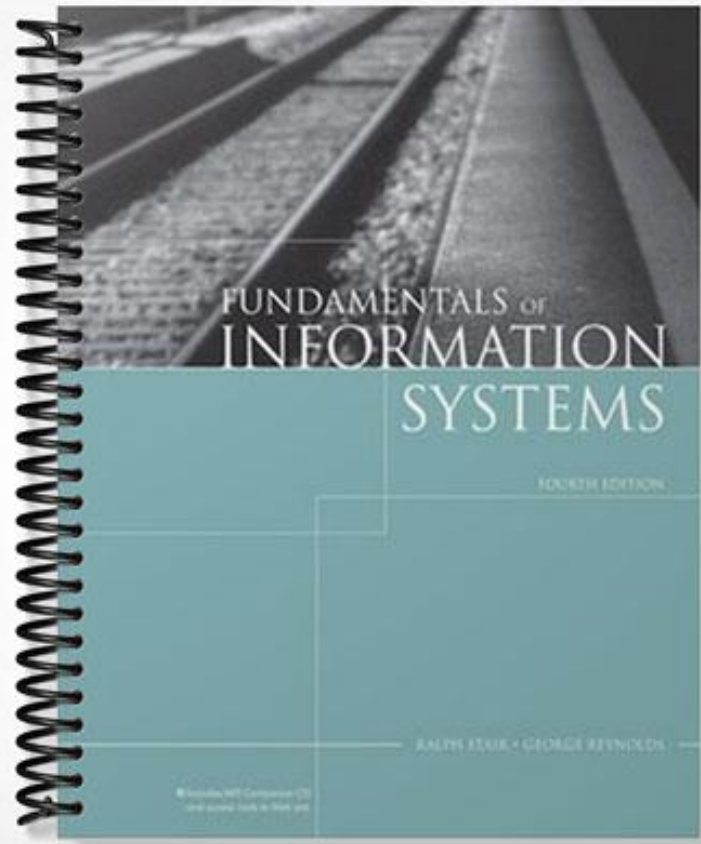


TEST BANK



FUNDAMENTALS of
INFORMATION
SYSTEMS

FOURTH EDITION

RALPH STAIR • GEORGE REYNOLDS

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ch02

True/False

Indicate whether the statement is true or false.

- ___ 1. Computer system hardware components include devices that perform the functions of input, processing, data storage, and output.
- ___ 2. Clock speed is often measured in MIPS.
- ___ 3. To turn a digital circuit within the CPU on or off, electrical current must flow through a medium (usually silicon) from point A to point B.
- ___ 4. Memory devices contain thousands of circuits imprinted on a silicon chip.
- ___ 5. RAM chips are mounted directly on the computer's main circuit board or in chips mounted on peripheral cards that plug into the computer's main circuit board.
- ___ 6. Key to the success of grid computing is a central server that acts as the grid leader and traffic monitor.
- ___ 7. Secondary storage is called temporary storage.
- ___ 8. Secondary storage offers the advantages of nonvolatility, greater capacity, and greater economy.
- ___ 9. Secondary storage devices are used to store data for easy retrieval at a later date.
- ___ 10. Magnetic tape is a direct access storage medium.
- ___ 11. The CD-RW disk can hold roughly 10 times the capacity of a 1.4-MB diskette.
- ___ 12. The two types of competing high-definition video-disc formats are called HD-DVD and Blu-ray Disc.
- ___ 13. Solid-state-memory disks (SSDs) that use flash memory are supplementing or replacing traditional hard drives.
- ___ 14. A keyboard and a computer mouse are the most common devices used for data output.
- ___ 15. Terminals are normally connected directly to the computer system by telephone lines or cables.
- ___ 16. Touch-sensitive screens are frequently used at gas stations for customers to select grades of gas and request a receipt.
- ___ 17. A bar-code scanner employs a laser scanner to read a bar-coded label.
- ___ 18. The U.S. Food and Drug Administration (FDA) is considering the use of RFID tags to help fight counterfeit prescription drugs by tracking shipping containers and crates of medicine.
- ___ 19. Supercomputers are those that are small enough to be carried easily.

