1. Introduction to Computer Networks
   - Chapter 1
   - Chapter 9: (Section 9.1-9.5) Review Questions: 9.1 thru 9.7; HW Problems: 9.7, 9.8
     - Station Interconnection
     - Switched Communications Networks
     - Circuit Switching vs. Packet Switching Networks
     - Packet Switching Alternatives
     - Frame Relay and ATM Networks
     - Broadcast Networks: Satellite Networks, Radio Networks, LANs
     - The Internet
     - Intranets and Extranets

2. Protocols
   - Chapter 2: Review Questions: 2.1 thru 2.11; HW Problems: 2.2, 2.5, 2.6, 2.7
   - Appendix E: The OSI Model
   - Appendix O: TCP/IP Example
     - Protocol Concepts & Functions
     - A Simple Protocol Architecture
     - The TCP/IP Protocol Architecture
     - Protocol Implementation
     - TCP/IP Sample Configuration
     - Traditional vs, Multimedia Internet Applications

3. Internetworking
   - Chapter 14: Review Questions: All; HW:14.2, 14.3, 14.6, 14.9, 14.10, 14.12, 14.22
   - Chapter 22: Review Questions: All, HW:22.3, 22.4, 22.5
   - Chapter 23: Review Questions: All, HW 23.2
   - Chapter 27 (Section 27.1) Review Question: 27.1; HW: 27.1
   - Chapter 11 (section 11.3): Review Question: 11.8
     - Principles of Internetworking
     - Approaches
     - Internet Protocols: IP, ICMP
     - IPv6, ICMPv6
     - Internet Routing: ARP, RIP, OSPF, EGP, BGP
     - Virtual Private Networks
     - IP Security (IPSec) Standards
     - Multicasting
     - Mobile IP
     - Integrated Services Architecture
     - Resource Reservation Protocol (RSVP)
     - Differentiated Services
     - Multiprotocol Label Switching

Exam #1
4. Transport Protocols
   Chapter 15: Review Questions: All; HW: 15.3, 15.5, 15.6, 15.7, 15.10, 15.13, 15.15, 15.16, 15.17, 15.18
   Chapter 7 (Reference Text - Section 7.3):
   Chapter 25 (Section 25.4): Review Questions: 25.6, 25.7; HW: 25.3, 25.4
   - Transport Layer Issues
   - The Transmission Control Protocol (TCP)
   - TCP Mechanisms, Policies, and Traffic Control
   - The User Datagram Protocol (UDP)
   - Real-Time Transport Protocol (RTP)

5. Application Protocols
   Chapter 3 (Reference Text): Link to Review Questions and HW
      Review Questions: 3.1 thru 3.11; HW: 3.1, 3.2
   Chapter 2 (Appendix): HW: 2.13, 2.15
   Appendix R:
   - The Client-Server Paradigm
   - Directory Services: DNS
   - Remote Login: TELNET, SSH
   - File Transfer: FTP
   - Trivial File Transfer Protocol (TFTP)
   - Electronic Mail: SMTP, MIME, POP
   - Universal Resource Locators (URLs)
   - Hypertext Transfer Protocol (HTTP)

6. Multimedia Protocols
   Chapter 25 (Sections 25.1-25.3): Review Questions: 25.1 thru 25.5
   - Real-Time Traffic
   - Session Initiation Protocol (SIP)
   - VoIP (Voice over IP) and other Multimedia Applications

7. Legacy Networks
   Appendix U:
   - X.25 Network Access
   - Frame Relay Networks
   - Frame Relay Congestion Control

8. ATM (Asynchronous Transfer Mode) Networks
   Chapter 9 (Section 9.6): Review Questions: 9.8-9.10
   Chapter 8 (Section 8.2 pp.256-259)
   Appendix V:
   - ATM Protocol Architecture
   - ATM Logical Connections
   - ATM Cells
   - Transmission of ATM Cells
   - ATM Service Categories
   - ATM Traffic Management

Exam #2
9. Wireless LAN Networks
   Chapters 11: Review Questions: All
   Chapters 12: Review Questions: 12.1 thru 12.4
   Chapters 13: Review Questions: All; HW 13.1
   Chapter 17 (reading only): Review Question: All
   - Legacy LAN Networks: Ethernet, ...
   - Wireless LAN Technology
   - Spread Spectrum Technology
   - IEEE 802.11 Architecture and Services
   - IEEE 802.11 MAC Layer
   - IEEE 802.11 Physical Layer
   - IEEE 802.11 Security Considerations

10. Computer and Network Security
    Chapters 26: Review Questions: All; HW: 26.1, 26.3, 26.5
    Chapters 27: Review Questions: All
    - Computer Security Concepts
    - Threats, Attacks, and Assets
    - Intruders
    - Malicious Software Overview: Viruses, Worms, Bots, etc.
    - VPNs and IPsec
    - SSL and TLS
    - WiFi Protected Access
    - Intrusion Detection
    - Firewalls
    - Malware Defense

Final Examination