

## Chapter 2

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### MULTIPLE CHOICE

1. Which one of the following would contain the translated Java byte code for a program named Demo?
  - a. Demo.java
  - b. Demo.code
  - c. Demo.class
  - d. Demo.byte

ANS: C

2. To compile a program named First, use the following command:
  - a. java First.java
  - b. javac First
  - c. javac First.java
  - d. compile First.javac

ANS: C

3. A Java program must have at least one of these:
  - a. Class definition
  - b. Variable
  - c. Comment
  - d. System.out.println(); statement

ANS: A

4. In Java, the beginning of a comment is marked with:
  - a. //
  - b. ""
  - c. ;
  - d. #

ANS: A

5. The term \_\_\_\_\_ typically refers to the device that displays console output.
  - a. Standard output device
  - b. Central processing unit
  - c. Secondary storage device
  - d. Liquid crystal display

ANS: A

6. In Java, \_\_\_\_\_ must be declared before they can be used.
  - a. Variables
  - b. Literals
  - c. Key words
  - d. Comments

ANS: A

7. If the following Java statements are executed, what will be displayed?

```
System.out.println("The top three winners are\n");
System.out.print("Jody, the Giant\n");
System.out.print("Buffy, the Barbarian");
System.out.println("Adelle, the Alligator");
```

- a. The top three winners are  
Jody, the Giant  
Buffy, the Barbarian  
Adelle, the Alligator
- b. The top three winners are  
Jody, the Giant\nBuffy, the BarbarianAdelle, the Alligator
- c. The top three winners are Jody, the Giant\nBuffy, the BarbarianAdelle, and the Albino
- d. The top three winners are  
Jody, the Giant  
Buffy, the BarbarianAdelle, the Alligator

ANS: D

8. This is a value that is written into the code of a program.
- a. literal
  - b. assignment statement
  - c. variable
  - d. operator

ANS: A

9. When the + operator is used with strings, it is known as the:
- a. Assignment operator
  - b. String concatenation operator
  - c. Addition operator
  - d. Combined assignment operator

ANS: B

10. What would be printed out as a result of the following code?

```
System.out.println("The quick brown fox" +
                  "jumped over the \n"
                  "slow moving hen.");
```

- a. The quick brown fox jumped over the \nslow moving hen.
- b. The quick brown fox jumped over the  
slow moving hen.
- c. The quick brown fox  
jumped over the  
slow moving hen.
- d. Nothing. This is an error.

ANS: D

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

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

ANS: B

12. Which of the following cannot be used as identifiers in Java?
- a. Variable names
  - b. Class names
  - c. Key words
  - d. All of the above
  - e. None of the above

ANS: C

13. In Java, it is standard practice to capitalize the first letter of:
- a. Class names
  - b. Variable names
  - c. Key words
  - d. Literals

ANS: A

14. Which of the following is not a primitive data type?
- a. short
  - b. long
  - c. float
  - d. String

ANS: D

15. Which of the following is valid?
- a. 

```
float y;  
y = 54.9;
```
  - b. 

```
float y;  
double z;  
z = 934.21;  
y = z;
```
  - c. 

```
float w;  
w = 1.0f;
```
  - d. 

```
float v;  
v = 1.0;
```

ANS: C

16. The `boolean` data type may contain values in the following range of values
- a. `true` or `false`

- b. -128 to + 127
- c. - 2,147,483,648 to +2,147,483,647
- d. - 32,768 to +32,767

ANS: A

17. Character literals are enclosed in \_\_\_\_; string literals are enclosed in \_\_\_\_.
- a. single quotes; single quotes
  - b. double quotes; double quotes
  - c. single quotes; double quotes
  - d. double quotes; single quotes

ANS: C

18. What is the result of the following expression?

$10 + 5 * 3 - 20$

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

ANS: B

19. What is the result of the following expression?

$25 / 4 + 4 * 10 \% 3$

- a. 19
- b. 5.25
- c. 3
- d. 7

ANS: D

20. What 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 = 32, y = 4
- b. x = 9, y = 52
- c. x = 37, y = 5
- d. x = 160, y = 80