- ___ 20. Unlike personal computers, thin clients download software from a network when needed, making support, distribution, and updating of software applications much easier and less expensive.
- ___ 21. Information systems that operate within the enterprise sphere of influence serve the needs of an individual user.
- ___ 22. Information systems that operate within the personal sphere of influence support the firm in its interaction with its environment.
- ___ 23. The role of the operating system is to act as an interface or buffer between users and application software and hardware.
- ___ 24. The memory management feature of OSs converts a user's request for data or instructions to the physical location where the data or instructions are stored.
- ___ 25. Task-management software permits multitasking and time-sharing.
- ___ 26. The central processing unit ensures that the files in secondary storage are available when needed and that they are protected from access by unauthorized users.
- ___ 27. The new generation of mainframe computers provides the computing and storage capacity to meet massive data processing requirements and provide a large number of users with high performance and excellent system availability, strong security, and scalability.
- ___ 28. The *z/OS* is IBM's first 32-bit enterprise OS.
- ___ 29. *Red Hat Linux* for IBM mainframe computers is an example of an enterprise operating system.
- ___ 30. A software component is a collection of single application programs packaged in a bundle.

Multiple Choice

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

- ___ 31. A ___ consists of two primary elements: the arithmetic/logic unit and the control unit.
 - a. RAID
 - b. SAN
 - c. central processing unit
 - d. magnetic tape
- ___ 32. The ___ performs mathematical calculations and makes logical comparisons.
 - a. RFID
 - b. arithmetic/logic unit
 - c. control unit
 - d. keyboard
- ___ 33. The ___ sequentially accesses program instructions, decodes them, and coordinates the flow of data in and out of the ALU, primary storage, and even secondary storage and various output devices.
 - a. arithmetic logic/unit
 - b. RFID
 - c. keyboard
 - d. control unit
- ___ 34. Each CPU produces a series of electronic pulses at a predetermined rate, called the ___, which affects machine cycle time.
 - a. clock speed
 - c. RAM

- b. ROM
d. flash memory
- ___ 35. ___ chips lose their contents if the current is turned off or disrupted.
a. ROM
b. MP3
c. RAM
d. ALU
- ___ 36. ___ is usually nonvolatile.
a. ROM
b. MP3
c. RAM
d. ALU
- ___ 37. ___ speeds processing by linking several processors to operate at the same time.
a. Multicore microprocessing
b. RAM
c. ROM
d. Parallel processing
- ___ 38. ___ is the use of a collection of computers, often owned by many people or organizations, to work in a coordinated manner to solve a common problem.
a. Multicore microprocessing
b. Grid computing
c. ROM
d. Parallel processing
- ___ 39. ___ means that data must be accessed in the order in which it is stored.
a. RFID
b. Flash memory
c. Sequential access
d. Direct access
- ___ 40. ___ means that data can be retrieved directly, without having to pass by other data in sequence.
a. RFID
b. Flash memory
c. Sequential access
d. Direct access
- ___ 41. The devices used to sequentially access secondary storage data are called _____.
a. sequential access storage devices
b. sequential access network devices
c. direct access network devices
d. direct access storage devices
- ___ 42. ___ is a method of storing data so that if a hard drive fails, the lost data on that drive can be rebuilt.
a. MP3
b. Redundant array of independent/inexpensive disks
c. Flash memory
d. Storage area network
- ___ 43. A(n) ___ uses computer servers, distributed storage devices, and networks to tie everything together.
a. MP3
b. redundant array of independent/inexpensive disks
c. optical disc
d. storage area network
- ___ 44. ___ disks allow data to be written once to a CD disk.
a. CD-RW
b. RAM
c. CD-R
d. ROM
- ___ 45. ___ displays are flat displays that use liquid crystals to form characters and graphic images on a backlit screen.
a. CRT
b. DVD
c. LCD
d. ROM
- ___ 46. ___ are a type of liquid crystal display that assigns a transistor to control each pixel, resulting in higher resolution and quicker response to changes on the screen.

