Not exhaustive - read the slides, homework, and chapter 1-3

Mathematical questions would be similar to homeworks.

No coding questions, not even pseudo code. Focus on understanding the concepts – why things work the way they do? What happens if we change things.

Expect questions similar to the homeworks but more well defined – you won't have to look anything up.

Combination of (a) explain things (b) calculate things (c) multiple choice (d) fill in the blanks (e) what if (e) why (f) compare between.

- TCP and UDP
  - Calculate throughput, window sizes, loss
  - Propose protocol changes (e.g., QUIC) and how things change due to protocol changes.
  - Syn/ack and how they behave
  - Three way handshake
  - Min-max fair queuing
  - Slow start, AIMD

- DNS –
  - How does it work?
  - DNS security problems

- HTTP/Email –
  - basics, request response
  - what are the application layer semantics that apply to them

- Firewalls and ACLs
  - How they differ
  - what types of traffic they apply to

- IPSec/VPNs
  - Their properties
  - What they don't protect against

- Network security
  - PKI, Symmetric and Asymmetric key cryptography
  - How things differ among them

- SDN and how they change the current internet.