HW 2 Chapter 2

R3. For a communication session between a pair of processes, which process is the client and which is the server?

R4. For a P2P file-sharing application, do you agree with the statement, “There is no notion of client and server sides of a communication session”? Why or why not?

R5. What information is used by a process running on one host to identify a process running on another host?

R6. Suppose you wanted to do a transaction from a remote client to a server as fast as possible. Would you use UDP or TCP? Why?

R11. Why do HTTP, SMTP, and IMAP run on top of TCP rather than on UDP?

R12. Consider an e-commerce site that wants to keep a purchase record for each of its customers. Describe how this can be done with cookies.

R16. Suppose Alice, with a Web-based e-mail account (such as Hotmail or Gmail), sends a message to Bob, who accesses his mail from his mail server using IMAP. Discuss how the message gets from Alice’s host to Bob’s host. Be sure to list the series of application-layer protocols that are used to move the message between the two hosts.

P1. True or false?

a) A user requests a Web page that consists of some text and three images. For this page, the client will send one request message and receive four response messages.

b)Two distinct Web pages (for example, www.mit.edu/research.html and www.mit.edu/students.html) can be sent over the same persistent connection.

c) With nonpersistent connections between browser and origin server, it is possible for a single TCP segment to carry two distinct HTTP request messages.

d) The Date: header in the HTTP response message indicates when the object in the response was last modified.

e) HTTP response messages never have an empty message body.