24**

Correct

Mark 1 out of 1

Complete the following code snippet, which is intended to be a recursive method that will find the smallest value in an array of double values from index to the end of the array:

```
public static double minValue(double[] elements, int index)
{
    if (index == elements.length - 1)
    {
        return elements[index];
    }
    double val = _____;
    if (elements[index] < val)
    {
        return elements[index];
    }
    else
    {
        return val;
    }
}
```

Select one:

- a. minValue(index - 1)
- b. minValue(elements, index - 1)
- c. minValue(elements, index + 1) ✓
- d. minValue(index + 1)

Your answer is correct.

The correct answer is: minValue(elements, index + 1)

Question **25**

Correct

Mark 1 out of 1

Consider the following code snippet that appears in a subclass:

```
public void deposit(double amount)
{
    transactionCount++;
    deposit(amount);
}
```

Which of the following statements is true?

Select one:

- a. This method calls a public method in its superclass.
- b. This method calls a public method in its subclass.
- c. This method calls a private method in its superclass
- d. This method will call itself. ✓

Your answer is correct.

The correct answer is: This method will call itself.

**Question 26**

Correct

Mark 1 out of 1

When a program throws an exception within a method that has no try-catch block, which of the following statements about exception handling is true?

Select one:

- a. The user must decide whether to continue or terminate the program.
- b. The current method must decide whether to continue or terminate.
- c. Execution will continue with the next statement in the method.
- d. The current method terminates immediately. ✓

The correct answer is: The current method terminates immediately.

**Question 27**

Correct

Mark 1 out of 1

If the current method in a program will not be able to handle an exception, what should be coded into the method?

Select one:

- a. The method should include a try/catch block for all possible exceptions.
- b. The throws clause should list the name of the method to which the exception should be passed.
- c. The throws clause should list the names of all exceptions that the method will not handle. ✓
- d. The method declaration should be enclosed in a try/catch block.

The correct answer is: The throws clause should list the names of all exceptions that the method will not handle.

**Question 28**

Correct

Mark 1 out of 1

What is the scope of a private instance variable?

Select one:

- a. All classes in the same package as the class in which the variable is defined.
- b. The entire class in which the variable is defined. ✓
- c. Only the method in which the variable is defined.
- d. The entire program.

The correct answer is: The entire class in which the variable is defined.

**Question 29**

Correct

Mark 1 out of 1

What is the output of the following code snippet?

```
int x = 25;
if (x < 100)
{
    x = x + 5;
}
if (x < 500)
{
    x = x - 2;
}
if (x > 10)
{
    x++;
}
else
{
    x--;
}
System.out.println(x);
```

Select one:

- a. 30
- b. 28
- c. 29 ✓
- d. 27

Your answer is correct.

The correct answer is: 29

**Question 30**

Incorrect

Mark 0 out of 1

Which of the following statements about an inner class is true?

Select one:

- a. An inner class that is defined inside a method is not publicly accessible.
- b. An inner class that is defined inside a method is publicly accessible. ✗
- c. An inner class is used for a utility class that should be visible elsewhere in the program.
- d. An inner class that is defined inside an enclosing class but outside of its methods is not available to all methods of the enclosing class.

The correct answer is: An inner class that is defined inside a method is not publicly accessible.

Question **31**

Correct

Mark 1 out of 1

Which of the following statements about abstract methods is true?

Select one:

- a. An abstract method has parameters, a return type, and code in its body, but has no defined name.
- b. An abstract method has a name, a return type, and code in its body, but has no parameters.
- c. An abstract method has only a name and a return type, but no parameters or code in its body.
- d. An abstract method has a name, parameters, and a return type, but no code in the body of the method. ✓

The correct answer is: An abstract method has a name, parameters, and a return type, but no code in the body of the method.

Question **32**

Correct

Mark 1 out of 1

You are creating a class inheritance hierarchy about motor vehicles that will contain classes named Vehicle, Auto, and Motorcycle. Which of the following statements is correct?

Select one:

- a. Vehicle should be the superclass, while Auto and Motorcycle should be the subclasses. ✓
- b. Vehicle should be the subclass, while Auto and Motorcycle should be the superclasses.
- c. Vehicle should be the subclass, while Auto and Motorcycle should be the default classes.
- d. Vehicle should be the default class, while Auto and Motorcycle should be the subclasses.

