Starting Out with Java Early Objects 6e (Gaddis)
Chapter 1 Introduction to Computers and Java

TRUE/FALSE

1. Logical errors are mistakes that cause the program to produce erroneous results.

    ANS: T

2. The Java Virtual Machine is a program that reads Java byte code instructions and executes them as they are read.

    ANS: T

3. Colons are used to indicate the end of a Java statement.

    ANS: F

4. Compiled byte code is also called source code.

    ANS: F

5. Application software refers to programs that make the computer useful to the user.

    ANS: T

6. Each byte is assigned a unique number known as an address.

    ANS: T

7. Encapsulation refers to the combining of data and code into a single object.

    ANS: T

8. Java source files end with the `.class` extension.

    ANS: F

9. A procedure is a set of programming language statements that, together, perform a specific task.

    ANS: T

10. A solid-state drive has no moving parts and operates faster than a traditional disk drive.

    ANS: T

MULTIPLE CHOICE

1. While _____ is centered on creating procedures, _____ is centered on creating objects.

    a. procedural programming, object-oriented programming
    b. object-oriented programming, procedural programming
    c. routine programming, method programming
    d. procedural programming, class programming

    ANS: A

2. Which of the following commands will run the compiled Java program named `DoItNow`?

    a. `run DoItNow`
    b. `java DoItNow.java`
    c. `java DoItNow`
    d. `go DoItNow`

    ANS: C

3. RAM is usually

    a. an input/output device
    b. a volatile type of memory, used for temporary storage
    c. secondary storage
    d. a static type of memory, used for permanent storage

    ANS: B

4. The two primary methods of programming in use today are

    a. procedural and object-oriented
    b. hardware and software
    c. practical and theoretical
    d. desktop and mobile

    ANS: A

5. Validating the results of a program is important to

    a. correct runtime errors
    b. make sure the program solves the original problem
    c. create a model of the program
    d. correct syntax error

    ANS: B

6. Software refers to

    a. programs
    b. the physical components a computer is made of
    c. firmware
    d. data stored in RAM

    ANS: A

7. Assume you are at the operating system command line and want to use the following command to compile a program:

    `javac MyClass.java`

Before entering the command you must

a. close all open windows on your computer system
b. make sure you are in the same directory or folder where the `MyClass.java` file is located
c. execute the `java.sun.com` program
d. save the program with the `.comp` extension

ANS: B

8. An object typically hides its data but allows outside code access to

a. the pseudocode
b. the methods that operate on the data
c. private data members
d. the data files

ANS: B

9. Variables are

a. symbolic names made up by the programmer and once created, their values cannot be changed
b. operators that perform operations on one or more operands
c. symbolic names made up by the programmer that represent memory locations
d. reserved words

ANS: C

10. _____ refers to the physical components that a computer is made of.

a. Input
b. Main memory
c. Control unit
d. Hardware

ANS: D

11. A characteristic of _____ is that only an object's methods are able to directly access and make changes to an object's data.

a. classes
b. procedures
c. data hiding
d. component reusability

ANS: C

12. Because Java byte code is the same on all computers, compiled Java programs

a. are nonexistent
b. must be re-compiled for each different machine before they can be run
c. are highly portable
d. cannot run on computers with different operating systems

ANS: C

13. A cross between human language and a programming language is called

a. a compiler
b. pseudocode
c. the Java Virtual Machine
d. the Java language

ANS: B

14. Byte code instructions are

a. machine code instructions
b. syntax errors
c. read and interpreted by the JVM
d. another name for source code

ANS: C

15. One type of design tool used by programmers when creating a model of a program is

a. the ALU
b. byte code
c. syntax
d. pseudocode

ANS: D

16. Key words are

a. symbols or words that perform operations on one or more operands
b. words or characters representing values that are defined by the programmer
c. the data names in your program
d. words that have a special meaning in the programming language

ANS: D

17. Computers can do many different jobs because they are

a. programmable
b. reliable
c. automated
d. electronic

ANS: A

18. A(n) _____ is a software entity that contains data and procedures.

a. object
b. program
c. class
d. method

ANS: A

19. The original name for Java was

a. *7
b. Oak
c. HotJava
d. JavaScript

ANS: B

20. Application software refers to

   a. the programs that make the computer useful to the user
   b. the operating system
   c. key words
   d. pseudocode

   ANS: A

21. The end of a Java statement is indicated by a _____.

   a. bracket (})
   b. asterisk (*)
   c. semicolon (;)
   d. colon (:)

   ANS: C

22. What is syntax?

   a. the rules that must be followed when writing a program
   b. the words that have a special meaning in the programming language
   c. the symbols or words that perform operations in a program
   d. the words or characters that are defined by the programmer

   ANS: A

23. A set of programming language statements that perform a specific task is a(n)

   a. pseudocode chart
   b. source code
   c. object
   d. procedure

   ANS: D

24. The central processing unit (CPU) consists of two parts which are

   a. the input and output devices
   b. the control unit and the arithmetic and logic unit (ALU)
   c. the control unit and main memory
   d. the arithmetic and logic unit (ALU) and main memory

   ANS: B

25. There are _____ bits in a byte.

   a. 4
   b. 8
   c. 16
   d. 32

   ANS: B

26. A runtime error is usually the result of

   a. a logical error

b.   a syntax error
c.   a compiler error
d.   bad data

ANS: A

27. A(n) _____ is used to write computer programs.

a.   pseudocode document
b.   operating system
c.   application
d.   programming language

ANS: D

28. The data contained in an object is known as

a.   the methods
b.   the attributes
c.   the classes
d.   the fields

ANS: B

29. A computer program is

a.   the same as main memory
b.   only used for desktop computers
c.   a set of instructions that allow the computer to solve a problem or perform a task
d.   another name for an operating system

ANS: C

30. Which of the following is not part of the programming process?

a.   defining and modeling the problem
b.   entering code and compiling it
c.   testing and debugging
d.   All of these are parts of the programming process

ANS: D