Exercise (Peterson & Davie 5th ed.)

What happens in the spanning tree algorithm if bridge B1 does not participate and:

a) Simply forwards all spanning tree algorithm messages?

b) Drops all spanning tree messages?

Exercise (Peterson & Davie 5th ed.)

What happens in the spanning tree algorithm if bridge B1 does not participate and:

a) Simply forwards all spanning tree algorithm messages?
   - D, E, F, G would be considered a single LAN segment.
   - The resulting tree would have B2 as its root.
   - Blocked ports:
     - B5 to A (B5 has a direct link to B2)
     - B7 to B
     - B6 on either side
   - If B3 also forwards all non-STP messages, network works correctly.

b) Drops all spanning tree messages?
   - Then the LAN is actually disconnected into two parts: A-F and G-H.
   - Neither part has a redundancy, so STP blocks no ports.
   - If B1 still forwards non-STP messages, then we still have loops! The network malfunctions.
All switch tables are initially flooded (bridges) — not only hosts. The learning mechanism decides which port to use as the root port and which port to use as the designated port. (Connected) 

Exercise (Peterson & Davie 5th ed.)

- W, X, Y, Z - hosts, B1, B2, B3 - bridges
- All switch tables are initially empty.
- X sends a message to W. Which bridges learn where X is? Does Y’s network interface see this packet?
- The frame is flooded. All the bridges see it, and so does Y’s interface.
Exercise (Peterson & Davie 5th ed.)

- W, X, Y, Z – hosts. B1, B2, B3 - bridges
- All switch tables are initially empty.
- Now, Z sends a message to X. Which bridges learn where Z is? Does Y's network interface see this packet?
- All the bridges know where X is, so the frame is simply forwarded from each bridge on its link to X.
- All bridges learn where Z is.
- Y doesn’t see the frame.

Exercise (Peterson & Davie 5th ed.)

- W, X, Y, Z – hosts. B1, B2, B3 - bridges
- All switch tables are initially empty.
- Y sends a message to X. Which bridges learn where Y is? Does Z's network interface see this packet?
- B1, B2 already know where X is so they are forwarding the frame properly. They learn where Y is.
- Z doesn’t see the frame.

Exercise (Peterson & Davie 5th ed.)

- W, X, Y, Z – hosts. B1, B2, B3 - bridges
- All switch tables are initially empty.
- W sends a message to Y. Which bridges learn where W is? Does Z’s network interface see this packet?
- B3 doesn’t know where Y is, so the frame is flooded by B3. Thus, Z sees the frame.
- When it arrives to B2, who knows where Y is, it is simply forwarded on the link to Y.
- B3 and B2 have learned where W is.