

**TRUE/FALSE**

1. Software engineering is a field that encompasses designing, writing, testing, debugging, documenting, modifying, and maintaining computer programs.

ANS: T

2. Pseudocode is a form of a program statement that will always evaluate to "false."

ANS: F

3. In programming, the terms "line" and "statement" always mean the same thing.

ANS: F

4. In C++, key words are written in all lowercase letters.

ANS: T

5. The preprocessor executes after the compiler.

ANS: F

6. Machine language is an example of a high-level language.

ANS: F

7. A CPU only understands machine language instructions.

ANS: T

8. Programs are often referred to as hardware.

ANS: F

9. The CPU is the most important component in a computer because without it, the computer could not run software.

ANS: T

10. The term "bit" stands for binary digit.

ANS: T

## MULTIPLE CHOICE

1. What does the term *hardware* refer to?
  - a. The relative difficulty of writing computer programs
  - b. The physical components that make up a computer
  - c. The way a computer's storage space is organized
  - d. The logical flow of instructions
  - e. None of these

ANS: B

2. A(n) \_\_\_\_\_ is a set of instructions that the computer follows to solve a problem.
  - a. compiler
  - b. linker
  - c. program
  - d. operator
  - e. None of these

ANS: C

3. Computer programs are also known as
  - a. hardware
  - b. firmware
  - c. software
  - d. Any of these
  - e. None of these

ANS: C

4. At the heart of a computer is its central processing unit. The CPU's job is:
  - a. To fetch instructions
  - b. To carry out the operations commanded by the instructions
  - c. To produce some outcome or resultant information
  - d. All of these
  - e. None of these

ANS: D

5. A computer stores a program while it is running
  - a. in main memory
  - b. on a hard disk
  - c. on the computer monitor
  - d. in the CPU
  - e. None of these

ANS: A

6. The \_\_\_\_\_ decodes an instruction and generates an electronic signal.
  - a. Arithmetic and Logic Unit
  - b. Main memory
  - c. BIOS
  - d. Control Unit
  - e. None of these

ANS: D

7. The CPU's control unit retrieves the next instruction in a sequence of program instructions from main memory in the \_\_\_\_\_ stage.
- fetch
  - decode
  - execute
  - portability

ANS: A

8. During which stage does the central processing unit analyze the instruction and encode it in the form of a number, and then generate an electronic signal?
- fetch
  - decode
  - execute
  - portability

ANS: B

9. The two parts of the CPU are
- the output device and the input device
  - the software and the hardware
  - the Control Unit and the Arithmetic and Logic Unit
  - the single-task device and the multi-task device
  - None of these

ANS: C

10. A volatile type of memory that is used for temporary storage is
- an address
  - the ALU
  - RAM
  - a disk drive
  - None of these

ANS: C

11. The purpose of a memory address is:
- to identify the location of a byte in memory
  - to prevent multitasking
  - to obtain an algorithm
  - to improve the speed of processing
  - None of these

ANS: A

12. Programs are normally stored in \_\_\_\_\_ and loaded into main memory as needed.
- the input device
  - the output device
  - secondary storage
  - the CPU

e. None of these

ANS: C

13. A computer monitor is a type of

- a. input device
- b. output device
- c. storage device
- d. software
- e. None of these

ANS: A

14. Which of the following is *not* a common input device?

- a. keyboard
- b. mouse
- c. digital camera
- d. printer
- e. All are common input devices

ANS: D

15. Which of the following is *not* one of the major components of a computer system?

- a. the preprocessor
- b. the CPU
- c. main memory
- d. input/output devices
- e. secondary storage

ANS: A

16. A set of well-defined steps for performing a task or solving a problem is known as a(n):

- a. hierarchy chart
- b. algorithm
- c. instruction set
- d. statement
- e. None of these

ANS: B

17. When a programmer saves to a file the statements he or she writes to create a program, these statements are

- a. high level
- b. source code
- c. a preprocessor file
- d. object code
- e. None of these

ANS: B

18. The programmer usually enters source code into a computer with

- a. a hierarchy chart
- b. a text editor

- c. a compiler
- d. pseudocode
- e. None of these

ANS: B

19. In the process of translating a source file into an executable file, which of the following is the correct sequence?
- a. Source code, preprocessor, modified source code, linker, object code, compiler, executable code
  - b. Preprocessor, source code, compiler, executable code, linker, modified source code, object code
  - c. Source code, compiler, modified source code, preprocessor, object code, linker, executable code.
  - d. Source code, preprocessor, modified source code, compiler, object code, linker, executable code.
  - e. Source code, linker, object code, compiler, modified source code, preprocessor, executable code.