- a. CRT
b. Thin-film transistor LCDs
- c. DVD
d. ROM
- ___ 47. ___ technology is based on research by Eastman Kodak Company and is appearing on the market in small electronic devices.
a. Organic light-emitting diode
b. Digital audio
c. MP3
d. Thin client
- ___ 48. ___ is a popular format for compressing a sound sequence into a very small file while preserving the original level of sound quality when it is played.
a. API
b. HP MPE/iX
c. Solaris
d. MP3
- ___ 49. ___ computers are single-user computers that are portable.
a. Thin client
b. Server
c. Handheld
d. Mainframe
- ___ 50. A ___ combines the functionality of a mobile phone, personal digital assistant, camera, Web browser, e-mail tool, MP3 player, and other devices into a single handheld device.
a. smartphone
b. portable computer
c. thin client
d. mainframe
- ___ 51. A ___ is a small, lightweight PC about the size of a three-ring notebook.
a. thin client
b. server
c. workstation
d. laptop
- ___ 52. A ___ is a low-cost, centrally managed computer that is devoid of a DVD player, diskette drive, and expansion slots.
a. server
b. thin client
c. mainframe
d. workstation
- ___ 53. ___ are relatively small, inexpensive single-user computer systems that are highly versatile.
a. Workstations
b. Servers
c. Desktop computers
d. Mainframe computers
- ___ 54. ___ are more powerful than personal computers but still small enough to fit on a desktop.
a. Workstations
b. Server systems
c. Supercomputers
d. Mainframe computers
- ___ 55. A computer ___ is a computer used by many users to perform a specific task, such as running network or Internet applications.
a. mainframe
b. server
c. API
d. HP-UX
- ___ 56. ___ are the most powerful computer systems with the fastest processing speeds and highest performance.
a. Mainframe computers
b. Servers
c. Workstations
d. Supercomputers
- ___ 57. ___ are special-purpose machines designed for applications that require extensive and rapid computational capabilities.
a. Mainframe computers
b. Servers
c. Workstations
d. Supercomputers
- ___ 58. A(n) ___ is two or more people who work together to achieve a common goal.

- a. workgroup
 - b. GUI
 - c. API
 - d. multiprocessor
- ___ 59. A(n) ___ allows individuals to access and command the computer system.
- a. workgroup
 - b. user interface
 - c. RFID
 - d. multiprocessor
- ___ 60. Applications use the OS by making requests for services through a defined ___.
- a. graphical user interface
 - b. command-based interface
 - c. application program interface
 - d. workgroup
- ___ 61. The ability of the computer to handle an increasing number of concurrent users smoothly is called ___.
- a. scalability
 - b. optimization
 - c. multiprogramming
 - d. portability
- ___ 62. ___ is an OS developed by Linus Torvalds in 1991 as a student in Finland.
- a. UNIX
 - b. Windows
 - c. DOS
 - d. Linux
- ___ 63. ___ is a powerful OS originally developed by AT&T for minicomputers.
- a. UNIX
 - b. NetWare
 - c. DOS
 - d. Linux
- ___ 64. ___ is a network OS sold by Novell that can support users on Windows, Macintosh, and UNIX platforms.
- a. MP3
 - b. NetWare
 - c. MPE/iX
 - d. z/OS
- ___ 65. The ___ supports IBM's z900 and z800 lines of mainframes.
- a. z/OS
 - b. PalmSource
 - c. MPE/iX
 - d. HP-UX
- ___ 66. The ___ is a mainframe OS from Hewlett-Packard, and is designed to support Internet, database, and a variety of business applications.
- a. z/OS
 - b. PalmSource
 - c. Linux
 - d. HP-UX
- ___ 67. A one-of-a-kind program developed for a specific application is known as ___.
- a. off-the-shelf software
 - b. stand alone software
 - c. proprietary software
 - d. embedded software
- ___ 68. The term ___ refers to existing software program that can be purchased.
- a. off-the-shelf software
 - b. stand alone software
 - c. proprietary software
 - d. embedded software
- ___ 69. A(n) ___ is a company that can provide the software, support, and computer hardware on which to run software from the user's facilities.
- a. API
 - b. application service provider
 - c. personal information manager
 - d. enterprise planning software provider
- ___ 70. The term ___ is used to describe a set of rules associated with a programming language.
- a. attribute
 - b. record
 - c. bug
 - d. syntax

