

## Chapter 2

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### MULTIPLE CHOICE

1. 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

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

ANS: A

3. The \_\_\_\_\_ is normally considered the standard output and standard input devices, and usually refer to the monitor and keyboard.
  - a. CRT
  - b. CPU
  - c. secondary storage devices
  - d. console

ANS: D

4. 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

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

d. operator

ANS: A

6. 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

7. 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

8. Which of the following is not a primitive data type?

- a. short
- b. long
- c. float
- d. String

ANS: D

9. 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

10. The `boolean` data type may contain values in the following range of values
- `true` or `false`
  - 128 to +127
  - 2,147,483,648 to +2,147,483,647
  - 32,768 to +32,767

ANS: A

11. Character literals are enclosed in \_\_\_\_\_; string literals are enclosed in \_\_\_\_\_.
- single quotes; single quotes
  - double quotes; double quotes
  - single quotes; double quotes
  - double quotes; single quotes

ANS: C

12. What is the result of the following expression?

$$10 + 5 * 3 - 20$$

- 5
- 5
- 25
- 50

ANS: B

13. What is the result of the following expression?

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

- 19
- 5.25
- 3
- 7

ANS: D

14. 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);
```

- `x = 32, y = 4`
- `x = 9, y = 52`
- `x = 37, y = 5`
- `x = 160, y = 80`

ANS: C

15. 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

16. 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

17. 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

18. 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.  
IAM ENJOYING THIS CLASS.  
i am enjoying this class.  
Character at index x = e  
msg has 24 characters.
- b. I am enjoying this class.  
IAM ENJOYING THIS CLASS.  
i am enjoying this class.  
Character at index x = e  
msg has 25 characters.
- c. I am enjoying this class.  
IAM ENJOYING THIS CLASS.  
i am enjoying this class.  
Character at index x = n  
msg has 24 characters.
- d. I am enjoying this class.  
IAM ENJOYING THIS CLASS.  
i am enjoying this class.  
Character at index x = n  
msg has 25characters.

ANS: D

19. 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

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

- a. // comment 1

- b. `/* comment 2 */`
- c. `*/ comment 3 /*`
- d. `/** comment 4 */`

ANS: C

21. When saving a Java source file, save it with an extension of
- a. `.javac`
  - b. `.class`
  - c. `.src`
  - d. `.java`

ANS: D

22. Every Java application program must have
- a. a class named `MAIN`
  - b. a method named `main`
  - c. comments
  - d. integer variables

ANS: B

23. To print "Hello, world" on the monitor, use the following Java statement
- a. `SystemOutPrintln("Hello, world");`
  - b. `System.out.println{"Hello, world"}`
  - c. `System.out.println("Hello, world");`
  - d. `Print "Hello, world";`

ANS: C

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

ANS: A

25. This is a named storage location in the computer's memory.
- a. Literal
  - b. Constant
  - c. Variable
  - d. Operator

ANS: C

26. 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\nehens in the hen house.
- d. There are 5785  
hens in the hen house.

ANS: D

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

ANS: B

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

ANS: A

29. 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

30. 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

31. 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

32. What is the result of the following expression?

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

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

ANS: B

33. What is the result of the following expression?

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

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

ANS: A

34. 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

35. 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

36. This is a variable whose content is read only and cannot be changed during the program's execution.
- operator
  - literal
  - named constant
  - reserved word

ANS: C

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

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

- x = 54.3
- x
- x = 108.6
- Nothing, this is an error.

ANS: D

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

- String str = 'John Doe';
- string str = "John Doe";
- string str = 'John Doe';
- String str = "John Doe";

ANS: D

39. 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.");
```

- I am enjoying java.  
IAM 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

40. 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

41. 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

42. Which Scanner class method reads an int?
- a. `readInt()`
  - b. `nextInt()`
  - c. `getInt()`
  - d. `read_int()`

ANS: B

43. Which Scanner class method reads a String?
- a. `readString()`
  - b. `nextString()`
  - c. `getString()`
  - d. `nextLine()`

ANS: D

**TRUE/FALSE**

1. All Java statements end with semicolons.

ANS: F

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

ANS: T

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

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

ANS: F

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

ANS: T

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

ANS: T

6. In Java the variable named `one` is the same as the variable named `One`.

ANS: F

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

ANS: F

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

ANS: F

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

ANS: T

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

ANS: T