

Chapter05

True/False

Indicate whether the statement is true or false.

- 1. There are three major categories of software: application software, system software, and operation software.
- 2. The only language that computer hardware understands is a series of electrical signals that represent bits and bytes.
- 3. 3GLs are significantly less procedural than 4GLs.
- 4. In traditional programming, data and the operations to manipulate the data are kept separate from each other.
- 5. A compiler checks one statement at a time.
- 6. If the first statement that an interpreter checks is free of syntactic and execution errors, it compiles the statement into object code and makes the computer execute it.
- 7. When you purchase an application, whether a computer game or a business program, you purchase a compiled version of the code, that is, the object code.
- 8. Project management tools enable the creation and manipulation of local or shared databases.
- 9. Hypermedia enables linking text, pictures, sounds, animations, and video.
- 10. Web page development packages expedite development of Web pages.
- 11. Compilers and interpreters are classified as system software.
- 12. Without an operating system, applications run slowly on a computer.
- 13. The great majority of business and individual software is open source, that is, software that is developed and sold for profit.
- 14. All free software is also open source.
- 15. While many versions of Linux can be downloaded free of charge from the Web, most firms prefer to purchase a packaged version.
- 16. The permissive model of software licensing permits anyone to use, modify, and make applications with the code, but not to use it in proprietary products for sale or licensing.
- 17. Microsoft, SAP, Oracle, and all other for-profit organizations that develop software own their software and license it.
- 18. When an application is developed specifically for an organization, specific program goals and custom requirements are considered during the development process.

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ____ 19. When executives talk about productivity tools, they really mean computer programs, commonly known as software ____.
- a. devices
 - b. applications
 - c. utilities
 - d. appliances
- ____ 20. ____ made programming somewhat easier because they aggregated common commands into “words,” although many of those “words” are not English-like.
- a. Programming languages
 - b. Utility languages
 - c. Assembly languages
 - d. 3GL languages
- ____ 21. Higher-level ____ enable the use of English-like statements to accomplish a goal, and those statements are translated by special software into the machine language.
- a. utility languages
 - b. assembly languages
 - c. appliance languages
 - d. programming languages
- ____ 22. Because 4GLs are very English-like, ____—locating and fixing programming errors—is relatively easy.
- a. compiling
 - b. coding
 - c. assembling
 - d. debugging
- ____ 23. An increasing amount of software is developed using ____.
- a. application languages
 - b. utility languages
 - c. object-oriented programming (OOP) languages
 - d. graphic languages
- ____ 24. ____ use a modular approach, which offers two great advantages: ease of maintenance and efficiency in applications development.
- a. OOP languages
 - b. SOP languages
 - c. assembly languages
 - d. machine languages
- ____ 25. ____ primarily involves modifying programs to meet new business needs, but also debugging of errors that were not detected when testing the developed code.
- a. Recoding
 - b. Reassembling
 - c. Coding
 - d. Maintenance
- ____ 26. The most popular OOP languages are ____, C++, Object Pascal, and Java.
- a. C
 - b. C##
 - c. Smalltalk
 - d. HTML
- ____ 27. A(n) ____ scans the entire source code, looking for errors in the form (syntax) of the code.
- a. compiler
 - b. assembler
 - c. coder
 - d. programmer
- ____ 28. Programs designed to perform specific jobs, such as calculating and executing a company’s payroll, are collectively called ____.
- a. application-specific software
 - b. general-purpose application software
 - c. operating system software
 - d. utility software
- ____ 29. Spreadsheets and word processors are ____.

