

Starting Out with Java Early Objects, 5e (Gaddis)
Chapter 2 Java Fundamentals

2.1 Multiple Choice Questions

1) Which of the following is not a valid Java comment?

- A) `/** Comment 1 */`
- B) `*/ Comment 2 /*`
- C) `// Comment 3`
- D) `/* Comment 4 */`

Answer: B

2) When saving a Java source file, save it with an extension of

- A) `.java.`
- B) `.javac.`
- C) `.src.`
- D) `.class.`

Answer: A

3) This is a value that is written into the code of a program.

- A) Literal
- B) Assignment statement
- C) Operator
- D) Variable

Answer: A

4) Which of the following is not a rule that must be followed when naming identifiers?

- A) After the first character, you may use the letters a-z, A-Z, an underscore, a dollar sign, or digits 0-9.
- B) Identifiers can contain spaces.
- C) Uppercase and lowercase characters are distinct.
- D) The first character must be one of the letters a-z, A-Z, an underscore or a dollar sign.

Answer: B

5) Character literals are enclosed in _____, and string literals are enclosed in _____.

- A) single quotes, double quotes
- B) double quotes, single quotes
- C) single quotes, single quotes
- D) double quotes, double quotes

Answer: A

6) What is the result of the following expression?

`17 % 3 * 2 - 12 + 15`

- A) 105
- B) 12
- C) 7
- D) 8

Answer: C

7) What will be the value of `z` after the following statements have been executed?

```
int x = 4, y = 33;
double z;
z = (double) (y / x);
```

- A) 8.25
- B) 4
- C) 0
- D) 8.0

Answer: D

8) What is the result of the following expression?

`10 + 5 * 3 - 20`

- A) -5
- B) -50
- C) 5
- D) 25

Answer: C

9) Variables are classified according to their

- A) names.
- B) values.
- C) location in memory.
- D) data type.

Answer: D

10) Which of the following statements will correctly convert the data type, if `x` is a `float` and `y` is a `double`?

- A) `x = float y;`
- B) `x = <float>y;`
- C) `x = (float)y;`
- D) `x = y;`

Answer: C

11) The `boolean` data type may contain the following range of values:

- A) -128 to +127.
- B) `true` or `false`.
- C) -2,147,483,648 to +2,147,483,647.
- D) -32,768 to +32,767.

Answer: B

12) What output will be displayed as a result of executing the following code?

```
int x = 5, y = 20;  
x += 32;  
y /= 4;  
System.out.println("x = " + x + ", y = " + y);
```

- A) `x = 160, y = 80`
- B) `x = 32, y = 4`
- C) `x = 37, y = 5`
- D) `x = 9, y = 52`

Answer: C

13) This is a named storage location in the computer's memory.

- A) Operator
- B) Constant
- C) Literal
- D) Variable

Answer: D

14) Which of the following statements is invalid?

- A) `double r = 9.4632E15;`
- B) `double r = 9.4632e15;`
- C) `double r = 2.9X106;`
- D) `double r = 326.75;`

Answer: C

15) To print "Hello, world" on the monitor, use the following Java statement:

- A) `System.out.println("Hello, world");`
- B) `System Print = "Hello, world";`
- C) `SystemOutPrintln('Hello, world');`
- D) `system.out.println{Hello, world};`

Answer: A

16) Variables of the `boolean` data type are useful for

- A) evaluating conditions that are either `true` or `false`.
- B) working with small integers.
- C) working with very large integers.
- D) evaluating scientific notation.

Answer: A

17) What would be displayed as a result of the following code?

```
int x = 578;      System.out.print("There are " +  
                  x + 5 + "\n" +  
                  "hens in the hen house.");
```

- A) There are 583
hens in the hen house.
- B) There are 5785
hens in the hen house.
- C) There are x5\nhens in the hen house.
- D) There are 5785 hens in the hen house.