The correct answer is: Vehicle should be the superclass, while Auto and Motorcycle should be the subclasses.

Question **33**

Correct

Mark 1 out of 1

Which of the following names would be considered to be qualified?

Select one:

- a. this.getGraduationYear()
- b. getGraduationYear().print()
- c. studentOne.getGraduationYear() ✓
- d. getGraduationYear()

The correct answer is: studentOne.getGraduationYear()

Question **34**

Correct

Mark 1 out of 1

Which of the following corresponds to the constructor body for a Square class that accepts an initial side length value where the instance variable is named sideLength?

Select one:

- a. sideLength = 0;
- b. initialLength = 0;
- c. initialLength = sideLength;
- d. sideLength = initialLength; ✓

The correct answer is: sideLength = initialLength;

Question **35**

Correct

Mark 1 out of 1

Which of the given System.out.print statements generates the following output? ABCDE\"\\

Select one:

- a. System.out.println("ABCDE\"\\"); ✓
- b. System.out.println("ABCDE\"");
- c. System.out.println("ABCDE\\\"");
- d. System.out.println("ABCDE\"\\");

The correct answer is: System.out.println("ABCDE\"\\");

Question **36**

Correct

Mark 1 out of 1

Consider the recursive method myPrint:

```
public void myPrint(int n)
{
    if (n < 10)
    {
        System.out.print(n);
    }
    else
    {
        int m = n % 10;
        System.out.print(m);
        myPrint(n / 10);
    }
}
```

What is printed for the call myPrint(8)?

Select one:

- a. 10
- b. 8 ✓
- c. 21
- d. 4

Your answer is correct.

The correct answer is: 8

Question **37**

Incorrect

Mark 0 out of 1

Which of the following statements about converting between types is true?

Select one:

- a. When you cast object types, you take a risk that an exception will occur.
- b. When you cast object types, you take a risk of losing information.
- c. When you cast number types, you take a risk that an exception will occur. ✗
- d. When you cast number types, you will not lose information.

The correct answer is: When you cast object types, you take a risk that an exception will occur.

Question **38**

Correct

Mark 1 out of 1

A class that represents the most general entity in an inheritance hierarchy is called a/an \_\_\_\_.

Select one:

- a. Subclass.
- b. Inheritance class.
- c. Default class.
- d. Superclass. ✓

The correct answer is: Superclass.

Question **39**

Correct

Mark 1 out of 1

What terminology describes a method that returns information about its implicit parameter and does not change the parameter's internal data?

Select one:

- a. accessor ✓
- b. void
- c. mutator
- d. public

The correct answer is: accessor

Question **40**

Incorrect

Mark 0 out of 1

Which of the following is true regarding subclasses?

Select one:

- a. A subclass inherits methods and instance variables from its superclass.
- b. A subclass inherits instance variables from its superclass but not methods.
- c. A subclass does not inherit methods or instance variables from its superclass.
- d. A subclass inherits methods from its superclass but not instance variables. ✗

The correct answer is: A subclass inherits methods and instance variables from its superclass.

Question **41**

Correct

Mark 1 out of 1

We want the `toString` method to return strings like 3/16/2014. Give the body of the `toString` method.

Select one:

- a. `return month + "/" + day + "/" + year;` ✓
- b. `return "m/d/y";`
- c. `return m + "/" + d + "/" + y;`
- d. `return "month/day/year";`

The correct answer is: `return month + "/" + day + "/" + year;`

**Question 42**

Incorrect

Mark 0 out of 1

Complete the code for the recursive method printSum shown in this code snippet, which is intended to return the sum of digits from 1 to n:

```
public static int printSum(int n)
{
    if (n == 0)
    {
        return 0;
    }
    else
    {
        _____
    }
}
```

Select one:

- a. return (printSum(n - 1)); ❌
- b. return (n + printSum(n + 1));
- c. return (n - printSum(n - 1));
- d. return (n + printSum(n - 1));

Your answer is incorrect.

The correct answer is: return (n + printSum(n - 1));

**Question 43**

Correct

Mark 1 out of 1

A class that has only accessor methods and no mutators methods is called a/an \_\_\_ class.

