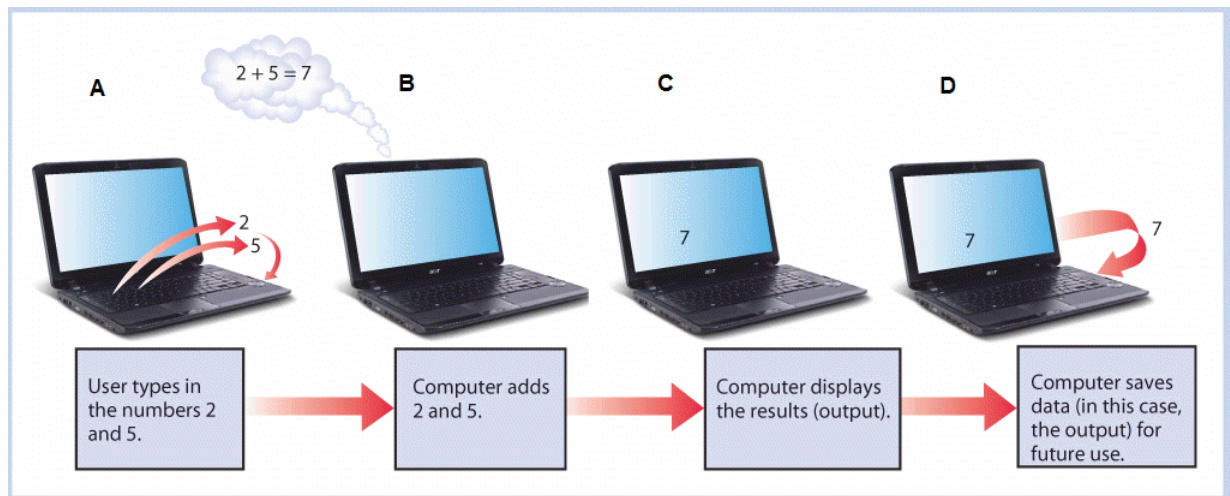


## Chapter 1: Introduction to Computers and the Internet

### TRUE/FALSE



1. The accompanying figure demonstrates the primary four operations of a computer.

ANS: T                      PTS: 1                      REF: 4

2. Information is processed into data.

ANS: F                      PTS: 1                      REF: 4

3. The physical parts of a computer are called hardware.

ANS: T                      PTS: 1                      REF: 5

4. Smartphones are a type of mobile device.

ANS: T                      PTS: 1                      REF: 7

5. Most of today's modern computers are fifth-generation machines.

ANS: F                      PTS: 1                      REF: 8

6. One of the most significant appeals of server virtualization today is increased efficiency.

ANS: T                      PTS: 1                      REF: 12

7. The most powerful and most expensive type of computer available is the ultracomputer.

ANS: F                      PTS: 1                      REF: 13

8. The Internet is the largest computer network in the world.

ANS: T                      PTS: 1                      REF: 15

9. An IP address uniquely identifies a specific Web page.

ANS: F                      PTS: 1                      REF: 17

10. A copyright is a word, phrase, symbol, or design that identifies one product or service from another.

ANS: F                      PTS: 1                      REF: 23

### MODIFIED TRUE/FALSE

1. Accessing information in a shared company database is an example of a(n) communications function performed by today's computers. \_\_\_\_\_

ANS: T    PTS: 1                      REF: 4

2. Computer users, often called nodes, are the people who use computers to perform tasks or obtain information. \_\_\_\_\_

ANS: F, end users

PTS: 1                      REF: 5

3. Performance, cost, and security are three advantages of cloud computing. \_\_\_\_\_

ANS: F, disadvantages

PTS: 1                      REF: 6

4. A(n) personal computer is a stationary computer designed to fit on or next to a desk. \_\_\_\_\_

ANS: F, desktop

PTS: 1                      REF: 9

5. A(n) tablet computer is designed to be used with a digital pen or stylus. \_\_\_\_\_

ANS: T    PTS: 1                      REF: 10

6. The current fastest computer in the world is technically a(n) supercomputing cluster. \_\_\_\_\_

ANS: T    PTS: 1                      REF: 13-14

7. Web pages are stored on Web browsers that are continually connected to the Internet. \_\_\_\_\_

ANS: F, servers

PTS: 1                      REF: 15

8. The TLD originally provided for ISPs is .org. \_\_\_\_\_

ANS: F, .net

PTS: 1

REF: 17

9. A(n) copyright gives the holder the exclusive right to publish, reproduce, distribute, perform, or display his or her work. \_\_\_\_\_