Completion

Complete each statement.

71. _____ consists of any machinery (most of which uses digital circuits) that assists in the input, processing, storage, and output activities of an information system.
72. Located physically close to the CPU (to decrease access time), _____ provides the CPU with a working storage area for program instructions and data.
73. Eight bits together form a(n) _____.
74. _____ involves the simultaneous execution of two or more instructions.
75. A(n) _____ combines two or more independent processors into a single computer so that they can share the workload and boost processing capacity.
76. A(n) _____ is a five-inch diameter CD-ROM look-alike with the ability to store about 135 minutes of digital video or several gigabytes of data.
77. _____ is a silicon computer chip that, unlike RAM, is nonvolatile and keeps its memory when the power is shut off.
78. _____ technology enables a computer equipped with a source of speech input such as a microphone to interpret human speech as an alternative means of providing data or instructions to the computer.
79. _____ record and store images or video in digital form.
80. The purpose of a(n) _____ system is to transmit data by a mobile device, called a tag, which is read by an RFID reader and processed according to the needs of an information system program.
81. The term _____ is used to describe paper output from a printer.
82. A(n) _____ player is a device that can store, organize, and play digital music files.
83. _____ are portable, lightweight computers that allow users to roam the office, home, or factory floor carrying the device like a clipboard.
84. A(n) _____ is a large, powerful computer shared by dozens or even hundreds of concurrent users connected to the machine over a network.
85. _____ are sequences of instructions for the computer.
86. The term _____ is used to describe the program functions that help the user operate the computer system.

87. _____ software is the set of programs designed to coordinate the activities and functions of the hardware and various programs throughout the computer system.
88. _____ software consists of programs that help users solve particular computing problems.
89. One of the most important functions of any OS is providing a(n) _____ to access and command the system.
90. A(n) _____ interface requires text commands to be given to the computer to perform basic activities.
91. A(n) _____ interface uses pictures called icons and menus displayed on screen to send commands to the computer system.
92. A computer understands only the _____ of data - that is, the specific location of the data in storage or memory and the techniques needed to access it.
93. The _____ is the first modern server OS from Apple Computer. It provides UNIX style process management.
94. _____ makes the Palm operating system that is used in over 30 million handheld computers and smartphones manufactured by Palm, Inc. and other companies.
95. The _____ of an operating system is the part that controls the hardware, manages files, separates processes, and so forth.

Essay

96. Provide a brief description of the following combinations of OSs, computers, and users: single computer with a single user, single computer with multiple users, multiple computers, and special-purpose computers.
97. List eight activities executed by the operating system.
98. What are the advantages and disadvantages of proprietary software?
99. What are the advantages and disadvantages of off-the-shelf software?
100. What is the difference between parallel processing and grid computing?