ANS: D

20. An Integrated Development Environment (IDE) typically consists of
- a. a text editor
  - b. a compiler
  - c. a debugger
  - d. All of the above
  - e. None of these

ANS: D

21. \_\_\_\_\_ are used to translate each source code instruction into the appropriate machine language instruction.
- a. modules
  - b. runtime libraries
  - c. compilers
  - d. preprocessor directives
  - e. None of these

ANS: C

22. This is a set of rules that must be followed when constructing a program:
- a. syntax
  - b. punctuation
  - c. key words
  - d. operators
  - e. identifiers

ANS: A

23. Words that have a special meaning and may be used only for their intended purpose are known as
- a. operators
  - b. programmer defined words
  - c. key words

- d. syntax
- e. None of these

ANS: C

24. Which of the following best describes an operator?

- a. An operator is a rule that must be followed when constructing a program.
- b. An operator allows you to perform operations on one or more pieces of data.
- c. An operator marks the beginning or ending of a statement, or is used to separate items in a list.
- d. An operator is a word that has a special meaning.
- e. An operator is a symbolic name that refers to a variable.

ANS: B

25. This is used in a program to mark the beginning or ending of a statement, or separate items in a list:

- a. separators
- b. punctuation
- c. operators
- d. key words
- e. None of these

ANS: B

26. Characters or symbols that perform operations on one or more operands are:

- a. separators
- b. op codes
- c. operators
- d. key words
- e. None of these

ANS: C

27. This is a complete instruction that causes the computer to perform some action:

- a. line
- b. statement
- c. variable
- d. key word
- e. None of these

ANS: B

28. A named storage location in the computer's memory that holds a piece of information is a(n):

- a. variable
- b. operator
- c. key word
- d. statement
- e. None of these

ANS: A

29. A variable definition defines the name of a variable that will be used in a program, as well as:

- a. the type of data it will be used to hold

- b. the operators that will be used on it
- c. the number of times it will be used in the program
- d. the value it will hold
- e. None of these

ANS: A

30. Three primary activities of a program are:
- a. variable definitions, operators, lists of key words
  - b. lines, statements, punctuation
  - c. input, processing, output
  - d. integer, floating-point, character definitions
  - e. None of these

ANS: C

31. Which step uncovers any syntax errors in your program?
- a. editing
  - b. compiling
  - c. linking
  - d. executing
  - e. None of these

ANS: B

32. Mistakes that cause a running program to produce incorrect results are called:
- a. syntax errors
  - b. logic errors
  - c. compiler errors
  - d. linker errors
  - e. None of these

ANS: B

33. The programming process consists of several steps, which include:
- a. key words, operator definitions, punctuation
  - b. design, creation, testing, debugging
  - c. input, processing, output
  - d. syntax, logic, error handling
  - e. None of these

ANS: B

34. The first step in writing a program is to
- a. type the code
  - b. visualize the program running on a computer
  - c. visualize logical errors
  - d. clearly define what the program is to do
  - e. None of these

ANS: D

35. A model often used when creating a program that begins with the overall task and refines it into smaller subtasks is a(n)
- a. flowchart
  - b. UML diagram
  - c. blueprint
  - d. hierarchy chart
  - e. None of these

ANS: D

36. The term that refers to the programmer reading the program from the beginning and stepping through each statement is
- a. pseudocoding
  - b. software engineering
  - c. desk checking
  - d. spot checking
  - e. None of these

ANS: C

37. The two methods used by C++ to write computer programs are:
- a. top-down programming and procedural programming
  - b. procedural programming and object-oriented programming
  - c. pseudocoding and object-oriented programming
  - d. flowcharting and procedural programming
  - e. None of these

ANS: B