Select one:

- a. Utility.
- b. Immutable. ✓
- c. Actor.
- d. Static.

The correct answer is: Immutable.

**Question 44**

Incorrect

Mark 0 out of 1

Which of the following statements about listener classes is true?

Select one:

- a. A listener class must be declared as an inner class. ❌
- b. A listener class cannot be declared as an inner class.
- c. A listener class cannot be declared as an anonymous inner class.
- d. A listener class must be declared as an anonymous inner class.

The correct answer is: A listener class cannot be declared as an anonymous inner class.

**Question 45**

Correct

Mark 1 out of 1

Which of the following statements about checked and unchecked exceptions is true?

Select one:

- a. Checked exceptions are handled by the Java runtime.
- b. The compiler ensures that the program is handling unchecked exceptions.
- c. All exceptions that are descendants of RunTimeException are checked exceptions.
- d. The compiler ensures that the program is handling checked exceptions. ✓

The correct answer is: The compiler ensures that the program is handling checked exceptions.

**Question 46**

Correct

Mark 1 out of 1

What is displayed after executing the given code snippet?

```
int[] mymarks = new int[10];
int total = 0;
Scanner in = new Scanner(System.in);
for (int cnt = 1; cnt <= 10; cnt++)
{
    System.out.print("Enter the marks: ");
    mymarks[cnt] = in.nextInt();
    total = total + mymarks[cnt];
}
System.out.println(total);
```

Select one:

- a. The code snippet causes a bounds error. ✓
- b. The code snippet displays zero.
- c. The for loop causes a run-time time error on the first iteration.
- d. The code snippet displays the total marks of all ten subjects.

Your answer is correct.

The correct answer is: The code snippet causes a bounds error.

**Question 47**

Correct

Mark 1 out of 1

Which of the following statements about interfaces is NOT true?

Select one:

- a. Interfaces can reduce the coupling between classes.
- b. Interfaces can make code more reusable.
- c. An interface provides no implementation.
- d. A class can implement only one interface type. ✓

The correct answer is: A class can implement only one interface type.

**Question 48**

Incorrect

Mark 0 out of 1

Under which condition will the PrintWriter constructor generate a FileNotFoundException?

Select one:

- a. If the output file already exists, but has data in it.
- b. If the output file already exists, but is empty.
- c. If the output file does not exist. ✗
- d. If the output file cannot be opened or created due to a security error.

The correct answer is: If the output file cannot be opened or created due to a security error.

**Question 49**

Correct

Mark 1 out of 1

What is the output of the following code snippet?

```
public static void main(String[] args)
{
    int num1 = 10;
    int num2 = 5;
    int num3 = 200;
    num3 = num3 % (num1 * num2);
    System.out.println(num3);
}
```

Select one:

- a. 0 ✓
- b. 250
- c. 4
- d. 10

Your answer is correct.

The correct answer is: 0

**Question 50**

Correct

Mark 1 out of 1

An instance variable declaration consists of which of the following parts?

Select one:

- a. an access specifier, the type of the instance variable, and the name of the instance variable. ✓
- b. an access specifier, a list of the parameters (if any), and the body of the method.
- c. the return type, the name of the method, and a list of the parameters (if any).
- d. the type of the instance variable, an access specifier, a list of the parameters (if any), and the body of the method.

The correct answer is: an access specifier, the type of the instance variable, and the name of the instance variable.

**Question 51**

Correct

Mark 1 out of 1

When the order of the elements is unimportant, what is the most efficient way to remove an element from an array?

Select one:

- a. Delete the element and move each element after that one to a lower index.
- b. Replace the element with the next element.
- c. Replace the element to be deleted with the first element in the array.
- d. Replace the element to be deleted with the last element in the array. ✓

The correct answer is: Replace the element to be deleted with the last element in the array.

**Question 52**

Incorrect

Mark 0 out of 1

Which method of an exception object will retrieve a description of the exception that occurred?

Select one:

- a. getDescription()
- b. printMessage()
- c. printStackTrace() ✘
- d. getMessage()

The correct answer is: getMessage()

**Question 53**

Correct

Mark 1 out of 1

Which of the following statements about abstract methods is true?

