1. As a communication systems engineer, what are the metrics you would use in system design?
2. Describe the layers and corresponding functions of the OSI reference model. What layers comprise the TCP/IP stack?
3. What are the pros and cons of cross layer design?
4. I characterized Packet Switching and the End-to-End principle as the two key design choices for the Internet. Describe them.
5. At what layer does ARQ exist? At what layer does TCP exist? Compare them in terms of how they provide reliability.
6. Describe the hierarchical structure and addressing of the Internet.
7. Explain the tradeoff between Packet Switching and Circuit Switching?
8. Why do we have both MAC & IP Addresses?
9. In setting up a network, should you use a switch or a router? Describe the pros and cons.
10. Think about security in a layer 2 and layer 3. What kind of attacks are there at layer 2 and layer 3? Hint: Lookup the broadcast storm, ARP/switch poisoning, and Denial of Service.