ECE 6353 Final Exam Review

1. How does an Ethernet switch learn its forwarding table?
2. IP routing, operation and comparison of Dijkstra and Bellman-Ford algorithms
3. IP subnet address structure
4. TCP
    a. reliable data transfer protocols
    b. comparison of Go-back-N and Selective Repeat
    c. checksum calculation
    d. timeout interval calculation
    e. operation and difference of difference congestion control schemes (Taho, Reno, NewReno, and Cubic)
    f. ACK and SACK sequence number update
    g. cwnd update in different modes (slow start, congestion avoidance, and fast recovery)
    h. ACK/SACK/cwnd update when packets are transmitted between a sender and a receiver with some packets lost in between
5. Comparison of different HTTP versions
6. Playback buffer in video streaming and CDN operation
7. How keys are used in Confidentiality, Integrity, and Authentication
8. Differences between Digital Signature, Digital Digest, and Message Authentication Code (MAC)
9. TLS operations
10. IPSec operations