
CHAPTER 13

Metropolitan Area Networks

13.1 REVIEW QUESTIONS

1. DQDB and SMDS use services of existing utilities, e.g. telephone companies.
3. Slots, or continuous streams of bits, are generated at the head of each bus and passed downstream to be filled with data by one of the stations on the bus.
5. Station X on bus A sets the reservation bit on a slot on bus B. After the reservation is made, the station deposits its data in the corresponding slot according to its queue.
7. A FIFO queue is a first-in, first-out waiting system; the elements are inserted at the rear and removed from the beginning.
9. A 53-byte packet makes a slot compatible with the size of an ATM cell.
11. Physical layer specifications are left open. Access media can be either coaxial or fiber-optic cable with a variety of data rates.
13. SIP defines levels that coordinate access to SMDS.
15. The header added at level 3 contains a telephone number because SMDS uses the existing telephone addressing system.

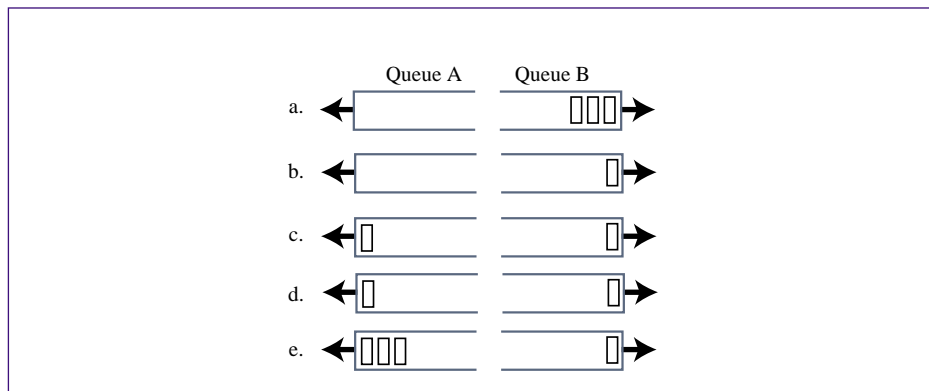
13.2 MULTIPLE CHOICE QUESTIONS

17. d 19. d 21. c 23. c 25. a 29. c

13.3 EXERCISES

29. As bus A is configured, stations 8, 9, 10 are upstream with respect to station 7. As bus B is configured stations 1, 2, 3, 4, 5, and 6 are considered to be upstream with respect to 7. Stations 4 through 10 are downstream in bus A with respect to station 3. 1 and 2 are downstream stations in bus B with respect to station 3.
31. The address field contains a 20-bit virtual channel identifier for MANs and WANs. When used in LAN transmission, the field is filled with all 1s and another header is added to carry the MAC physical address.
33. See Figure 13.1.

Figure 13.1 Exercise 33



- 35.
- a. 16 more bytes will be needed for padding
 - b. 24 sections
 - c. 24 sections
 - d. 24 sections
- 37.
- a. 0.0002261 seconds to send the data
 - b. 0.0000094 seconds to send one slot
39. It is the last 40 bits of the address.