CHAPTER 22

Transport Layer

22.1   REVIEW QUESTIONS

1. While the data link layer is designed to provide service within a single network, the transport layer provides theses services across an internetwork made of many networks.

3. Connection establishment, data transfer, and connection termination

5. The upper layer protocols can use the services of the transport layer protocols to interact with the network without directly interacting with the lower layers.

7. End-to-end delivery, addressing, reliable delivery, flow control, and multiplexing.

9. Communication occurs not only between machines, but between application programs. The service points identify the application programs.

11. The various pieces of data may arrive out of order at the destination. To ensure the usability of the data for the upper layers, the transport layer needs to reassemble the arrived packets.

13. Downward multiplexing is used to split a single connection among several different paths to improve throughput.

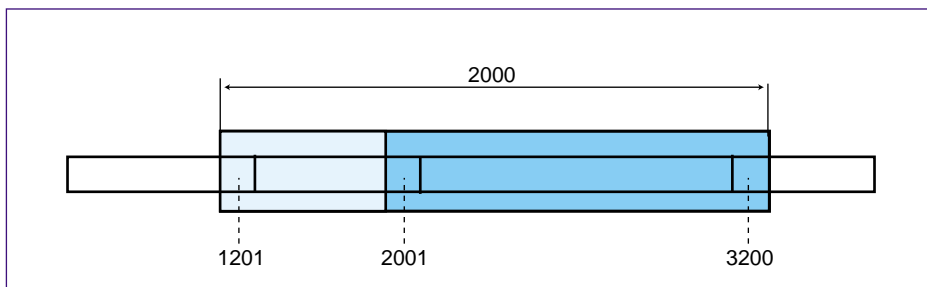15. Length, fixed parameters, variable parameters, and data.

22.2   MULTIPLE CHOICE QUESTIONS

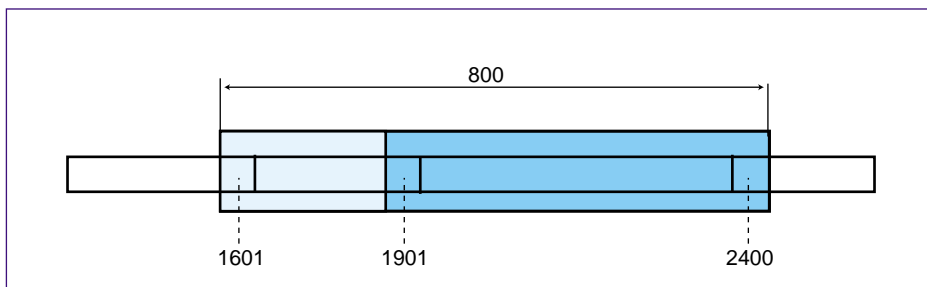17. c   19. c   21. b   23. d   25. b   27. a   29. b

22.3   EXERCISES

31. See Figure 22.1.

Figure 22.1   *Exercise 31*

33. See Figure 22.2.

Figure 22.2   *Exercise 33*

35. When all bytes that are sent are acknowledged.
37. When all bytes in the window are sent, all bytes are acknowledged and the receiver decreases the size of the window to 0.