ch02

Answer Section

TRUE/FALSE

1.	ANS: T	PTS: 1	REF: 59
2.	ANS: F	PTS: 1	REF: 60
3.	ANS: T	PTS: 1	REF: 60
4.	ANS: T	PTS: 1	REF: 61
5.	ANS: T	PTS: 1	REF: 61
6.	ANS: T	PTS: 1	REF: 62
7.	ANS: F	PTS: 1	REF: 63
8.	ANS: T	PTS: 1	REF: 63
9.	ANS: T	PTS: 1	REF: 64
10.	ANS: F	PTS: 1	REF: 64
11.	ANS: F	PTS: 1	REF: 67
12.	ANS: T	PTS: 1	REF: 67
13.	ANS: T	PTS: 1	REF: 67
14.	ANS: F	PTS: 1	REF: 68
15.	ANS: T	PTS: 1	REF: 69
16.	ANS: T	PTS: 1	REF: 69
17.	ANS: T	PTS: 1	REF: 69
18.	ANS: T	PTS: 1	REF: 70
19.	ANS: F	PTS: 1	REF: 74
20.	ANS: T	PTS: 1	REF: 74
21.	ANS: F	PTS: 1	REF: 77
22.	ANS: F	PTS: 1	REF: 78
23.	ANS: T	PTS: 1	REF: 79
24.	ANS: T	PTS: 1	REF: 80
25.	ANS: T	PTS: 1	REF: 80
26.	ANS: F	PTS: 1	REF: 81
27.	ANS: T	PTS: 1	REF: 85
28.	ANS: F	PTS: 1	REF: 85
29.	ANS: T	PTS: 1	REF: 85
30.	ANS: F	PTS: 1	REF: 93

MULTIPLE CHOICE

31.	ANS: C	PTS: 1	REF: 59
32.	ANS: B	PTS: 1	REF: 59
33.	ANS: D	PTS: 1	REF: 59
34.	ANS: A	PTS: 1	REF: 60
35.	ANS: C	PTS: 1	REF: 61
36.	ANS: A	PTS: 1	REF: 61
37.	ANS: D	PTS: 1	REF: 62

38.	ANS: B	PTS: 1	REF: 62
39.	ANS: C	PTS: 1	REF: 63
40.	ANS: D	PTS: 1	REF: 63
41.	ANS: A	PTS: 1	REF: 63-64
42.	ANS: B	PTS: 1	REF: 65
43.	ANS: D	PTS: 1	REF: 65
44.	ANS: C	PTS: 1	REF: 67
45.	ANS: C	PTS: 1	REF: 71
46.	ANS: B	PTS: 1	REF: 71
47.	ANS: A	PTS: 1	REF: 72
48.	ANS: D	PTS: 1	REF: 72
49.	ANS: C	PTS: 1	REF: 74
50.	ANS: A	PTS: 1	REF: 74
51.	ANS: D	PTS: 1	REF: 74
52.	ANS: B	PTS: 1	REF: 74
53.	ANS: C	PTS: 1	REF: 75
54.	ANS: A	PTS: 1	REF: 75
55.	ANS: B	PTS: 1	REF: 75
56.	ANS: D	PTS: 1	REF: 76
57.	ANS: D	PTS: 1	REF: 76
58.	ANS: A	PTS: 1	REF: 78
59.	ANS: B	PTS: 1	REF: 79
60.	ANS: C	PTS: 1	REF: 80
61.	ANS: A	PTS: 1	REF: 81
62.	ANS: D	PTS: 1	REF: 83
63.	ANS: A	PTS: 1	REF: 84
64.	ANS: B	PTS: 1	REF: 84
65.	ANS: A	PTS: 1	REF: 85
66.	ANS: D	PTS: 1	REF: 85
67.	ANS: C	PTS: 1	REF: 88
68.	ANS: A	PTS: 1	REF: 88
69.	ANS: B	PTS: 1	REF: 88
70.	ANS: D	PTS: 1	REF: 97

COMPLETION

71.	ANS: Hardware		
	PTS: 1	REF: 58	
72.	ANS: memory		
	PTS: 1	REF: 61	
73.	ANS: byte		
	PTS: 1	REF: 61	
74.	ANS: Multiprocessing		

