In addition to the vocabulary below, prepare for longer questions on the following topics:

- TCPDump output: use hw5 as refresher.
- dig +trace output: run it for your favorite hostnames.
- The TCP sawtooth, variations (like slow start).

Vocabulary:

- p-persistent CSMA
- 1-persistent CSMA
- 4B/5B
- 802.11
- A record
- accept (the system call)
- ack clocking
- ack implosion
- active open
- address
- advertised window
- AIMD (expand and define)
- ALOHA
- application layer
- ARP (expand and define)
- ARP table
- ARQ
- AS (path) prepending
- asymmetric key
- asymmetric routing
- attenuation
- authentication
- authorization
- Autonomous System
- backbone
- BAN logic: Believes
- BAN logic: Controls
- BAN logic: Fresh
- BAN logic: Said
- bandwidth
- bandwidth delay product
- best-effort delivery
- bind (the system call)
- bit stuffing
- bridge
- CE (in ECN)
- chosen plaintext attack
- clock recovery
- closed window
- congestion
- congestion avoidance
- congestion collapse
- congestion control
- congestion window (cwnd)
- connect (the system call)
- convergence layers
- count to infinity
- country-code top-level domain (ccTLD)
- CSMA/CA
- CSMA/CD
- CTS
- cumulative ack
- cwnd
- CWR (in ECN)
- cyclic redundancy code
- data-link layer
- delay
- delayed ack
- delayed ack rule in TCP
- demultiplexing
- DIFS
- dictionary attack
- dijkstra’s algorithm
- distance vector
- DNS
- DoS (expand and define)
- drop tail
- duplicate ack
- early-exit
- ECE (in ECN)
- ECN
- ECT (in ECN)
- EGP
- encapsulation
- error correction
- error detection
- exponential backoff
- export filtering
- exposed terminal
- fast recovery
- fast retransmit
- file swarming
- firewall
- flat addressing
- flow control
- forwarding (different from routing)
- forwarding database (in a switch/bridge)
- frame (different from segment, packet)
- framing
- generic top-level domain (gTLD)
- hidden terminal
- hierarchical addressing
- hierarchy
- ICMP time exceeded
- IGP
- import (ingress) filtering
- initial sequence number (ISN)
- IP address prefix
- IP service model (four bad things)
- IP TTL
- Jacobson/Karels RTO algorithm
- Karn/Partridge algorithm
- Kerberos
- late-exit
- latency
• link state
• link state database
• link state packet
• listen (the system call)
• localpref
• lollipop sequence space
• MAC address
• man-in-the-middle attack
• Manchester
• MED
• metric
• MSL (expand and define)
• MSS (expand and define)
• MTU (expand and define)
• multicast
• multiplexing
• mutual authentication
• Nagle’s algorithm
• NAT
• negative ack
• network byte order
• network layer
• noise
• non-persistent CSMA
• nonce
• NRZI
• optimistic ack
• origin AS
• OSPF
• OSPF areas
• packet (different from segment, frame)
• packet conservation
• passive open
• path vector routing
• physical layer
• PIFS
• preamble
• prefer-customer rule
• privacy
• private key
• protocol state machine (especially TCP’s)
• RED
• reliable flooding
• replay attack
• replication
• retransmission
• retransmission (sender’s) buffer
• RIP’s infinity = 16
• route advertisement
• Route Views
• route withdrawal
• routing (different from forwarding)
• routing convergence
• routing loops
• RTO (expand and define)
• RTS
• RTT (expand and define)
• SACK
• scrambling
• segment (different from packet, frame)
• sentinels
• sequence numbers
• shared key
• SIFS
• signatures, certificates
• silly window syndrome
• sliding window
• slotted ALOHA
• slow start
• smoothed RTT
• smurfing
• so_reuseaddr
• spanning tree protocol
• split horizon
• spoofing
• stop and wait
• store-and-forward
• switched ethernet
• SYN cookies
• SYN flooding
• TCP (expand and define)
• TCP Reno
• TCP sawtooth
• TCP state machine
• TCP Tahoe
• TCP three-way handshake
• TCP Vegas
• tinygrams
• top-level domain (TLD)
• transit AS
• transport layer
• triggered update
• two criteria for accepting a distance vector route
• two-dimensional parity
• UDP
• UDP port

• valley-free routing
• vpn
• waterfall diagram
• window probes
• Zipf’s law
• zombie