ANS: T

PTS: 1

REF: 22

10. According to the text, CTS (carpal tunnel syndrome) is a(n) RSI. \_\_\_\_\_

ANS: T

PTS: 1

REF: 25

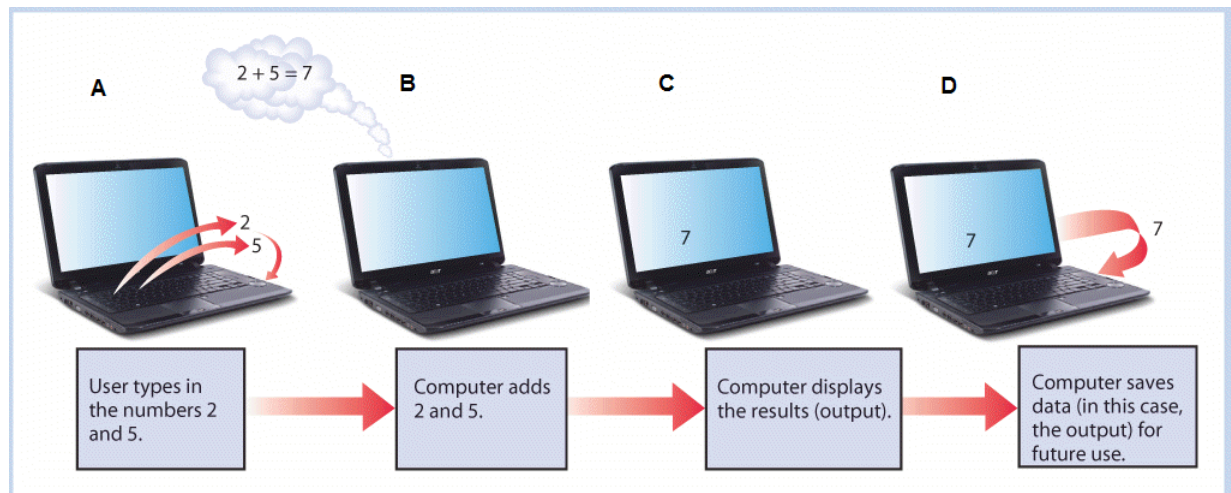
## MULTIPLE CHOICE

1. All of the following are primary operations of a computer EXCEPT \_\_\_\_.
- a. input
  - b. sorting
  - c. processing
  - d. output

ANS: B

PTS: 1

REF: 3



2. The accompanying figure is a representation of the \_\_\_\_ cycle.
- a. TCP/IP
  - b. IPOS
  - c. ISP
  - d. product

ANS: B

PTS: 1

REF: 4

3. Operations are performed on data in step \_\_\_\_ in the accompanying figure.
- a. D
  - b. C
  - c. B
  - d. A

ANS: C

PTS: 1

REF: 4

4. Any fact or set of facts, such as the words in a letter to a friend or the notes in a song, can become computer \_\_\_\_.
- a. data
  - b. information
  - c. logic
  - d. hardware

ANS: A

PTS: 1

REF: 5

5. \_\_\_\_ are computer professionals who write the programs that computers use.

- a. Servers
- b. Suppliers
- c. End users
- d. Programmers

ANS: D                      PTS: 1                      REF: 5

6. \_\_\_\_ refers to data, applications, and even resources stored on computers accessed over the Internet.

