CHAPTER 11

UDP

11.1 MULTIPLE-CHOICE QUESTIONS

1. c	3. c	5. a	7. a	9. d
11. d	13. c	15. a	17. d	19. a
21. c	23. c			

11.2 EXERCISES

25. IP and UDP are both connectionless and unreliable protocols. The main difference in their reliability is that IP only calculates a checksum for the IP header and not for the data while UDP calculates a checksum for the entire datagram.

27. Ephemeral is defined as short-lived or transitory. Ephemeral port numbers are only used for the duration of a single communication between client and server, so they are indeed short-lived.

29. FTP uses the services of TCP, not UDP.

31. 65152

33. The client would use the IP address 122.45.12.7, combined with an ephemeral port number in the range of 49,152 – 65,535 generated by the SNMP software, for its source socket address and the IP address 200.112.45.90, combined with the well known port number 161, as the destination socket address.

35. The minimum size of a UDP datagram is 8 bytes at the transport layer and 28 bytes at the IP layer. This size datagram would contain no data–only an IP header with no options and a UDP header. The networking technology being used may require the using of padding.

37. The smallest amount of process data that can be encapsulated in a UDP datagram is 0 bytes.

39. This datagram could not be transferred using a single user datagram.

41. 16 bytes of data / 44 bytes of total length = 0.364

43.

    a. Port number 1586

    b. Port number 13

    c. 28 bytes

    d. 20 bytes (28 $-$ 8 byte header $=$ 20 bytes)

    e. From a client to a server

    f. Daytime