Chapter 1:

1. What is Internet? Host, link, switch, protocol, standards
2. What is protocol? Semantics, time sequence
3. Performance? Delay, loss throughput
4. Network protocol layering. Communication procedure.

Chapter 2:

1. App layer protocols, what defined, architectures
2. Web
   1. Cookie
   2. Cache
3. Http
   1. Procedure
   2. Two types of Http: non-persistent, persistent
   3. Different methods
4. Email, DNS, FTP
   1. Procedure
5. P2P
   1. Benefit
   2. Free-ride, tit-for-tat

Chapter 3:

1. Mux, Demux
   1. Connectionless
   2. Connection-oriented
2. UDP
   1. Best-effort
   2. Not-reliable
3. TCP
   1. Reliable data delivery, FSM, time sequence
   2. Know how to analyze a protocol, and figure out the problem of a give protocol
   3. 3-way handshake
   4. Window management
   5. Retransmission, Go-back-N, selected repeat
   6. Fairness, ECN

Chapter 4

1. Architecture of router
   1. Head-of-line problem
   2. Scheduling policy
2. IP
   1. Datagram format, transmission efficiency
   2. Fragmentation, offset
   3. IP address
      1. Subnet, net address, host address
      2. mask