**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