**Starting Out with Java Early Objects 6e (Gaddis)**

**Chapter 2 Java Fundamentals**

**TRUE/FALSE**

1. Programming style includes techniques for consistently putting spaces and indentation in a program to help create visual cues.

ANS: T

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

ANS: F

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

ANS: T

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

ANS: T

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.

ANS: T

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

ANS: F

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

ANS: T

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

ANS: T

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

ANS: T

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

ANS: T

**MULTIPLE CHOICE**

1. Which of the following is a value that is written into the code of a program?

|  |  |
| --- | --- |
| a. | a literal |
| b. | an assignment statement |
| c. | an operator |
| d. | a variable |

ANS: A

2. Which of the following is a named storage location in the computer's memory?

|  |  |
| --- | --- |
| a. | a literal |
| b. | an operator |
| c. | a constant |
| d. | a variable |

ANS: D

3. Which of the following is not a valid Java comment?

|  |  |
| --- | --- |
| a. | **/\*\* Comment one \*/** |
| b. | **\*/ Comment two /\*** |
| c. | **// Comment three** |
| d. | **/\* Comment four \*/** |

ANS: B

4. A Java source file must be saved with the extension

|  |  |
| --- | --- |
| a. | **.java** |
| b. | **.javac** |
| c. | **.src** |
| d. | **.class** |

ANS: A

5. 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 the 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. |

ANS: B

6. 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 |

ANS: A

7. Variables are classified according to their

|  |  |
| --- | --- |
| a. | names |
| b. | values |
| c. | locations |
| d. | data types |

ANS: D

8. What is the result of the following expression?

**17 % 3 \* 2 - 12 + 15**

|  |  |
| --- | --- |
| a. | **105** |
| b. | **12** |
| c. | **7** |
| d. | **8** |

ANS: C

9. What is the result of the following expression?

**10 + 5 \* 3 - 20**

|  |  |
| --- | --- |
| a. | **-5** |
| b. | **-50** |
| c. | **5** |
| d. | **25** |

ANS: C

10. 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** |

ANS: B

11. What is 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** |

ANS: D

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** |

ANS: C

13. 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;** |

ANS: C

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;** |

ANS: C

15. To print **"Hello, world"** on the monitor, which of the following Java statements should be used?

|  |  |
| --- | --- |
| a. | **System.out.println("Hello, world");** |
| b. | **System Print = "Hello, world";** |
| c. | **SystemOutPrintln('Hello, world');** |
| d. | **system.out.println(Hello, world);** |

ANS: A

16. The **boolean** data type may contain which of 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** |

ANS: B

17. 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 |

ANS: A

18. What would be displayed as a result of executing 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.** |

ANS: B

19. What would be displayed as a result of executing the following code?

**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. |

ANS: D

20. What would be displayed as a result of executing the following code?

**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** |

ANS: D

21. What is the value of **z** after the following code is executed?

**int x = 5, y = 28;**

**float z;**

**z = (float) (y / x);**

|  |  |
| --- | --- |
| a. | **5.6** |
| b. | **3.0** |
| c. | **5.0** |
| d. | **5.60** |

ANS: C

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);** |

ANS: B

23. Which **Scanner** class method reads a **String**?

|  |  |
| --- | --- |
| a. | **nextLine** |
| b. | **charAt** |
| c. | **nextString** |
| d. | **getLine** |

ANS: A

24. Which 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;** |

ANS: A

25. The \_\_\_\_\_\_\_\_\_\_ method is used to display a message dialog.

|  |  |
| --- | --- |
| a. | **showMessageDialog** |
| b. | **messageDialog** |
| c. | **messageDialogShow** |
| d. | **showDialog** |

ANS: A

26. The primitive data types only allow a(n) \_\_\_\_\_\_\_\_\_\_ to hold a single value.

|  |  |
| --- | --- |
| a. | class |
| b. | literal |
| c. | object |
| d. | variable |

ANS: D

27. A Java program must have at least one of the following:

|  |  |
| --- | --- |
| a. | a comment |
| b. | a class definition |
| c. | a **System.out.println();** statement |
| d. | a variable declaration |

ANS: B

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 |

ANS: D

29. The simplest way to 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 |

ANS: B

30. If you want to use the **System.out.printf** method to print a string argument , use the \_\_\_\_\_\_\_\_\_\_ format specifier.

|  |  |
| --- | --- |
| a. | **%d** |
| b. | **%b** |
| c. | **%f** |
| d. | **%s** |

ANS: D