Select one:

- a. An abstract method has a name, parameters, and a return type, but no code in the body of the method. ✓
- b. An abstract method has parameters, a return type, and code in its body, but has no defined name.
- c. An abstract method has only a name and a return type, but no parameters or code in its body.
- d. An abstract method has a name, a return type, and code in its body, but has no parameters.

The correct answer is: An abstract method has a name, parameters, and a return type, but no code in the body of the method.

**Question 54**

Correct

Mark 1 out of 1

The enhanced for loop

Select one:

- a. is only used for arrays of integers
- b. is used to initialize all array elements to a common value
- c. is convenient for traversing all elements in an array ✓
- d. is convenient for traversing elements in a partially filled array

The correct answer is: is convenient for traversing all elements in an array

**Question 55**

Correct

Mark 1 out of 1

To ensure that an instance variable can only be accessed by the class that declared it, the variable should be declared as \_\_\_\_.

Select one:

- a. public
- b. protected
- c. final
- d. private ✓

The correct answer is: private

**Question 56**

Correct

Mark 1 out of 1

The \_\_\_ reserved word in a class definition ensures that subclasses cannot be created from this class.

Select one:

- a. final ✓
- b. anonymous
- c. abstract
- d. static

The correct answer is: final

**Question 57**

Correct

Mark 1 out of 1

A method header consists of which of the following parts?

Select one:

- a. an access specifier, the type of the instance variable, and the name of the instance variable
- b. the return type, the name of the method, and a list of the parameters (if any)
- c. an access specifier, a return type, a method name, and a list of the parameters (if any) ✓
- d. the type of the instance variable, an access specifier, and a list of the parameters (if any)

The correct answer is: an access specifier, a return type, a method name, and a list of the parameters (if any)

**Question 58**

Correct

Mark 1 out of 1

Which of the following is a mutator method for the Rectangle class?

Select one:

- a. isEmpty
- b. translate ✓
- c. getHeight
- d. getWidth

The correct answer is: translate

Question **59**

Correct

Mark 1 out of 1

Encapsulation allows a programmer to use a class without having to know ...

Select one:

- a. interface
- b. methods
- c. implementation ✓
- d. name

The correct answer is: implementation

Question **60**

Incorrect

Mark 0 out of 1

If a subclass uses the same method name but different parameter types for a method that appears in its superclass,  
\_\_\_\_\_.

Select one:

- a. the subclass method has overloaded its superclass's method.
- b. a compiler error will occur.
- c. the subclass method has overridden its superclass's method. ✗
- d. the subclass has implemented its superclass's method.

The correct answer is: the subclass method has overloaded its superclass's method.

Question **61**

Correct

Mark 1 out of 1

We want to create a class that represents a date. A date has a day, month, and year. For example, the date March 16, 2014 has the day 16, month 3, and year 2014. The basic framework of a date class is below:

```
public class Date {
    private int day;
    private int month;
    private int year;
```

```
}
```

We want to create a specific date using code like:

```
Date first = new Date (16, 3, 2014);
// Creates March 16, 2014
```

```
Date second = new Date (1, 9, 2013);
```

```
// Creates September 1, 2013
```

Which of the constructor specifications below will allow this code to behave as desired?

Select one:

- a. public Date (int d, int m, int y) ✓
- b. public Date Date (int d, int m, int y)
- c. public void Date (int d, int m, int y)
- d. public init (int d, int m, int y)

Your answer is correct.

The correct answer is: public Date (int d, int m, int y)

Question **62**

Correct

Mark 1 out of 1

Why can't Java methods change parameters of primitive type?

Select one:

- a. Java methods can have no actual impact on parameters of any type.
- b. Parameters of primitive type are considered by Java methods to be local variables. ✓
- c. Parameters of primitive type are immutable.
- d. Java methods cannot accept parameters of primitive type.

The correct answer is: Parameters of primitive type are considered by Java methods to be local variables.

Question **63**

Correct

Mark 1 out of 1

Which of the following conditions tests whether the user enters the single digit 5?

```
String s;
Scanner in = new Scanner(System.in);
System.out.print("Enter a single digit: ");
s = in.next();
```

Select one:

- a. if (s == '5')
- b. if (s.equals("5")) ✓
- c. if (s == "5")
- d. if (s = "5")

Your answer is correct.