- a. Telecommuting
- b. Cloud computing
- c. The Ethernet
- d. Embedded computing

ANS: B                      PTS: 1                      REF: 6

7. The computers found in DVD players, thermostats, answering machines, and some appliances are known as \_\_\_\_.

- a. mobile devices
- b. fifth-generation computers
- c. embedded computers
- d. miniframes

ANS: C                      PTS: 1                      REF: 6

8. The third generation of computers was marked by the introduction of \_\_\_\_.

- a. vacuum tubes
- b. artificial intelligence
- c. punch cards and magnetic tape
- d. integrated circuits

ANS: D                      PTS: 1                      REF: 8

9. A \_\_\_\_ is a very small notebook computer.

- a. tablet PC
- b. mobile device
- c. netbook
- d. thin client

ANS: C                      PTS: 1                      REF: 10

10. A device that must be connected to a network to perform processing or storage tasks is referred to as a \_\_\_\_.

- a. dumb terminal
- b. minicomputer
- c. portable computer
- d. server

ANS: A                      PTS: 1                      REF: 11

11. Devices designed primarily for accessing Web pages and/or exchanging email are called \_\_\_\_.

- a. thin clients
- b. Internet appliances
- c. Web TVs
- d. Web apps

ANS: B                      PTS: 1                      REF: 11

12. Midrange servers are also known as \_\_\_\_.

- a. supercomputers
- b. mainframes
- c. minicomputers
- d. enterprise-class servers

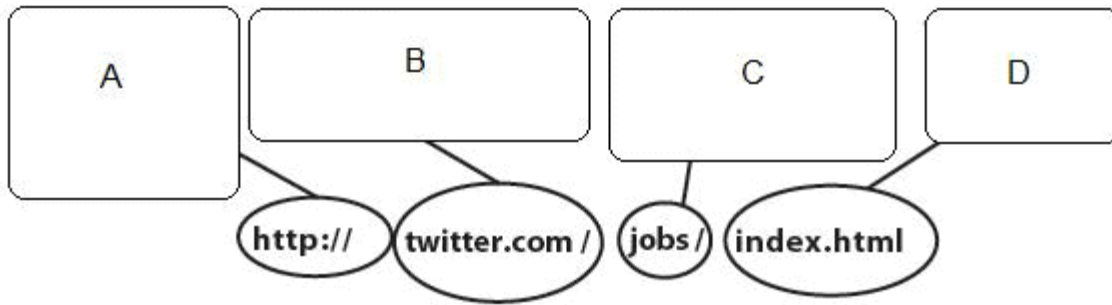
ANS: C                      PTS: 1                      REF: 11

13. \_\_\_\_ generally run one program at a time, as fast as possible.

- a. Supercomputers
- b. Mainframes
- c. Minicomputers
- d. Thin clients

ANS: A                      PTS: 1                      REF: 13

14. A large organization that needs a computer to run the programs that staff use during the day, and then spend the night performing large processing tasks, most likely will buy a \_\_\_\_.
- a. mainframe
  - b. supercomputer
  - c. cloud computer
  - d. midrange server
- ANS: A                      PTS: 1                      REF: 12
15. The Roadrunner computer cost approximately \_\_\_\_.
- a. \$1 billion
  - b. \$100 million
  - c. \$10 million
  - d. \$250 million
- ANS: B                      PTS: 1                      REF: 14
16. \_\_\_\_ is the most well-known computer network in the world.
- a. Skynet
  - b. Telnet
  - c. The Internet
  - d. AOL
- ANS: C                      PTS: 1                      REF: 15
17. The term \_\_\_\_ refers to one resource available through the \_\_\_\_.
- a. Internet, WWW
  - b. WWW, Internet
  - c. IP address, URL
  - d. Web client, Web servers
- ANS: B                      PTS: 1                      REF: 15
18. IP addresses and domain names identify \_\_\_\_.
- a. Web pages
  - b. people
  - c. regions
  - d. computers
- ANS: D                      PTS: 1                      REF: 15
19. A(n) \_\_\_\_ makes it easier for people to request Web pages than using a(n) \_\_\_\_.
- a. domain name, IP address
  - b. IP address, domain name
  - c. URL, IP address
  - d. ISP, modem
- ANS: A                      PTS: 1                      REF: 16
20. Of the following, the only original TLD is \_\_\_\_.
- a. .mil
  - b. .info
  - c. .uk
  - d. .biz
- ANS: A                      PTS: 1                      REF: 17
21. Of the following, the TLD mentioned in the chapter that is intended for individuals is \_\_\_\_.
- a. .ind
  - b. .net
  - c. .name
  - d. .me
- ANS: C                      PTS: 1                      REF: 17
22. An email address consists of a \_\_\_\_, followed by an @ symbol, followed by the domain name of the mail server.
- a. URL
  - b. username
  - c. password
  - d. TLD
- ANS: B                      PTS: 1                      REF: 17



