ITEC 350 Study Guideline for Final Exam

Please study based on the powerpoint slides which we used in class. All the powerpoint slides are posted on the class calendar of ITEC 350 D2L.

> **_Note_: The final exam will be comprehensive. Thus, please refer the study guideline of the midterm exams.**

1. Chapter 3
    a. Line Coding
        i. Unipolar NRZ
        ii. Polar NRZ
        iii. NRZ-inverted (differential encoding)
        iv. Bipolar encoding
        v. Manchester encoding
        vi. Differential Manchester encoding

    b. Error Detection & Correction
        i. Single Parity Check
        ii. Two Dimensional Parity Check
        iii. CRC (Cyclic Redundancy Check) Code

2. Chapter 5 – Automatic Repeat Request (ARQ): You should know how it works.
    a. Stop-and-Wait ARQ
    b. Go-Back N ARQ
    c. Selective Repeat ARQ
    d. Sliding Window Protocol

3. Chapter 7
    a. Centralized Routing vs. Distributed Routing
    b. Static Routing vs. Dynamic Routing
    c. Flooding, Limited Flooding
    d. Shortest Path Routing Algorithm
        i. Distance Vector Algorithm, Bellman-Ford Algorithm
        ii. Counting to infinite problem & its solution
        iii. Link State Algorithm, Dijkstra Algorithm

4. Chapter 8
    a. RIP
    b. Interior Gateway Protocol, OSPF
    c. Exterior Gateway Protocol, BGP

5. Security Basic
    a. Symmetric Key Cryptography
    b. DES
    c. Asymmetric Key Cryptography, Public Key Cryptography
    d. RSA