Name_____

Q1: Which of the following does *not* represent a capability of the printf method?

a.Center justification of outputs.
b.Left justification of outputs.
c.Right justification of outputs.
d.Inserting literal characters at precise locations in a line of output.

Q2: Each format specifier begins with a(n) _____ and is followed by a conversion character that represents the data type of the value to output.

a.asterisk (*).
b.percent sign (%).
c.dollar sign ($).
d.question mark (?).

Q3: What does the 4 signify in the following statement?
System.out.printf("%4d\n", 123);

a.degree of exponentiation
b.floating point precision
c.field width
d.none of these

Q4: The statement
System.out.printf("%-7.2f", 98.736);
uses _____ for the precision, _____ for the field width and outputs the value 98.74 _____.

a.7, 2, left justified.
b.2, 7, left justified.
c.2, 7, right justified.
d.7, 2, right justified.

Q5: The static method _____ of class String returns a formatted String.

a. printf.
b. format.
c. formatString.
d. toFormatString.

Q6: Which of the following should usually be **private**?

a. Methods.
b. Constructors.
c. Variables (or fields).
d. All of the above.

Q7: Static class variables:

a. are final.
b. are **public**.
c. are **private**.
d. are shared by all objects of a class.

Q8: Which of the following statements about arrays are true?

A. Arrays are a group of variables containing values that all have the same type.
B. Elements are located by index or subscript.
C. The length of an array c is determined by the expression c.length();.
D. The zeroth element of array c is specified by c[0].

a. A, C, D.
b. A, B, D.
c. C, D.
d. A, B, C, D.

Q9: A programmer must do the following before using an array:

a. declare then reference the array.
b. create then declare the array.
c. create then reference the array.
d. declare then create the array.

Q10: Consider the code segment below. Which of the following statements is *false*?

```
int g[];
g = new int[ 25 ];
```

a. The first statement declares an array reference.
b. The second statement creates the array.
c. g is a reference to an array of integers.
d. The value of g[3] is -1.

Q11: What do the following statements do?

```
double array[];
array = new double[ 14 ];
```

a. Creates a double array containing 13 elements.
b. Creates a double array containing 14 elements.
c. Creates a double array containing 15 elements.
d. Declares but does not create a double array.

Q12: Which of the following initializer lists would correctly set the elements of array n?

a. int n[] = { 1, 2, 3, 4, 5 };.
b. array n[int] = { 1, 2, 3, 4, 5 };.
c. int n[5] = { 1; 2; 3; 4; 5 };.
d. int n = new int(1, 2, 3, 4, 5);.

Q13: Invalid possibilities for array indices include ____.

a. Positive integers.
b. Negative integers.
c. Zero.
d. None of the above.

Q14: Which expression adds 1 to the element of array arrayName at index i?

a. ++arrayName[i].
b. arrayName++[i].
c. arrayName[i++].
d. None of the above.

Q15: Consider integer array values, which contains 5 elements. Which statements successfully *swap* the contents of the array at index 3 and index 4?

a.

```
values[ 3 ] = values[ 4 ];
values[ 4 ] = values[ 3 ];
```

b.

```
values[ 4 ] = values[ 3 ];
values[ 3 ] = values[ 4 ];
```

c.

```
int temp = values[ 3 ];
values[ 3 ] = values[ 4 ];
values[ 4 ] = temp;
```

d.

```
int temp = values[ 3 ];
values[ 3 ] = values[ 4 ];
values[ 4 ] = values[ 3 ];
```

Q16: Assume array items contains the values 0, 2, 4, 6 and 8. Which of the following set of statements uses the for loop to display each value in array items?

a.

```
for ( int i = 0; i <= items.length; i++ )
  System.out.prinf( "%d\n", items[ i ] );
```

b.

```
for (int i = 1; i < items.length; i++)
  System.out.prinf( "%d\n", items[ i ] );
```

c.

```
for (int i = 0; i < items.length; i++)
  System.out.prinf( "%d\n", i );
```

d.

```
for (int i = 0; i < items.length - 1; i++)
  System.out.prinf( "%d\n", items[ i ] );
```

Q17: In an expression containing values of the types int and double, the _____ values are _____ to _____ values for use in the expression.

a. int, promoted, double.
b. int, demoted, double.
c. double, promoted, int.
d. double, demoted, int.

Q18: Which of the following statements about the **continue** statement is true?

a. The **continue** statement is used to exit a repetition structure early and continue execution after the loop.
b. The **continue** statement is used to continue after a **switch** statement.
c. The **continue** statement does not alter the flow of control.
d. A **continue** statement proceeds with the next iteration of the immediately enclosing **while**, **for**, **do…while** statement.