PTS: 1 REF: 62
75. ANS: multicore multiprocessor

PTS: 1 REF: 62
76. ANS:
DVD
digital video disk
digital video disk (DVD)
DVD (digital video disk)

PTS: 1 REF: 67
77. ANS: Flash memory

PTS: 1 REF: 67
78. ANS:
Speech-recognition
Speech recognition

PTS: 1 REF: 68
79. ANS: Digital cameras

PTS: 1 REF: 69
80. ANS:
Radio Frequency Identification
radio frequency identification
RFID

PTS: 1 REF: 70
81. ANS: hard copy

PTS: 1 REF: 72
82. ANS: digital audio

PTS: 1 REF: 72
83. ANS: Tablet PCs

PTS: 1 REF: 74
84. ANS: mainframe computer

PTS: 1 REF: 75
85. ANS: Computer programs

PTS: 1 REF: 76
86. ANS: documentation

PTS: 1 REF: 76
87. ANS: System

PTS: 1 REF: 77

88. ANS: Application
PTS: 1 REF: 77
89. ANS: user interface
PTS: 1 REF: 79
90. ANS:
command-based
command based
PTS: 1 REF: 79
91. ANS: graphical user
PTS: 1 REF: 79
92. ANS: physical view
PTS: 1 REF: 80
93. ANS: Mac OS X Server
PTS: 1 REF: 84
94. ANS: PalmSource
PTS: 1 REF: 85
95. ANS: kernel
PTS: 1 REF: 83

ESSAY

96. ANS:
Single computer with a single user: This system is commonly used in a personal computer or a handheld computer that allows one user at a time.

Single computer with multiple users: This system is typical of larger, mainframe computers that can accommodate hundreds or thousands of people, all using the computer at the same time.

Multiple computers: This system is typical of a network of computers, such as a home network with several computers attached or a large computer network with hundreds of computers attached around the world.

Special-purpose computers: This system is typical of a number of special-purpose computers, such as those that control sophisticated military aircraft, the space shuttle, and some home appliances.
PTS: 1 REF: 78
97. ANS:
The activities include:

Performing common computer hardware functions
Providing a user interface

Providing a degree of hardware independence
Managing system memory
Managing processing tasks
Providing networking capability
Controlling access to system resources
Managing files

PTS: 1 REF: 79

98. ANS:

The advantages include:

- 1) You can get exactly what you need in terms of features, reports, and so on.
- 2) Being involved in the development offers control over the results.
- 3) You can modify features that you might need to counteract an initiative by competitors or to meet new supplier or customer demands. A merger with or acquisition of another firm also requires software changes to meet new business needs.

The disadvantages include:

- 1) It can take a long time and significant resources to develop required features.
- 2) In-house system development staff may become hard pressed to provide the required level of ongoing support and maintenance because of pressure to move on to other new projects.
- 3) There is more risk concerning the features and performance of the software that has yet to be developed.

PTS: 1 REF: 89

99. ANS:

The advantages include:

- 1) The initial cost is lower because the software firm can spread the development costs over many customers.
- 2) The software is likely to meet the basic business needs - you can analyze existing features and the performance of the package.
- 3) The package is likely to be of high quality because many customer firms have tested the software and helped identify its bugs.

The disadvantages include:

- 1) An organization might have to pay for features that are not required and never used.
- 2) The software might lack important features, thus requiring future modification or customization. This can be very expensive because users must adopt future releases of the software as well.
- 3) The software might not match current work processes and data standards.

PTS: 1 REF: 89

100. ANS:

Parallel processing speeds processing by linking several processors to operate at the same time, or in parallel. The most frequent business uses for parallel processing are modeling, simulation, and analysis of large amounts of data.

Grid computing is the use of a collection of computers, often owned by many people or organizations, to work in a coordinated manner to solve a common problem. Grid computing is one low-cost approach to parallel processing. The grid can include dozens, hundreds, or even thousands of computers that run collectively to solve extremely large parallel processing problems.

PTS: 1

REF: 62