The correct answer is: if (s.equals("5"))

Question **64**

Correct

Mark 1 out of 1

What verifies that a class works correctly in isolation, outside a complete program?

Select one:

- a. encapsulation
- b. enumeration
- c. unit test ✓
- d. abstraction

The correct answer is: unit test

Question **65**

Incorrect

Mark 0 out of 1

Which of the following can potentially be changed by a Java method?

Select one:

- a. An object reference parameter. ✗
- b. A String parameter.
- c. The state of an object reference parameter's attribute.
- d. A primitive parameter.

The correct answer is: The state of an object reference parameter's attribute.

Question **66**

Correct

Mark 1 out of 1

Which of the following statements is correct about constants?

Select one:

- a. Variables defined using final make a code snippet more readable and easier to maintain. ✓
- b. You can make a variable constant by using the constant reserved word while declaring the variable.
- c. Constants are written using uppercase letters because the compiler ignores constants declared in lowercase letters.
- d. The data stored inside a final variable can be changed using an assignment statement.

The correct answer is: Variables defined using final make a code snippet more readable and easier to maintain.

Question **67**

Correct

Mark 1 out of 1

Is the following code snippet legal?

```
boolean b = false;
do
{
    System.out.println("Do you think in Java?");
}
while (b != B);
```

Select one:

- a. No, it is not legal and gives a compilation error. ✓
- b. Yes, it is legal but does not print anything.
- c. Yes, it is legal and prints "Do you think in Java?" once.
- d. Yes, it is legal and prints "Do you think in Java?" twice.

Your answer is correct.

The correct answer is: No, it is not legal and gives a compilation error.

Question **68**

Correct

Mark 1 out of 1

Which of the following statements about the finally clause in a try block is NOT true?

Select one:

- a. The finally clause will be executed when an exception is thrown in the try block but not caught.
- b. The finally clause will be executed after the last statement of a catch clause completes if this try block catches an exception.
- c. If no exception occurs, the finally clause will not be executed. ✓
- d. The finally clause will be executed after the last statement of the try block completes without exception.

The correct answer is: If no exception occurs, the finally clause will not be executed.

Question **69**

Correct

Mark 1 out of 1

What is the output of the following code snippet?

```
int shoeSize = 8;  
if (shoeSize < 6)  
{  
    System.out.println("Petite");  
}  
if (shoeSize < 8)  
{  
    System.out.println("Small");  
}  
if (shoeSize < 10)  
{  
    System.out.println("Medium");  
}  
if (shoeSize < 14)  
{  
    System.out.println("Large");  
}
```

Select one:

- a. Small  
Medium
- b. Petite
- c. Petite  
Small
- d. Medium  
Large ✓

Your answer is correct.

The correct answer is: Medium

Large

Question **70**

Correct

Mark 1 out of 1

What is the output of the following code snippet?

```
int[] myarray = { 10, 20, 30, 40, 50 };  
System.out.print(myarray[2]);  
System.out.print(myarray[3]);
```

Select one:

- a. 2030
- b. 4050
- c. 3040 ✓
- d. 1050

Your answer is correct.

The correct answer is: 3040

Question **71**

Correct

Mark 1 out of 1

Which one of the following statements can be used to convert a string str to a double?

- Select one:
- a. double n = Integer.parseDouble(str);
  - b. double n = str.parseDouble();
  - c. double n = double.parseDouble(str);
  - d. double n = Double.parseDouble(str); ✓

The correct answer is: double n = Double.parseDouble(str);

Question **72**

Correct

Mark 1 out of 1

The code snippet below checks whether a given number is a prime number. What will be the result of executing it?

```
public static void main(String[] args)
{
    int j = 2;
    int result = 0;
    int number = 0;
    Scanner reader = new Scanner(System.in);
    System.out.println("Please enter a number: ");
    number = reader.nextInt();
    while (j <= number / 2) // better is while (j * j <= number)
    {
        if (number % j == 0)
        {
            result = 1;
        }
        j++;
    }
    if (result == 1)
    {
        System.out.println("Number: " + number + " is Not Prime.");
    }
    else
    {
        System.out.println("Number: " + number + " is Prime. ");
    }
}
```

Select one:

- a. The code snippet will not compile.
- b. The code snippet will display the desired result.
- c. The code snippet will display an incorrect result. // incorrect if number is 1 ✓
- d. The code snippet will loop forever.

