¤ The capacity of high line can be shared between all pairs of telephones.

¤ The switch is used for only forwarding.

➢ Advantage:

A circuit-switched network is efficient only when it is working at its full capacity.

➢ Disadvantage:

Most of the time, the network is inefficient because it is working at partial capacity.

1.3.4.2 Packet Switched Network

➢ In a computer network, the communication between the 2 ends is done in blocks of data called packets.

➢ The switch is used for both storing and forwarding because a packet is an independent entitythat can be stored and sent later.

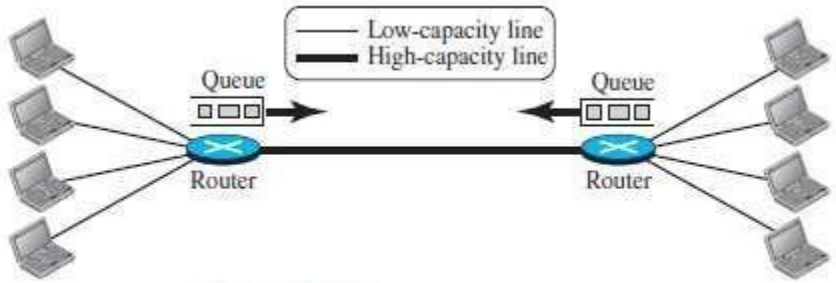

Figure 1.14 *A packet-switched network*

¤ As shown in Figure 1.14, the 4 computers at each side are connected to a router.

¤ A router has a queue that can store and forward the packet.

¤ The high-capacity line has twice the capacity of the low-capacity line.

¤ If only 2 computers (one at each site) need to communicate with each other, there isno waiting for the packets.

¤ However, if packets arrive at one router when high-capacity line is at its full capacity,the packets should be stored and forwarded.

➢ Advantages:

A packet-switched network is more efficient than a circuit switched network.

➢ Disadvantage:

The packets may encounter some delays.

[Note: Packet Switching is explained in detail at the end of the chapter]