Q19: Information is passed to a method in:

a. the method name.
b. that method's return.
c. the method body.
d. the arguments to the method.

Q20. To declare a method as static, place the keyword static before _____ in the method's declaration.

a. the method modifier.
b. the return type.
c. the method name.
d. the argument list.

Q21: Which of the following is *not* true about the conditional operator (?:)?

a. The conditional operator is a ternary operator, meaning that it takes three operands.
b. The first operand is a boolean expression.
c. The second operand is the result value if the condition evaluates to false.
d. The second operand is the result value if the condition evaluates to true.

Q22: Which is a correct static method call of Math class method sqrt?

a. sqrt(900);.
b. math.sqrt(900);.
c. Math.sqrt(900);.
d. Math math = new Math(); math.sqrt(900);.

Q23: The parameter list in the method header and the arguments in the method call must agree in:

a. number
b. type
c. order
d. all of the above

Q24: Which operator can be used in string concatenation?

a. *.
b. +=.
c. ++.
d. =+.

Q25: A class instance creation expression contains:
a. Parentheses.
b. The new keyword.
c. The name of the class.
d. All of the above.

Q26: Which of the following promotions of primitive types is NOT allowed to occur?

a. char to int.
b. int to double.
c. short to long.
d. double to int.

Q27: Which statement below could be used to simulate the outputs of tossing a quarter to get heads or tails? Suppose *randomNumbers* is a Random object.

a. randomNumbers.nextInt(3);
b. randomNumbers.nextInt(2);
c. randomNumbers.nextInt(1);
d. randomNumbers.nextInt(2) + 1;

Q28: Which statement below could be used to simulate the outputs of rolling a six-sided die? Suppose *randomNumbers* is a Random object.

a. 1 + randomNumbers.nextInt(6);
b. 1 + randomNumbers.nextInt(7);
c. 6 + randomNumbers.nextInt(1);
d. 3 + randomNumbers.nextInt(3);

Q29: Which of the following statements describes block scope?

a. It begins at the opening { of the class declaration and terminates at the closing }
b. It limits label scope to only the method in which it is declared.
c. It begins at the identifier's declaration and ends at the terminating right brace (}).
d. It is valid for one statement only.

Q30: Which of the following is not a syntax error?

a. System.out.println('Hello world!'):
b. System.out.println("Hello world!');
c. System.out.println("Hell/xx world!");
d. System.out.println(Hello world!);

Q31: Which of the following will count down from 10 to 1 correctly?

a. for (int j = 10; j <= 1; j++)
b. for (int j = 1; j <= 10; j++)
c. for (int j = 10; j > 1; j--)
d. for (int j = 10; j > 0; j--)

Q32: Which of the following is *not* a syntax error?

a. Neglecting to initialize a local variable in a method before it is used.
b. Using a single equals sign instead of a double equals sign in the condition of an *if* statement.
c. Placing a semicolon at the end of the first line of an *if* statement.
d. Omitting the left and right parenthesis for the condition of an if statement.

Q33: Every Java application is composed of at least one:

a. local variable
b. instance variable
c. public class declaration
d. imported class

Q34: Any field declared with keyword _____ is constant.

a. static.
b. const.
c. constant.
d. final.

Q35: Declaring main as _____ allows the JVM to invoke main without creating an instance of the class.

a. public.
b. void.
c. static.
d. final.

Q36: A Java class can have which of the following methods?

A. void foo(int a)
B. void foo(int a, int b)
C. void foo(double a)
D. void foo(double a, double b)
E. void foo(int b)

a. All of the above.
b. A, B, D, E.
c. A, B, C, D.
d. A, C, D, E.

Q37: Which of the following statements is *true*?

a. Methods and instance variables can both be either **public** or **private**.
b. Information hiding is achieved by restricting access to class members via keyword public.
c. The private members of a class are directly accessible to the client of a class.
d. None of the above is true.

Q38: A constructor *cannot*:

a. be overloaded.
b. initialize variables to their defaults.
c. specify return types or return values.
d. have the same name as the class.

Q39: Using **public** *set* methods provides data integrity if:

a. The instance variables are **public**.
b. The instance variables are **private**.
c. The methods perform validity checking.
d. Both b and c.

Q40. The empty statement is denoted with what symbol?
a. Semicolon ;
b. Parentheses ()
c. Braces {}
d. End-of-line comment //