Your answer is correct.

The correct answers are: The code snippet will display the desired result., The code snippet will display an incorrect result. // incorrect if number is 1

**Question 73**

Correct

Mark 1 out of 1

A method that has no implementation is called a/an \_\_\_ method.

Select one:

- a. abstract ✓
- b. interface
- c. overloaded
- d. implementation

The correct answer is: abstract

**Question 74**

Correct

Mark 1 out of 1

Which of the following is true regarding a class and interface types?

Select one:

- a. You can convert from a class type to any interface type that the class defines.
- b. You can convert from a class type to any interface type that the class implements. ✓
- c. You cannot convert from a class type to any interface type.
- d. You can convert from a class type to any interface type that is in the same package as the class.

The correct answer is: You can convert from a class type to any interface type that the class implements.

**Question 75**

Correct

Mark 1 out of 1

What is the output of the following code snippet?

```
public static void main(String[] args)
{
    int var1 = 10;
    int var2 = 2;
    int var3 = 20;
    var3 = var3 / (var1 % var2);
    System.out.println(var3);
}
```

Select one:

- a. 20
- b. 0
- c. 4
- d. There will be no output due to a run-time error. ✓

Your answer is correct.

The correct answer is: There will be no output due to a run-time error.

Question **76**

Incorrect

Mark 0 out of 1

Is there any thing wrong with the following code snippet?

```
String[] data = { "abc", "def", "ghi", "jkl" };
String searchedValue = "ghi";
int pos = 0;
boolean found = false;
while (pos < data.length)
{
    if (data[pos].equals(searchedValue))
    {
        found = true;
    }
    else
    {
        found = false;
    }
    pos++;
}
if (found)
{
    System.out.println("Found at position: " + pos);
}
else
{
    System.out.println("Not found");
}
```

Select one:

- a. There is a bounds error.
- b. There is a logic error. ✖
- c. There is compile-time error.
- d. There is nothing wrong.

Your answer is incorrect.

The correct answer is: There is compile-time error.

Question **77**

Correct

Mark 1 out of 1

Which of the following types of methods are invoked on objects?

Select one:

- a. Instance method. ✓
- b. Either static or instance methods.
- c. Class method.
- d. Static method.

The correct answer is: Instance method.

Question **78**

Correct

Mark 1 out of 1

What will be printed by the statements below?

```
ArrayList<String> names = new ArrayList<String>();
names.add("Annie");
names.add("Bob");
names.add("Charles");
for (int i = 0; i < 3; i++)
{
    String extra = names.get(i);
    names.add (extra);
}
System.out.print (names);
```

Select one:

- a. [Annie, Bob, Charles, Charles, Bob, Annie]
- b. [Annie, Bob, Charles, Bob, Charles]
- c. [Annie, Bob, Charles, Annie, Bob, Charles] ✓
- d. [Annie, Annie, Bob, Bob, Charles, Charles]

Your answer is correct.

The correct answer is: [Annie, Bob, Charles, Annie, Bob, Charles]

Question **79**

Correct

Mark 1 out of 1

Which of the following conditions can be added to the code below so it will assign the larger value of two integer variables a and b to the integer variable maximum?

```
if /* put condition here */
{
    maximum = a;
}
else
{
    maximum = b;
}
```

Select one:

- a.  $b > a$
- b.  $a == b$
- c.  $a.compareTo(b) > 0$
- d.  $a > b$  ✓

Your answer is correct.

The correct answer is:  $a > b$

Question 80

Correct

Mark 1 out of 1

Your program must read in an existing text file. You want the program to terminate if the file does not exist. Which of the following indicates the correct code for the main method header?

Select one:

- a. public static void main(String[] args) throws FileNotFoundException ✓
- b. public static void main(String[] args) throws FileMissingException
- c. public static void main(String[] args)
- d. public static void main(String[] args) throws UnknownFileNotFoundException

The correct answer is: public static void main(String[] args) throws FileNotFoundException

Question 81

Incorrect

Mark 0 out of 1

If you have multiple classes in your program that have implemented the same interface in different ways, how is the correct method executed?

