

Starting Out with C++: Early Objects, 9th ed. (Gaddis, Walters & Muganda)

Chapter 1 Introduction to Computers and Programming

Chapter 1 Test 1 Key

1) The term **hardware** refers to

- A) the difficulty of programming.
- B) the physical components that make up a computer.
- C) the way a computer's storage space is organized.
- D) the fixed order of a program's instructions.
- E) none of the above.

Answer: B

2) At the heart of a computer is its central processing unit (CPU). Its job is to

- A) fetch instructions.
- B) carry out the operations commanded by the instructions.
- C) produce some result.
- D) do all of the above.
- E) do none of the above.

Answer: D

3) The CPU includes

- A) the arithmetic and logic unit (ALU) and the control unit.
- B) the ALU and the I/O unit.
- C) the I/O unit and the control unit.
- D) the ALU and the main memory unit.
- E) all of the above.

Answer: A

4) An integrated development environment (IDE) normally includes

- A) a text editor.
- B) a compiler.
- C) a debugger.
- D) all of the above.
- E) none of the above.

Answer: D

5) The purpose of a memory address is

- A) to identify the location of a memory cell.
- B) to allow multitasking.
- C) to prevent multitasking.
- D) to locate a program.
- E) none of the above.

Answer: A

6) True/False: Most of the lines in a program contain something meaningful; however, some of the lines may contain nothing at all.

Answer: TRUE

7) Creating a program requires many steps. Three of these are

- A) input, processing, and output.
- B) keywords, operators, and punctuation.
- C) program design, writing source code, and testing.
- D) syntax, logic, and error handling.
- E) none of the above.

Answer: C

8) Memory locations that can hold data are called

- A) operators.
- B) variables.
- C) syntax.
- D) operands.
- E) none of the above.

Answer: B

9) Characters or symbols that perform operations on one or more operands are

- A) syntax.
- B) op codes.
- C) operators.
- D) program ops.
- E) none of the above.

Answer: C

10) True/False: Before a computer can execute a program written in a high level language, such as C++, it must be translated into object code.

Answer: TRUE

11) The computer's main memory is commonly known as

- A) direct-access memory (DAM).
- B) random-access memory (RAM).
- C) read only memory (ROM).
- D) secondary storage.
- E) none of the above.

Answer: B

12) The _____ coordinates the computer's operations by fetching the next instruction and using control signals to regulate the other major computer components.

- A) arithmetic and logic unit (ALU)
- B) traffic controller
- C) instruction manager
- D) control unit
- E) operating system

Answer: D

13) List five elements that are common to all programming languages.

Answer: keywords, programmer-defined symbols, operators, punctuation, and syntax

14) A(n) _____ is a set of instructions that tells the computer how to solve a problem.

- A) compiler
- B) linker
- C) program
- D) operator
- E) variable

Answer: C

15) True/False: Once a value has been stored in a variable it cannot be changed.

Answer: FALSE

16) True/False: The purpose of the compiler is to convert object code into source code.

Answer: FALSE

17) C++ is an example of a _____ programming language.

- A) low-level
- B) mid-level
- C) high-level
- D) binary
- E) non-structured

Answer: C

18) _____ is used in a C++ program to mark the end of a statement, or to separate items in a list.

- A) A separator
- B) Punctuation
- C) An operator
- D) A keyword
- E) A blank space

Answer: B

19) A set of well-defined steps for performing a task or solving a problem is known as

- A) a hierarchy chart.
- B) a flowchart.
- C) a solution engine.
- D) an algorithm.
- E) software engineering.

Answer: D

20) The statements written by a programmer are called

- A) syntax.
- B) object code.
- C) source code.
- D) language elements.
- E) none of the above.

Answer: C

Chapter 1 Test 2 Key

1) Internally, the central processing unit (CPU) consists of two parts:

- A) input devices and output devices.
- B) software and hardware.
- C) the arithmetic and logic unit (ALU) and the control unit.
- D) single-task devices and multi-task devices.
- E) the compiler and the linker.

Answer: C

2) Even when there is no power to the computer, data can be held in

- A) a secondary storage device.
- B) random access memory (RAM).
- C) variables.
- D) a computer program.
- E) any of the above.

Answer: A

3) Words with a special meaning that may be used only for their intended purpose are known as

- A) single purpose words..
- B) programmer-defined identifiers.
- C) keywords.
- D) syntax words.
- E) none of the above.

Answer: C

4) A storage location in the computer's memory that can hold a piece of data is called

- A) a variable.
- B) a number.
- C) a data cell.
- D) a storage box.
- E) RAM.

Answer: A

5) A _____ is a complete instruction that causes the computer to perform some action.

- A) line
- B) line number
- C) statement
- D) statement number
- E) programming construct

Answer: C

6) True/False: If a new value is stored in a variable, it replaces whatever value was previously there.

Answer: TRUE

- 7) A variable definition always specifies the name of a variable and tells
- A) what type of data it can hold.
 - B) how many times it will be used in the program.
 - C) the part of the code where it will be used.
 - D) what its starting value is.
 - E) all of the above.

Answer: A

- 8) Three primary activities of a typical program are
- A) creating variables, operators, and keywords.
 - B) executing lines, statements, and keywords.
 - C) reading, writing, and arithmetic.
 - D) input, processing, and output.
 - E) compiling, linking, and debugging.

Answer: D

- 9) Which of the following is an example of a secondary storage device?
- A) a hard disk drive
 - B) a USB flash drive
 - C) a CD
 - D) a DVD
 - E) all of the above

Answer: E

- 10) True/False: Most modern computers can understand and execute pseudocode.

Answer: FALSE

- 11) Mistakes that allow a program to run, but cause it to produce erroneous results are called
- A) syntax errors.
 - B) logic errors.
 - C) compiler errors.
 - D) linker errors.
 - E) none of the above.

Answer: B

- 12) True/False: Syntax involves rules that must be followed when writing a program.

Answer: TRUE

- 13) The programs that control and manage the basic operations of a computer are generally referred to as
- A) control programs.
 - B) utility programs.
 - C) system hardware programs.
 - D) system software.
 - E) computer application programs.

Answer: D

- 14) True/False: Executable code is computer code that contains no errors.

Answer: FALSE

15) _____ is an example of volatile memory, used for temporary storage while a program is running.

- A) A flash drive
- B) The ALU
- C) RAM
- D) The CPU
- E) A hard disk

Answer: C

16) The programmer usually enters source code into a computer using

- A) a preprocessor.
- B) a compiler.
- C) a linker.
- D) a debugger.
- E) none of the above.

Answer: E

17) High-level programming languages include

- A) C++ and Java.
- B) C++ and JavaScript.
- C) C++ and Visual Basic.
- D) all of the above.
- E) A and B, but not C.

Answer: D

18) True/False: IDE stands for internal data engine.

Answer: FALSE

19) In the C++ statement

```
pay = rate * hours;
```

the * symbol is an example of

- A) an operator.
- B) an operand.
- C) a variable separator.
- D) syntax.
- E) none of the above.

Answer: A

20) A software package that includes a text editor, compiler, debugger, and assorted utilities for creating, testing, and running software is called

- A) a low-level programming language.
- B) a high-level programming language.
- C) a software utility package (SUP).
- D) an operating system.
- E) none of the above.

Answer: E