- a. application-specific applications
 - b. general-purpose applications
 - c. super applications
 - d. universal applications
- ___ 30. Software developers often create ___ of productivity tools.
- a. prototypes
 - b. suites
 - c. interpretations
 - d. compilations
- ___ 31. ___ is a feature that enables a user to access additional information by clicking on selected text or graphics.
- a. Supermedia
 - b. Textmedia
 - c. Hypermedia
 - d. Fullmedia
- ___ 32. Programs that can handle many different types of data are called ___.
- a. supermedia software
 - b. multisoftware
 - c. packaged software
 - d. multimedia software
- ___ 33. Web page development packages include ___, Dreamweaver, and GoLive.
- a. Flash MX
 - b. FrontPage
 - c. FullPage
 - d. Acrobat
- ___ 34. The most sophisticated ___ provide two important elements: immersion and interaction.
- a. VR devices
 - b. video recording devices
 - c. multi-purpose devices
 - d. Web devices
- ___ 35. Many people refer to sophisticated multimedia applications that run on PCs as ___.
- a. polymedia
 - b. hypermedia
 - c. VR
 - d. overmedia
- ___ 36. The purpose of ___ is to manage computer resources and perform routine tasks that are not specific to any application.
- a. system languages
 - b. production software
 - c. production tools
 - d. system software
- ___ 37. The ___ mediates between applications and the computer, and controls peripheral devices.
- a. operating system
 - b. utility system
 - c. 4GL
 - d. application software
- ___ 38. OSs are usually developed with the aid of ___, such as assembly languages or C.
- a. 4GL programming languages
 - b. low-level programming languages
 - c. high-level programming languages
 - d. OOP programming languages
- ___ 39. Computers operate on a number of layers, starting from the user interface and moving inward to the ___.
- a. procedures and functions
 - b. language translators
 - c. application software
 - d. hardware
- ___ 40. NetWare and ___ are popular network operating systems that are compatible with clients running DOS, all versions of Windows, and Mac OS.
- a. Windows XP Professional
 - b. MS DOS
 - c. Windows CE
 - d. Windows Server
- ___ 41. One OS that has grown in popularity is ___, which can be obtained free of charge.
- a. Windows CE
 - b. Linux
 - c. Solaris
 - d. MVS

- ___ 42. While operating systems are the most prevalent type of system software, other types of system programs include compilers and ____, communications software, and utilities.
- | | |
|----------------|-----------------|
| a. programmers | c. coders |
| b. debuggers | d. interpreters |
- ___ 43. ____ is the best known open source operating system.
- | | |
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| a. Solaris | c. Windows XP |
| b. Linux | d. Mac OS X |
- ___ 44. Reputable software companies including IBM, Intel, Hewlett-Packard (HP), and Dell have committed to supporting ____ by developing applications that run on it.
- | | |
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| a. Linux | c. Mac OS X |
| b. Netware | d. Palm OS |
- ___ 45. Most of the software that organizations and individuals obtain is not purchased; it is ____.
- | | |
|-------------|---------------|
| a. leased | c. downloaded |
| b. licensed | d. reproduced |
- ___ 46. Much of the software we use is ____, which means the code is owned by someone who has the right to sell or license it to us.
- | | |
|----------------|----------------|
| a. pre-owned | c. proprietary |
| b. open source | d. public |
- ___ 47. ____ takes several forms, such as a fee per user per year, or a site license for a limited or unlimited use regardless of how many users use the software.
- | | |
|-----------------|--------------|
| a. Distributing | c. Licensing |
| b. Dealing | d. Sourcing |

Completion

Complete each statement.

48. _____ enables users to complete a particular application or task, such as word processing, investment analysis, data manipulation, or project management.
49. _____ enables application software to run on a computer and manages the interaction between the CPU, memory, storage, input/output devices, and other computer components.
50. To accelerate their work, programmers can use one of several _____, such as Microsoft Visual Basic, Borland Delphi, Micro Focus COBOL, ASNA Visual RPG, and Visual C++.
51. In _____, software developers treat objects as parts, or standardized modules that work together and can be used and reused.
52. The main advantage of Java, JavaScript, and J2EE is that the code produced—often called _____—can be executed well regardless of the operating system the computer uses.
53. Code written in interpreted programming languages can run only on machines whose disks store the _____.
54. General-purpose applications are available as _____; that is, they come ready to install from an external storage medium such as a CD or a file downloaded from a vendor's Web site.

55. Linking among documents involves _____ technologies, and embedding information such as sound and video clips in documents uses multimedia technologies.
56. _____ applications are programs that enable workers to collaborate in real time over the Web.
57. _____ applications mimic sensory reality using software.
58. _____ are often referred to as “platforms,” because they are the platform on which all other applications “ride” when interacting with the hardware.
59. Some OSs perform _____ such as hardware diagnostics, file comparison, file sorting, and the like.
60. A(n) _____ is the software that enables the OS to control a device, either one installed inside the computer box (such as a second video card) or an external device such as a flash memory drive.
61. The developers of _____ do not make the source code of their software public.
62. A(n) _____ program can be developed by a random group of programmers, rather than by a single company.
63. The _____ and documentation for Firefox is open: programmers from the world over can access it and improve it.
64. The _____ licensing model allows anyone to use, modify, and make the software into a product that can be sold or licensed for profit.