Select one:

- a. The compiler must determine which method implementation to use.
- b. You cannot have multiple classes in the same program with different implementations of the same interface.
- c. The method must be qualified with the class name to determine the correct method. ✗
- d. The Java virtual machine must locate the correct method by looking at the class of the actual object.

The correct answer is: The Java virtual machine must locate the correct method by looking at the class of the actual object.

Question 82

Correct

Mark 1 out of 1

A class declaration consists of which of the following parts?

Select one:

- a. an access specifier, the name of the class, a list of the parameters (if any), and the body of the constructor
- b. an access specifier, the keyword class, the name of the class, declarations for instance variables, constructors, and methods ✓
- c. an access specifier, a return type, a method name, a list of the parameters (if any), and the body of the method
- d. the keyword class, the name of the class, declarations for instance variables, constructors, and methods

The correct answer is: an access specifier, the keyword class, the name of the class, declarations for instance variables, constructors, and methods

Question 83

Correct

Mark 1 out of 1

What must a subclass do to modify a private superclass instance variable?

Select one:

- a. The subclass must declare its own instance variable with the same name as the superclass instance variable.
- b. The subclass must simply use the name of the superclass instance variable.
- c. The subclass must have its own public method to update the superclass's private instance variable.
- d. The subclass must use a public method of the superclass (if it exists) to update the superclass's private instance variable. ✓

The correct answer is: The subclass must use a public method of the superclass (if it exists) to update the superclass's private instance variable.

**Question 84**

Correct

Mark 1 out of 1

What is the output of the code snippet given below?

```
String s = "aeiou";
int i = 0;
do
{
    System.out.print(s.substring(i, i + 1));
    i++;
    if (i >= 3)
    {
        i = 5;
    }
}
while (i < 5);
```

Select one:

- a. aei ✓
- b. aeiou
- c. a
- d. ae

Your answer is correct.

The correct answer is: aei

**Question 85**

Correct

Mark 1 out of 1

Which of the following statements about recursion is correct?

Select one:

- a. In many cases, a recursive solution will be easier to understand and to implement than an iterative solution.  
✓
- b. A recursive solution will always run faster than an equivalent iterative solution.
- c. It is not necessary to simplify the argument in the recursive call.
- d. It is not necessary to have a special terminating case in all recursions.

The correct answer is: In many cases, a recursive solution will be easier to understand and to implement than an iterative solution.

**Question 86**

Correct

Mark 1 out of 1

Suppose you wish to use an array to solve a new problem. What is the first step to take in finding a solution?

Select one:

- a. structure a program using methods
- b. adapt a built-in array algorithm
- c. decompose the problem into steps ✓
- d. assemble a test program and run it

The correct answer is: decompose the problem into steps

**Question 87**

Correct

Mark 1 out of 1

If you want to use the Comparable interface, you must implement a single method called \_\_\_\_.

Select one:

- a. compare
- b. comparator
- c. compareTo ✓
- d. comparable

The correct answer is: compareTo

**Question 88**

Correct

Mark 1 out of 1

Which one of the following is a valid signature of a method with an integer two-dimensional array parameter of size 10 x 10?

Select one:

- a. public static void func(int[][][10] arr)
- b. public static void func(int[10][10] arr)
- c. public static void func(int[10][] arr)
- d. public static void func(int[][]) arr) ✓

The correct answer is: public static void func(int[][]) arr)

**Question 89**

Correct

Mark 1 out of 1

Which of the following corresponds to the getArea method header for a Square class assuming an integer value for a side length?

Select one:

- a. public integer getArea
- b. public int getArea
- c. public integer getArea()
- d. public int getArea() ✓

The correct answer is: public int getArea()

**Question 90**

Correct

Mark 1 out of 1

It may be necessary to "grow" an array when reading inputs because

Select one:

- a. the only alternative is a bounds exception.
- b. arrays in Java must be resized after every 100 elements.
- c. arrays are based on powers of two.
- d. the number of inputs may not be known in advance. ✓

The correct answer is: the number of inputs may not be known in advance.

Question **91**

Incorrect

Mark 0 out of 1

How many times does the following loop execute?

```
double d;
double x = Math.random() * 100;
do
{
    d = Math.sqrt(x) * Math.sqrt(x) - x;
    System.out.println(D);
    x = Math.random() * 10001;
}
while (d != 0);
```

Select one:

- a. Can't be determined
- b. Exactly twice
- c. Always infinite loop
- d. Exactly once ✘

Your answer is incorrect.