23. In the accompanying figure, the protocol identifier is shown in box \_\_\_\_.

- a. A
- b. B
- c. C
- d. D

ANS: A                      PTS: 1                      REF: 18

24. In the accompanying figure, the Web server is shown in box \_\_\_\_.

- a. A
- b. B
- c. C
- d. D

ANS: B                      PTS: 1                      REF: 18

25. In the accompanying figure, the document being retrieved and displayed is found in box \_\_\_\_.

- a. A
- b. B
- c. C
- d. D

ANS: D                      PTS: 1                      REF: 18

26. All of the following are commonly used Web browsers EXCEPT \_\_\_\_.

- a. Navigator
- b. Internet Explorer
- c. Chrome
- d. Firefox

ANS: A                      PTS: 1                      REF: 19

27. \_\_\_\_ browsing allows you to open multiple Web pages at one time.

- a. Webbed
- b. Threaded
- c. Tabbed
- d. none of the above

ANS: C                      PTS: 1                      REF: 19

28. Worldwide email traffic is expected to exceed \_\_\_\_ messages per day by 2013.

- a. 1 billion
- b. 300 million
- c. 500 billion
- d. 30 billion

ANS: C                      PTS: 1                      REF: 20

29. Gmail is a(n) \_\_\_\_.

- a. email program
- b. Web mail service
- c. knowledge base
- d. search site

ANS: B                      PTS: 1                      REF: 20

30. Using a Web browser to view Web pages is called \_\_\_\_ the Web.

- a. surfing
- b. scanning
- c. spinning
- d. skating

ANS: A                      PTS: 1                      REF: 18

31. To help protect your computer, avoid opening email attachments with any of the following file extensions EXCEPT \_\_\_\_.

- a. .exe
- b. .jpg
- c. .com
- d. .vbs

ANS: B                      PTS: 1                      REF: 22

32. Intellectual property is \_\_\_\_.

- a. any device or appliance containing a computer chip
- b. original creative work
- c. both a and b
- d. neither a nor b

ANS: B                      PTS: 1                      REF: 22

33. Copyrights remain in effect until \_\_\_\_ after the creator's death.

- a. a year and a day
- b. 10 years
- c. a century
- d. 70 years

ANS: D                      PTS: 1                      REF: 22

34. \_\_\_\_ software is rights-protection software used to control the use of a work.

- a. DRM
- b. ISP
- c. RSI
- d. Copyright-Trademark

ANS: A                      PTS: 1                      REF: 23

35. Presenting someone else's work as your own is \_\_\_\_.

- a. libel
- b. trademark infringement
- c. plagiarism
- d. unethical but not illegal

ANS: C                      PTS: 1                      REF: 23

36. Ethical beliefs may vary based on \_\_\_\_.

- a. religion
- b. culture
- c. country
- d. all of the above

ANS: D                      PTS: 1                      REF: 24

37. An RSI related to repetitive finger movements on a keyboard is \_\_\_\_.

- a. CTS
- b. CVS
- c. CDS
- d. CPS

ANS: A                      PTS: 1                      REF: 25

38. The U.S. Department of Energy and EPA developed the \_\_\_\_ program to encourage the creation of energy-saving devices.

