1.

Sol.

As the problem mentioned, the propagation delay is

So the minimum frame size is

2.

Sol.

3.

Sol.

1. B1's MAC table includes: A(1). B2's MAC table includes: A(4).
2. B1's MAC table includes: A(1), E(4). B2's MAC table includes: A(4), E(2).
3. B1's MAC table includes: A(1), E(4). B2's MAC table includes: A(4), E(2), F(2).
4. B1's MAC table includes: A(1), E(4). B2's MAC table includes: A(4), E(2), F(2), G(3).
5. B1's MAC table includes: A(1), E(4). B2's MAC table includes: A(4), D(1), E(2), F(2), G(3).
6. B1's MAC table includes: A(1), B(2), E(4). B2's MAC table includes: A(4), D(1), E(2), F(2), G(3).

4.

Sol.

1. The strength of the received signal is often less than that of the transmitted signal, and the range of signal strength changes dynamically on wireless media. As a result, the collision detection is much more difficult in wireless networks.
2. In 802.11 networks, the source station can broadcast a RTS(request to send) frame before transmitting data. And the destination station needs to broadcast a CTS(clear to send) frame if the medium is idle.