The correct answer is: Can't be determined

Question **92**

Correct

Mark 1 out of 1

Which of the following is true regarding inheritance?

Select one:

- a. When creating a subclass, no methods of a superclass can be overridden.
- b. A superclass can force a programmer to override a method in any subclass created from it. D) A superclass cannot prevent a programmer from overriding a method in any subclass created from it. ✓
- c. When creating a subclass, all methods of the superclass must be overridden.

The correct answer is: A superclass can force a programmer to override a method in any subclass created from it. D)  
A superclass cannot prevent a programmer from overriding a method in any subclass created from it.

Question **93**

Correct

Mark 1 out of 1

Which of the following can potentially be changed when implementing an interface?

Select one:

- a. The name of a method in the interface.
- b. The return type of a method in the interface.
- c. You cannot change the name, return type, or parameters of a method in the interface. ✓
- d. The parameters of a method in the interface.

The correct answer is: You cannot change the name, return type, or parameters of a method in the interface.

**Question 94**

Correct

Mark 1 out of 1

Which of the following declares a sideLength instance variable for a Square class that stores an integer value?

Select one:

- a. private int sideLength; ✓
- b. private integer sideLength;
- c. public static int sideLength;
- d. public integer sideLength

The correct answer is: private int sideLength;

**Question 95**

Correct

Mark 1 out of 1

Which of the following is true regarding subclasses?

Select one:

- a. A subclass may inherit methods and instance variables from its superclass, and may also implement its own methods and declare its own instance variables. ✓
- b. A subclass that inherits methods from its superclass may not override the methods.
- c. A subclass that inherits instance variables from its superclass may not declare additional instance variables.
- d. A subclass may inherit methods or instance variables from its superclass but not both.

The correct answer is: A subclass may inherit methods and instance variables from its superclass, and may also implement its own methods and declare its own instance variables.

**Question 96**

Correct

Mark 1 out of 1

To override a superclass method in a subclass, the subclass method \_\_\_\_.

Select one:

- a. Must use a different method name and different parameter types.
- b. Must use a different method name and the same parameter types.
- c. Must use the same method name and the same parameter types. ✓
- d. Must use a different method name.

The correct answer is: Must use the same method name and the same parameter types.

**Question 97**

Incorrect

Mark 0 out of 1

Which of the following statements about a Java interface is NOT true?

Select one:

- a. All methods in a Java interface must be abstract. ✗
- b. A Java interface specifies behavior that a class will implement.
- c. A Java interface defines a set of methods that are required.
- d. A Java interface must contain more than one method.

The correct answer is: A Java interface must contain more than one method.

**Question 98**

Incorrect

Mark 0 out of 1

Which of the following statements about an inner class is true?

Select one:

- a. An inner class can only be defined outside of any method within its enclosing class.
- b. An inner class may be anonymous.
- c. An inner class must implement an interface.
- d. An inner class can only be defined within a specific method of its enclosing class. X

The correct answer is: An inner class may be anonymous.

**Question 99**

Incorrect

Mark 0 out of 1

Consider the following code snippet:

```
Scanner in = new Scanner(...);
...
if (in.hasNext())
{
    throw new IOException("End of file expected");
}
```

Which of the following statements about this code is correct?

- A) The program will display the message "End of file expected" if there is no data.
- B) The program will throw an exception if there is no data.
- C) The program will display the message "End of file expected" if there is data left in the input when the if statement is executed.
- D) The program will throw an exception if there is data left in the input when the if statement is executed.

Select one:

- a. The program will throw an exception if there is data left in the input when the if statement is executed.
- b. The program will display the message "End of file expected" if there is no data.
- c. The program will throw an exception if there is no data.
- d. The program will display the message "End of file expected" if there is data left in the input when the if statement is executed. X

Your answer is incorrect.

The correct answer is: The program will throw an exception if there is data left in the input when the if statement is executed.

**Question 100**

Incorrect

Mark 0 out of 1

An inner class can access local variables from the enclosing scope only if they are declared as \_\_\_\_.

Select one:

- a. public
- b. private
- c. static
- d. final X

The correct answer is: public