ANS: C

21. 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. 5.60
- b. 5.6
- c. 3.0
- d. 5.0

ANS: D

22. 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 = 4
- b. x = 22, y = 26
- c. x = 22, y = 88
- d. Nothing, this is an error

ANS: D

23. In the following Java statement what value is stored in the variable name?

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

- a. John Doe
- b. The memory address where "John Doe" is located
- c. name
- d. The memory address where name is located

ANS: B

24. What will be displayed as a result of executing the following code?

```
int x = 6;
String msg = "I am enjoying this class.";
String msg1 = msg.toUpperCase();
String msg2 = msg.toLowerCase();
char ltr = msg.charAt(x);
int strSize = msg.length();
System.out.println(msg);
System.out.println(msg1);
System.out.println(msg2);
System.out.println("Character at index x = " +
    ltr);
System.out.println("msg has " + strSize +
    "characters.");
```

- a. I am enjoying this class.  
I AM ENJOYING THIS CLASS.

- i am enjoying this class.  
Character at index x = e  
msg has 24 characters.
- b. I am enjoying this class.  
I AM ENJOYING THIS CLASS.  
i am enjoying this class.  
Character at index x = e  
msg has 25 characters.
- c. I am enjoying this class.  
I AM ENJOYING THIS CLASS.  
i am enjoying this class.  
Character at index x = n  
msg has 24 characters.
- d. I am enjoying this class.  
I AM ENJOYING THIS CLASS.  
i am enjoying this class.  
Character at index x = n  
msg has 25characters.

ANS: D

25. What will be displayed as a result of executing the following code?

```
public class test
{
    public static void main(String[] args)
    {
        int value1 = 9;
        System.out.println(value1);
        int value2 = 45;
        System.out.println(value2);
        System.out.println(value3);
        value = 16;
    }
}
```

- a. 9  
45  
16
- b. 94516
- c. 9 45 16
- d. Nothing, this is an error

ANS: D

26. Which of the following is not a valid comment statement?

- a. // comment 1
- b. /\* comment 2 \*/
- c. \*/ comment 3 /\*
- d. /\*\* comment 4 \*/

ANS: C

27. When saving a Java source file, save it with an extension of
- .javac
  - .class
  - .src
  - .java

ANS: D

28. Every Java application program must have
- a class named MAIN
  - a method named main
  - comments
  - integer variables

ANS: B

29. To print "Hello, world" on the monitor, use the following Java statement
- SystemOutPrintln("Hello, world");
  - System.out.println{"Hello, world"}
  - System.out.println("Hello, world");
  - Print "Hello, world";

ANS: C

30. To display the output on the next line, you can use the println method or use this escape sequence in the print method.
- \n
  - \r
  - \t
  - \b

ANS: A

31. This is a named storage location in the computer's memory.
- Literal
  - Constant
  - Variable
  - Operator

ANS: C

32. 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.");
```

- 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: D

33. Variables are classified according to their
- a. value
  - b. data type
  - c. names
  - d. location in the program

ANS: B

34. The primitive data types only allow a(n) \_\_\_\_\_ to hold a single value.
- a. variable
  - b. object
  - c. class
  - d. literal

ANS: A

35. If `x` has been declared an `int`, which of the following statements is invalid?
- a. `x = 0;`
  - b. `x = -58932;`
  - c. `x = 1,000;`
  - d. `x = 592;`

ANS: C

36. Given the declaration `double r;`, which of the following statements is invalid?
- a. `r = 326.75;`
  - b. `r = 9.4632e15;`
  - c. `r = 9.4632E15;`
  - d. `r = 2.9X106;`

ANS: D

37. Variables of the `boolean` data type are useful for
- a. working with small integers
  - b. evaluating true/false conditions
  - c. working with very large integers
  - d. evaluating scientific notation

ANS: B

38. What is the result of the following expression?

$$25 - 7 * 3 + 12 / 3$$



- a. 6
- b. 8
- c. 10
- d. 12

ANS: B

39. What is the result of the following expression?

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

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

ANS: A

40. 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 = 27, y = 3, z = 18
- d. x = 37, y = 14, z = 4

ANS: C

41. 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. 8
- d. 8.0

ANS: D

42. This is a variable whose content is read only and cannot be changed during the program's execution.

- a. operator
- b. literal
- c. named constant

- d. reserved word

ANS: C

43. What will be displayed after the following statements have been executed?