Answer: B

18) In the following Java statement what value is stored in the variable name?

```
String name = "John Doe";
```

- A) "name"
- B) the memory address where "John Doe" is located
- C) the memory address where name is located
- D) "John Doe"

Answer: B

19) What will be the displayed when the following code is executed?

```
final int x = 22, y = 4;  
y += x;  
System.out.println("x = " + x + ", y = " + y);
```

- A) x = 22, y = 26
- B) x = 22, y = 4
- C) x = 22, y = 88
- D) Nothing. There is an error in the code.

Answer: D

20) A Java program must have at least one

- A) comment.
- B) `System.out.println()` ; statement.
- C) class definition.
- D) variable declaration.

Answer: C

21) What will be displayed after the following statements have been executed?

```
int x = 15, y = 20, z = 32;
x += 12;
y /= 6;
z -= 14;
System.out.println("x = " + x +
                    ", y = " + y +
                    ", z = " + z);
```

- A) x = 27, y = 3.333, z = 18
- B) x = 27, y = 2, z = 18
- C) x = 37, y = -14, z = 4
- D) x = 27, y = 3, z = 18

Answer: D

22) Which of the following statements correctly creates a Scanner object for keyboard input?

- A) Scanner kbd = new Scanner(System.keyboard);
- B) Scanner keyboard = new Scanner(System.in);
- C) Scanner keyboard(System.in);
- D) Keyboard scanner = new Keyboard(System.in);

Answer: B

23) What will be the value of z as a result of executing the following code?

```
int x = 5, y = 28;
float z;
z = (float) (y / x);
```

- A) 5.6
- B) 3.0
- C) 5.0
- D) 5.60

Answer: C

24) The primitive data types only allow a(n) _____ to hold a single value.

- A) class
- B) literal
- C) object
- D) variable

Answer: D

25) Which Scanner class method reads a String?

- A) nextLine
- B) charAt
- C) nextString
- D) getLine

Answer: A

26) This statement tells the compiler where to find the `JOptionPane` class and makes it available to your program.

- A) `import javax.swing.JOptionPane;`
- B) `import Java.Swing.JOptionPane;`
- C) `import JOptionPane;`
- D) `import javax.JOptionPane;`

Answer: A

27) The _____ method is used to display a message dialog.

- A) `showMessageDialog`
- B) `messageDialog`
- C) `messageDialogShow`
- D) `showDialog`

Answer: A

28) A(n) _____ is a dialog box that prompts the user for input.

- A) input box
- B) user prompt
- C) adaptive dialog
- D) input dialog

Answer: D

29) The simplest way you can use the `System.out.printf` method is

- A) with a format string, and one format specifier.
- B) with only a format string, and no additional arguments.
- C) with a format string, and one or more format specifiers.
- D) with only one format specifier, and no format string.

Answer: B

30) If you wish to use the `System.out.printf` method to print a string argument, use the _____ format specifier.

- A) `%d`
- B) `%b`
- C) `%f`
- D) `%s`

Answer: D

2.2 True/False Questions

1) Programming style includes techniques for consistently putting spaces and indentation in a program so visual cues are created.

Answer: TRUE

2) Both character literals and string literals can be assigned to a `char` variable.

Answer: FALSE

3) A variable's scope is the part of the program that has access to the variable.

Answer: TRUE

4) Named constants are initialized with a value, and that value cannot change during the execution of the program.

Answer: TRUE

5) When you call one of the `Scanner` class's methods to read a primitive value, such as `nextInt` or `nextDouble`, and then call the `nextLine` method to read a string, an annoying and hard-to-find problem can occur.

Answer: TRUE

6) A message dialog is a quick and simple way to ask the user to enter data.

Answer: FALSE

7) The Java API provides a class named `Math`, which contains numerous methods that are useful for performing complex mathematical operations.

Answer: TRUE

8) Unlike a console program, a program that uses `JOptionPane` does not automatically stop executing when the end of the `main` method is reached.

Answer: TRUE

9) The `System.out.printf` method allows you to format output in a variety of ways.

Answer: TRUE

10) If you use a flag in a format specifier, you must write the flag before the field width and the precision.

Answer: TRUE