# COSC244 Tutorial
From Lecture 14, 15 & 16

1. Distinguish between circuit switching, message switching, and packet switching.
2. What is a protocol converter? At what OSI layers can protocol converters exist? List common examples.
3. Distinguish between a repeater hub, a switch and a bridge.
4. List major reasons for using bridges between two LANs.
5. Distinguish between a *fixed routing bridge* and a *transparent bridge*.
6. Build routing tables for the following bridges.
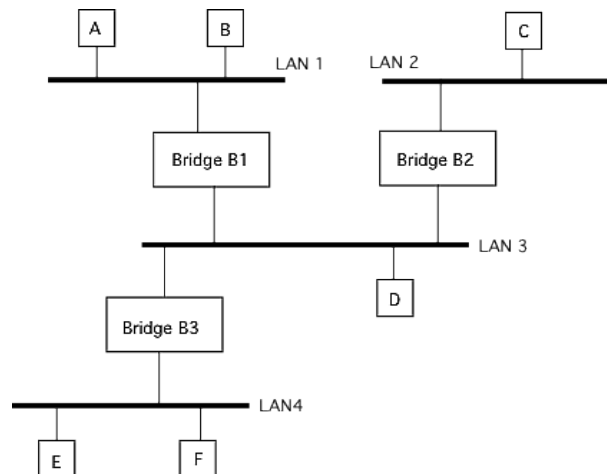
7. According to the routing tables created in the above question, explain how a frame is transmitted from station A to station F in the multiple LANs interconnected by bridges.
8. What is a routing table? What information do routers maintain in their routing tables? Discuss the differences of routing in bridges and routers.
9. Create a routing matrix for the following network. In cases where two routes have the cheapest cost, choose the one containing the fewest nodes. If both criteria are the same then choose one arbitrarily.
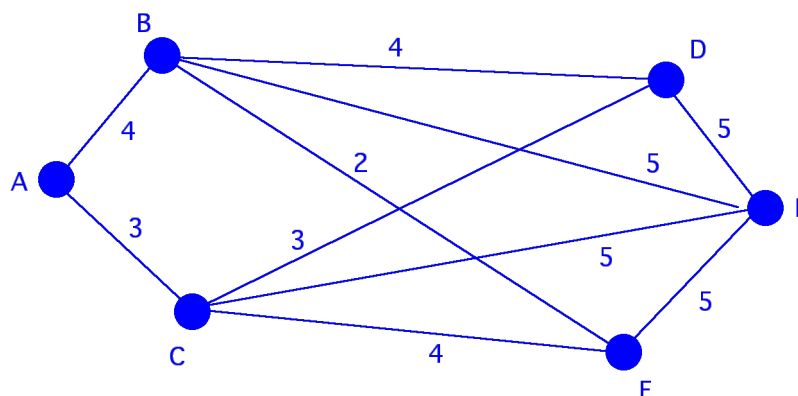
10. What problem does the Bellman-Ford algorithm have? Why does link state routing overcome the problem for the Bellman-Ford algorithm?

11. What is hierarchical routing? What are its advantages and disadvantages?