CHAPTER 25

Multimedia

Exercises

1.

a. At time 00:00:17

first packet:	10 units arrived, 9 units played, 1 unit in buffer
second packet:	2 units arrived, none played, 3 units in buffer

b. At time 00:00:20

first packet:	none left
second packet:	5 units arrived, 2 units played, 3 unit in buffer

c. At time 00:00:25

first packet:	none left
second packet:	10 units arrived, 7 units played, 3 units in buffer

d. At time 00:00:30

first packet:	none left
second packet:	none left
third packet:	3 units arrived, 2 units played, 1 unit in buffer

3. RTP plus UDP provides about the same services as TCP without the latter's retransmission policy.

5. The answer is yes. The protocol defines a server as a process running at the application level. The two servers can be on the same machine or different machines.

7. SIP just sets up and terminates a session between 2 parties. H.323 is a protocol suite that covers everything pertaining to the session. SIP is more flexible in its address formats. H.323 setup is more complicated than that of SIP.

9.

a. The input during the first minute is (100 gallons/minutes) × (12 / 60 minutes) or **20** gallons.

b. The output during the first minutes is (5 gallons/minutes) × (1 minute) or **5** gallons.

c. This means that after the first minute, **15** gallons of liquid is left in the bucket. The problem does not mention the input rate after the first minute. If there is no input flow, the bucket would be empty after three minutes.