```
final double x;  
x = 54.3;  
System.out.println("x = " + x );
```

- a. x = 54.3
- b. x
- c. x = 108.6
- d. Nothing, this is an error.

ANS: D

44. Which of the following is a valid Java statement?

- a. String str = 'John Doe';
- b. string str = "John Doe";
- c. string str = 'John Doe';
- d. String str = "John Doe";

ANS: D

45. What will be displayed as a result of executing the following code?

```
int x = 8;  
String msg = "I am enjoying java.";   
String msg1 = msg.toUpperCase();   
String msg2 = msg.toLowerCase();   
char ltr = msg.charAt(x);   
int strSize = msg.length();   
System.out.println(msg);   
System.out.println(msg1);   
System.out.println(msg2);   
System.out.println("Character at index x = " +   
                    ltr);   
System.out.println("msg has " + strSize +   
                    " characters.");
```

- a. I am enjoying java.  
I AM ENJOYING JAVA.  
i am enjoying java.  
Character at index x = j  
msg has 20 characters.
- b. I am enjoying java.  
I AM ENJOYING JAVA.  
i am enjoying java.  
Character at index x = o  
msg has 20 characters.
- c. I am enjoying java.

I AM ENJOYING JAVA.  
i am enjoying java.  
Character at index x = o  
msg has 19 characters.

- d. I am enjoying java.  
I AM ENJOYING JAVA.  
i am enjoying java.  
Character at index x = y  
msg has 19 characters.

ANS: C

46. Which of the following does not describe a valid comment in Java?
- a. Single line comments, two forward slashes - //
  - b. Multi-line comments, start with /\* and end with \*/
  - c. Multi-line comments, start with \*/ and end with /\*
  - d. Documentation comments, any comments starting with /\*\* and ending with \*/

ANS: C

47. Which of the following statements correctly creates a Scanner object for keyboard input?
- a. `Scanner kbd = new Scanner(System.keyboard);`
  - b. `Scanner keyboard(System.in);`
  - c. `Scanner keyboard = new Scanner(System.in);`
  - d. `Keyboard scanner = new Keyboard(System.in);`

ANS: C

48. Which Scanner class method reads an int?
- |                           |                            |
|---------------------------|----------------------------|
| a. <code>readInt()</code> | c. <code>getInt()</code>   |
| b. <code>nextInt()</code> | d. <code>read_int()</code> |

ANS: B

49. Which Scanner class method reads a String?
- |                              |                             |
|------------------------------|-----------------------------|
| a. <code>readString()</code> | c. <code>getString()</code> |
| b. <code>nextString()</code> | d. <code>nextLine()</code>  |

ANS: D

50. Which one of the following methods would you use to convert a string to a double?
- |                                |                                    |
|--------------------------------|------------------------------------|
| a. <code>Byte.ParseByte</code> | c. <code>Integer.parseInt</code>   |
| b. <code>Long.parseLong</code> | d. <code>Double.parseDouble</code> |

ANS: D

**TRUE/FALSE**

1. A Java program will not compile unless it contains the correct line numbers.

ANS: F

2. All Java statements end with semicolons.

ANS: F

3. Java is a case-insensitive language.

ANS: F

4. Although the dollar sign is a legal identifier character, you should not use it because it is normally used for special purposes.

ANS: T

5. Assuming that `pay` has been declared a `double`, the following statement is valid.

```
pay = 2,583.44;
```

ANS: F

6. Named constants are initialized with a value, that value cannot be changed during the execution of the program.

ANS: T

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

ANS: T

8. In Java the variable named `total` is the same as the variable named `Total`.

ANS: F

9. Class names and key words are examples of variables.

ANS: F

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

ANS: F

11. If the compiler encounters a statement that uses a variable before the variable is declared, an error will result.

ANS: T

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

ANS: T