

***Starting Out with Programming Logic and Design 6th
edition Gaddis Test Bank***

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Starting Out with Programming Logic and Design 6e (Gaddis)

Chapter 1 Introduction to Computers and Programming

TRUE/FALSE

1. Programs that use an interpreter generally execute faster than compiled programs because they are already entirely translated into machine language when executed.

ANS: F

2. System software typically includes applications that people normally use most often on their computers, such as word processing programs, games, or web browsers.

ANS: F

3. Assembly language is referred to as a high-level language because it is similar to the C++ language.

ANS: F

4. The instruction set for a microprocessor is unique and is typically understood only by the microprocessors of the same brand.

ANS: T

5. The CPU understands binary instructions.

ANS: T

6. A bit that is turned off is represented by the value -1 .

ANS: F

7. The main reason to use secondary storage is to hold data for long periods of time, even when the power to the computer is turned off.

ANS: T

8. RAM is volatile memory which means it cannot be erased.

ANS: F

9. The term software refers to all the physical devices, or components, that a computer is made of.

ANS: F

10. A syntax error does not prevent a program from being compiled and executed.

ANS: F

11. IDEs are specialized software packages that help programmers write programs.

ANS: T

12. Interpreted programs always execute faster than compiled programs.

ANS: F

MULTIPLE CHOICE

1. A(n) _____ is a program that translates a high-level language into a machine language program.
a. compiler b. CPU c. storage device d. IDE

ANS: A

2. A(n) _____ is a software package that usually consists of a text editor, a compiler or interpreter, and tools to test and debug programs.
a. compiler b. CPU c. storage device d. IDE

ANS: D

3. _____ is used to encode real numbers to store them in the computer's memory.
a. Floating-point notation c. Assembly language
b. Unicode d. RAM

ANS: A

4. _____ is an extensive encoding scheme that is compatible with ASCII.
a. Floating-point notation c. Assembly language
b. Unicode d. RAM

ANS: B

5. The physical devices that make up a computer are its _____.
a. software b. applications c. hardware d. CPU

ANS: C

6. Software refers to _____.
a. programs c. the CPU
b. physical components of a computer d. data stored in RAM

ANS: A

7. Programs that make a computer useful for everyday tasks are known as _____.
a. system software c. IDEs
b. application software d. operating systems

ANS: B

8. Which of the following is **not** an example of operating system software?
a. Microsoft Word c. Linux

b. Windows

d. Mac OS X

ANS: A

9. Which of the following is **not** an example of application software?

a. Microsoft Word

c. PowerPoint

b. Windows

d. a web browser

ANS: B

10. Which of the following functions does an interpreter perform with the instructions from a high-level language?

a. it translates

d. it executes

b. it compiles

e. it translates and executes

c. it compiles and translates

f. it compiles and executes

ANS: E

11. _____ is the term used for a set of rules that must be strictly followed when writing a program.

a. Semantics

b. Syntax

c. Grammar

d. Key words

ANS: B

12. The first high-level programming language that could perform complex mathematical calculations was _____.

a. COBOL

b. Ada

c. C++

d. FORTRAN

ANS: D

13. The computer language that uses mnemonics for writing programs is _____.

a. Assembly

b. Ada

c. Java

d. Pascal

ANS: A

14. The _____ cycle is used by the CPU to execute instructions in a program.

a. decode - fetch - execute

c. fetch - decode - execute

b. decode - execute - fetch

d. execute - fetch - decode

ANS: C

15. Which of the following companies does not manufacture microprocessors?

a. Intel

b. Dell

c. AMD

d. Motorola

ANS: B

16. The following is an example of an instruction written in the _____ computer language.

1011000 010100110

a. C++

c. Java

b. Assembly

d. machine language

ANS: D

17. _____ is the encoding technique used to store negative numbers in the computer's memory.

- a. Unicode
- b. ASCII
- c. floating-point notation
- d. two's complement

ANS: D

18. _____ is the coding scheme that contains a set of 128 numeric codes which are used to represent characters in a computer's memory.

- a. Unicode
- b. ASCII
- c. binary numbering
- d. two's complement

ANS: B

19. What is the largest value that can be stored in one byte?

- a. 255
- b. 128
- c. 8
- d. 16

ANS: A

20. The smallest storage location in a computer's memory is known as a _____.

- a. byte
- b. word
- c. bit
- d. switch

ANS: C

21. A computer system consists of all of the following **except** _____.

- a. the CPU
- b. main memory
- c. the operating system
- d. input and output devices

ANS: C

22. The term _____ can be used to describe anything that uses binary numbers.

- a. digital
- b. computer
- c. mnemonic
- d. processor

ANS: A

23. The statements that a programmer writes in a high-level language are called _____.

- a. binary code
- b. pseudocode
- c. source code
- d. processor code

ANS: C

24. Main memory is also called _____.

- a. ROM
- b. RAM
- c. the hard drive
- d. secondary storage

ANS: B

25. USB drives store data in a special type of memory known as _____.

- a. magnetic memory
- b. flash memory
- c. optical server memory
- d. disks

ANS: B

26. Computers can do many different jobs because they are

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

ANS: A

27. Application software refers to _____.

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

ANS: A

28. 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

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

- a. The device
- b. Hardware
- c. Software
- d. The system

ANS: B

30. 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

31. A program is a sequence of instructions stored in _____.

- a. the CPU
- b. the computer's memory
- c. software
- d. the operating system

ANS: B

32. Each different type of CPU has its own _____.

- a. syntax
- b. high-level language
- c. machine language
- d. software

ANS: C

COMPLETION

1. A program cannot be translated if it has _____ errors.

ANS: syntax

2. A _____ language allows the programmer to create very powerful and complex programs without knowing how the CPU works.

ANS: high-level

3. A(n) _____ is used to translate Assembly language programs to machine language to be executed by the CPU.

ANS: assembler

4. In _____ all numeric values are written as sequences of 1s and 0s.

ANS: binary

5. The term _____ stands for a binary digit.

ANS: bit

6. A _____ is a person with the training and skill needed to design, create, and test computer programs.

ANS: programmer

7. Computers can do a wide variety of things because they can be _____.

ANS: programmed

8. The _____ is the most important component of a computer because, without it, the computer could not run software.

ANS: CPU

9. A disk drive, a USB drive, and an optical disk are all types of _____.

ANS: secondary storage

10. Smartphones, car navigation systems, and tablets are all types of _____.

ANS: computers