- a. Gold Star
- b. ENERGY STAR
- c. LEED
- d. GreenWare

ANS: B                      PTS: 1                      REF: 25

39. The majority of discarded computer equipment ends up \_\_\_\_.
- a. being reused in new computer components
  - b. being safely separated and recycled within the United States
  - c. in landfills or foreign nations with lax environmental standards
  - d. being ground into the underlayment used in highways

ANS: C                      PTS: 1                      REF: 27

40. A desktop computer may contain \_\_\_\_.
- a. arsenic
  - b. lead
  - c. mercury
  - d. all of the above

ANS: D                      PTS: 1                      REF: 27

### Case-Based Critical Thinking Questions

#### Case 1-1

Shannon, a sophomore at the local college, spends an evening with her father and her grandfather talking about technology. Shannon is amazed at the changes that have happened over just a few generations.

41. Shannon's grandfather told her that when his grandfather was a young man, he worked on the 1890 U.S. Census using Hollerith's Punch Card Tabulating Machine and Sorter. What can Shannon determine from this?
- a. He used a first-generation computer.
  - b. He worked on a machine built by a company that would much later create the IBM PC.
  - c. The machine was the first to use magnetic tape for storage.
  - d. none of the above

ANS: B                      PTS: 1                      REF: 8                      TOP: Critical Thinking

42. Shannon's grandfather then told her that when he was a teenager, back in 1952, he helped out in the local Eisenhower for President campaign office. At that time, there was talk of a fancy new machine that was going to help count and analyze the votes that year. That machine was \_\_\_\_.
- a. ENIAC
  - b. UNIVAC
  - c. the IBM 1401
  - d. the PC

ANS: B                      PTS: 1                      REF: 8                      TOP: Critical Thinking

43. Shannon's father chimes in, and reminds her somewhat proudly that he was born right about the same time that integrated circuits were invented. He was born in \_\_\_\_.
- a. 1955
  - b. 1958
  - c. 1964
  - d. 1971

ANS: C                      PTS: 1                      REF: 8                      TOP: Critical Thinking

44. Shannon has enjoyed hearing about the advances in computers before her day. She asks her grandfather and father which was the longest-lasting generation of computers. They look at her and tell her \_\_\_\_.
- a. the one in which her grandfather was born
  - b. the one in which her father was born
  - c. the one in which she was born
  - d. the third generation, which is just what she is



ANS: C

PTS: 1

REF: 8

TOP: Critical Thinking

### Case-Based Critical Thinking Questions

#### Case 1-2

Quincy is learning about the types of servers and more powerful computers available. She's asked you to come over and quiz her.

45. You tell Quincy that she needs a computer to operate and maintain the network in her school's computer lab. Quincy tells you that would be a \_\_\_\_.
- a. mainframe
  - b. minicomputer
  - c. supercomputer
  - d. netbook

ANS: B

PTS: 1

REF: 11-13

TOP: Critical Thinking

46. Next, you tell Quincy that what she needs is a computer that can handle intensive 3D applications, and will be designed to focus all of its computing power on one task at a time. Quincy tells you that you're describing a(n) \_\_\_\_.
- a. petaflop
  - b. supercomputer
  - c. mini-cluster
  - d. enterprise-class server

ANS: B

PTS: 1

REF: 11-13

TOP: Critical Thinking

47. Lastly, you tell Quincy that she needs a computer for a large organization that can manage large amounts of data and run multiple programs simultaneously. She tells you that this would be a(n) \_\_\_\_.
- a. enterprise-class server
  - b. mainframe
  - c. supercomputing cluster
  - d. either a or b

ANS: D

PTS: 1

REF: 11-13

TOP: Critical Thinking

### Case-Based Critical Thinking Questions

#### Case 1-3

Terrell is learning how to classify Web sites by their TLDs.

