
Chapter 1 Review Question Answers

1. A network is a combination of software and hardware that allows computers to exchange data and to share software and devices, such as printers.
2. *Answers will vary.* Four benefits of using a network are:
 - They allow users to reliably share and exchange data.
 - They can reduce costs by sharing devices such as printers.
 - They can be set up to allow users access to only specific files.
 - They simplify the process of creating backup copies of files.
3. a) LAN and WAN are the two most common size classifications for networks.
b) A WAN is used to connect devices over large geographical distances.
4. a) An operating system is software that allows the user to communicate with the computer.
b) Two networking functions are:
 - security access features
 - support for multiple users
5. a) Network architecture refers to the structure of a network, which determines how network resources are handled.
b) Client/server and peer-to-peer are two common network architecture models.
6. a) Physical topology refers to the arrangement of the nodes on a network.
b) A node is a location on the network capable of processing information, such as a computer or a printer.
c) A star topology uses a hub.
d) A ring topology connects each node to form a closed loop.
e) Physical topology refers to the arrangement of the nodes on a network, while logical topology refers to the way data is passed between the nodes on the network.
7. a) Transmission media is what joins the nodes on a network to enable communication.
b) Bandwidth is the amount of data and the speed at which the data can travel over the transmission media.
- c) Four types of transmission media are:
 - Twisted-pair wiring consists of pairs of insulated strands of copper twisted around each other to form a cable.
 - Coaxial cable is made up of a central copper wire, a layer of insulation, a braided metal shield, and an outer shield.
 - Fiber optic cable is composed of a bundle of thin strands of glass or plastic fibers that transmits data modulated onto light waves.
 - Wireless networks use high frequency radio waves or infrared signals instead of cables to transmit data.
8. a) A protocol is a standard.
b) Ethernet is a widely used protocol for Local Area Networks.
c) *Answers will vary.* IBM's Token Ring network and Apple Computer's AppleTalk are two other LAN protocols besides the one used in part (a).
9. Three netiquette rules are:
 - Do not attempt to access the account of another user without authorization.
 - Do not share your password, and change it periodically.
 - Use appropriate subject matter and language, and be considerate of other people's beliefs and opinions.
10. The Internet is the largest and most widely accessed network.
11. A router is a device that can connect different network technologies together.
12. a) A client computer is sent information from a server computer.
b) The client/server structure is called interactive because the information accessed is a result of selections made by the user.
13. a) Individuals can get access to the Internet through telecommunications and an Internet service provider or an online information service.
b) AOL is an example of an online information service.

14. a) Telecommunications is the transmitting and receiving of data.
 b) *Answers will vary.* Three telecommunications options are:
 - conventional modem
 - DSL (Digital Subscriber Line)
 - cable modem
15. a) Leased/Dedicated lines would be a good choice of connection for a business that needed constant access to the Internet because they allow for a permanent connection that is always active and the cost is usually a fixed monthly fee.
 b) A cable modem uses a coaxial cable instead of analog phone lines.
16. The World Wide Web (WWW) is the most widely used Internet service.
17. a) E-mail is an Internet service that allows an individual with an e-mail account to send messages to another person with an e-mail account.
 b) One benefit of e-mail over standard mail is that e-mail can be received in a matter of seconds, even if the recipient is located half way around the world.
18. a) Chatting is communicating with someone else who is also online by typing messages back and forth to each other.
 b) Real time means that data reflects an event as it occurs.
 c) Chatting is considered to be a real time event because after one person writes something, the other person receives the message and replies.
19. A bulletin board service allows a user to participate in a discussion group.
20. a) A listserv is a discussion group that uses e-mail to send messages.
 b) HTTP is used for handling the transmission of pages between a Web server and a Web browser.
 c) FTP is used to rapidly transfer (upload and download) files from one computer to another over the Internet.
21. Gopher locates information on the Internet using a text-based environment.
22. a) An intranet is a network that is used by a single organization, such as a corporation or school, and is only accessible by authorized users.
 b) An extranet is an extended intranet that provides various levels of access to authorized members of the public.
23. Online profiling is a marketing technique that collects online data about consumers.
24. A cookie is a text file created by the server computer when a user enters information into a Web site.
25. a) A Web bug is a tiny, transparent graphic located on a Web page used to collect data about the Web page user.
 b) An outside advertising company usually monitors the information collected by Web bugs.
26. A privacy policy is a legally binding document that explains how any personal information will be used.
27. *Answers will vary.* The Children's Online Privacy Protection Act of 1998, which requires commercial Web sites that collect personal information from children under the age of 13 to obtain parental consent, is one law that helps protect the privacy of an individual.
28. a) Concerns about Internet content, unproductive use, and copyright are three reasons why many schools have developed an Internet Use Agreement.
 b) *Answers will vary.* "Use appropriate language" is a rule that typically appears on an Internet Use Agreement.
29. The information age is the present time characterized by increasing dependence on the computer's ability to store and manipulate large amounts of information.
30. a) *Answers will vary.* Society is benefitting from the information age by having access to information almost immediately.
 b) Probably the most serious problem associated with computers is the possibility of invading our privacy. Computers store records that can be used to learn a great deal about you.

31. Computers can be used to invade your privacy by storing information about you.
32. If you are turned down for credit at a bank and believe that the data used to deny credit is inaccurate, you can see the files used to make the credit determination. If any of the information is incorrect, the person has the right to have it changed.
33.
 - a) A subpoena, summons, or search warrant is necessary for a federal government authority to access an individual's financial records.
 - b) The financial institution must notify the individual of who has had access to their financial records.
34.
 - a) Computer piracy is illegally copying or distributing software.
 - b) A computer cracker is a person who enters a computer system without authorization.
 - c) A computer virus is a series of instructions buried into a computer file that causes the computer to destroy data when given a certain signal.
35.
 - a) A Web developer has the ethical responsibility to ensure, as best they can, the reliability of the data when creating dynamic Web pages.
 - b) It is extremely difficult, if not impossible, for a Web developer to guarantee that data is always valid because computers will only do what they have been programmed to do.