Ch 2

1.

FTFFF

4.

a) The document request was http://gaia.cs.umass.edu/cs453/index.html. The Host: field indicates the server's name and /cs453/index.html indicates the file name.

b) The browser is running HTTP version 1.1, as indicated just before the first <cr><lf> pair.

c) The browser is requesting a persistent connection, as indicated by the Connection: keep-alive.

d) This is a trick question. This information is not contained in an HTTP message anywhere. So there is no way to tell this from looking at the exchange of HTTP messages alone. One would need information from the IP datagrams (that carried the TCP segment that carried the HTTP GET request) to answer this question.

e) Mozilla/5.0. The browser type information is needed by the server to send different versions of the same object to different types of browsers.

15.

MTA stands for Mail Transfer Agent. A host sends the message to an MTA. The message then follows a sequence of MTAs to reach the receiver’s mail reader. We see that this spam message follows a chain of MTAs. An honest MTA should report where it receives the message. Notice that in this message, “asusus-4b96 ([58.88.21.177])” does not report from where it received the email. Since we assume only the originator is dishonest, so “asusus-4b96 ([58.88.21.177])” must be the originator.

21.

Yes, we can use dig to query that Web site in the local DNS server. For example, “dig cnn.com” will return the query time for finding cnn.com. If cnn.com was just accessed a couple of seconds ago, an entry for cnn.com is cached in the local DNS cache, so the query time is 0 msec. Otherwise, the query time is large.

29.

Yes, you can configure many browsers to open multiple simultaneous connections to a Web site. The advantage is that you will you potentially download the file faster. The disadvantage is that you may be hogging the bandwidth, thereby significantly slowing down the downloads of other users who are sharing the same physical links.