48. Terrell sees the .name TLD. He knows this is \_\_\_\_.
- a. an original TLD
  - b. for noncommercial organizations
  - c. based in the United Kingdom
  - d. none of the above

ANS: D

PTS: 1

REF: 17

TOP: Critical Thinking

49. Terrell would like his own TLD. The biggest roadblock to this will be \_\_\_\_.
- a. legal: TLDs can only be created and assigned to governments or registered non-government bodies.
  - b. technical: The ability to register TLDs is not possible yet due to conflicts with the TCP/IP protocols used on the Web.
  - c. financial: It is estimated that registering a TLD could cost as much as \$100,000.
  - d. all of the above

ANS: C

PTS: 1

REF: 17

TOP: Critical Thinking

50. Lastly, Terrell sees the TLD “.cz” and wonders what it means. His best clue is that it \_\_\_\_.
- a. is one of the original seven TLDs used in the United States
  - b. is two letters long, and thus likely represents a country
  - c. ends in “z” and is thus among the most recent new TLDs created

d. none of the above; this is not a valid TLD

ANS: B

PTS: 1

REF: 17

TOP: Critical Thinking

## COMPLETION

1. A(n) \_\_\_\_\_ is a programmable, electronic device that accepts data, performs operations on that data, presents the results, and stores the data or results as needed.

ANS: computer

PTS: 1

REF: 2

2. The term \_\_\_\_\_ refers to the programs or instructions used to tell the computer hardware what to do.

ANS: software

PTS: 1

REF: 5

3. PDA stands for \_\_\_\_\_.

ANS: personal digital assistant

PTS: 1

REF: 7

4. UNIVAC is an example of a(n) \_\_\_\_\_-generation computer.

ANS: first

PTS: 1

REF: 8

5. Desktop computers usually conform to one of two standards or platforms: \_\_\_\_\_ or \_\_\_\_\_.

ANS:

PC-compatible, Macintosh

Macintosh, PC-compatible

PTS: 1

REF: 9

6. A(n) \_\_\_\_\_ client is a device that is designed to be used in conjunction with a company network.

ANS: thin

PTS: 1

REF: 10

7. Today's \_\_\_\_\_ computers are sometimes referred to as high-end servers or enterprise-class servers.

ANS: mainframe

PTS: 1 REF: 12

8. The text described a total of \_\_\_\_\_ major categories of computer, though it emphasized that classification of any individual device is often not so straightforward.

ANS:  
six  
6

PTS: 1 REF: 6-13

9. ISP stands for \_\_\_\_\_.

ANS: Internet service provider

PTS: 1 REF: 15

10. A group of Web pages belonging to one individual or company is called a(n) \_\_\_\_\_.

ANS: Web site

PTS: 1 REF: 15

11. 212.41.18.147 is an example of a(n) \_\_\_\_\_.

ANS: IP address

PTS: 1 REF: 16

12. An email message first travels from the sender's computer to his or her ISP's \_\_\_\_\_.

ANS: mail server

PTS: 1 REF: 20

13. The legal concept of \_\_\_\_\_ permits limited duplication and use of a portion of copyrighted material for specific purposes.

ANS: fair use

PTS: 1 REF: 22

14. \_\_\_\_\_ are the standards of conduct that guide a business's policies, decisions, and actions.

ANS: Business ethics

PTS: 1 REF: 24

15. The average U.S. household spends approximately \_\_\_\_\_ per year powering devices that are turned off or in standby mode.

ANS: \$100

**MATCHING**

- |                       |                      |
|-----------------------|----------------------|
| a. Internet appliance | g. URL               |
| b. desktop computer   | h. portable computer |
| c. Web server         | i. browser           |
| d. the IPOS cycle     | j. domain name       |
| e. trademark          | k. software          |
| f. midrange server    | l. ISP               |

1. uniquely identifies a specific Web page
2. the programs or instructions used to tell the computer what to do
3. used for viewing Web pages
4. uses a tower case
5. a device designed primarily for accessing Web pages and using email
6. a company that provides Internet access
7. uniquely identifies a computer on the Internet
8. a word, symbol, etc. that identifies one product or service from another
9. where Web pages are stored
10. the progression of the four primary operations of a computer
11. often the computer of choice for students, home users, and even businesses
12. a medium-sized computer used to host programs and data for small networks

- |            |        |         |
|------------|--------|---------|
| 1. ANS: G  | PTS: 1 | REF: 17 |
| 2. ANS: K  | PTS: 1 | REF: 5  |
| 3. ANS: I  | PTS: 1 | REF: 15 |
| 4. ANS: B  | PTS: 1 | REF: 9  |
| 5. ANS: A  | PTS: 1 | REF: 11 |
| 6. ANS: L  | PTS: 1 | REF: 15 |
| 7. ANS: J  | PTS: 1 | REF: 15 |
| 8. ANS: E  | PTS: 1 | REF: 23 |
| 9. ANS: C  | PTS: 1 | REF: 15 |
| 10. ANS: D | PTS: 1 | REF: 4  |
| 11. ANS: H | PTS: 1 | REF: 9  |
| 12. ANS: F | PTS: 1 | REF: 11 |

**ESSAY**

1. What is “cloud computing”? What are some of its advantages and disadvantages?

ANS:

In general, cloud computing refers to data, applications, and even resources stored on computers accessed over the Internet—in a “cloud” of computers rather than on users’ computers. Users access only what they need when they need it. Advantages of cloud computing include easy scalability, lower capital expenditure, and access to data from anywhere. It is also beneficial to business travelers and other individuals whose computers, mobile phones, or other devices may be lost or otherwise compromised while the individual is on the go. If no personal or business data is stored on the device, none can be compromised. Disadvantages include a possible reduction in performance of applications if they run more slowly via the cloud than they would run if installed locally, and the potentially high expense related to data transfer for companies with high-bandwidth applications. In addition, numerous security concerns exist, such as how the data is protected against unauthorized access and data loss.

PTS: 1

REF: 6

TOP: Critical Thinking

2. Name and briefly describe the four major kinds of portable computers mentioned in the textbook.

ANS:

Notebook computers (laptop computers)—computers that are about the size of a paper notebook and open to reveal a screen on the top half of the computer and a keyboard on the bottom. They are comparable to desktop computers in features and capabilities.

Tablet computer—notebook-sized computers that are designed to be used with a digital pen or stylus. They can be either slate tablets (one-piece computers with a screen on top and no keyboard, such as the one shown in Exhibit 1-6) or convertible tablets, which use the same clamshell design as notebook computers but whose top half can be rotated and folded shut so it can also be used as a slate tablet.

Netbooks—also called mini-notebooks, mini-laptops, and ultraportable computers; notebook computers that are smaller (a 10-inch-wide screen is common), lighter (typically less than three pounds), and less expensive than conventional notebooks, so they are especially appropriate for students and business travelers. They typically don’t include a CD or DVD drive, and they have a smaller keyboard than a notebook computer. The market for netbooks is growing rapidly and it is expected to reach 50 million by 2012, according to the research firm Gartner.

Ultra-mobile PCs (UMPCs)—sometimes called handheld computers; computers that are small enough to fit in one hand. UMPCs are smaller (screen size is often seven inches or smaller) and lighter (usually less than two pounds) than netbooks. They can support keyboard, touch, and/or pen input, depending on the particular design being used.

PTS: 1

REF: 10

TOP: Critical Thinking

3. Name and describe two technologies currently being used to protect digital content.

ANS:

To protect their rights, some creators of digital content (such as art, music, photographs, and movies) use digital watermarks—a subtle alteration of digital content that is not noticeable when the work is viewed or played but that identifies the copyright holder. For instance, the digital watermark for an image might consist of slight changes to the brightness of a specific pattern of pixels that are imperceptible to people but are easily read by software. Digital watermarks can be added to images, music, video, TV shows, and other digital content. The purpose of digital watermarking is to give digital content a unique identity that remains intact even if the work is copied, edited, compressed, or otherwise manipulated.

Another rights-protection tool used with digital content is digital rights management (DRM) software, which is used to control the use of a work. For instance, DRM used in conjunction with business documents (called enterprise rights management) can protect a sensitive business document by controlling usage of that document, such as by limiting who can view, print, or copy it. DRM used with digital content, such as movies and music, downloaded via the Internet can control whether the downloaded file can be copied to another device, as well as make a video-on-demand movie unviewable after the rental period expires.

PTS: 1

REF: 23

TOP: Critical Thinking