Computer Networks (Topics covered)

Chapter 5 (Tanenbaum)

Short Notes/ Short questions:

1. Store and forward packet switching.

2. Routing algorithm

3. Session Routing

4. Forwarding Routing.

5. Non-Adaptive algorithm.

6. Static algorithm.

7. Adaptive algorithm

8. Dynamic routing algorithm.

9. Provisioning.

10. Traffic aware routing.

11. Admission control.

12. Traffic throttling.

13. Load shedding.

14. QoS.

15. Traffic shaping.

16. Bursty traffic.

17. Traffic shaping.

18. Traffic policing.

19. IP address.

Broad Questions:

1. Define store and forward packet switching. Also mention the services provided by transport layer and the implementation of connection oriented service.

2. Give differences between virtual circuit and datagram network.

3. Describe the types of routing algorithms.

4. Describe congestion control algorithm with appropriate graph.

5. Describe the approaches of congestion control as it goes from slower to faster network.

6. Define QoS and the issues which must be address to ensure QoS.

7. Describe 2 (two) types of traffic policing.

8. Describe 3 (three) elements of packet scheduling.

Chapter 6 (Kurose Book)

Short Notes/ Short questions:

1. Single hop infrastructure.

2. Single hop infrastructure-less.

3. Multi-hop infrastructure based

4. Multi-hop infrastructure less.

5. Types of wireless

6. Hidden terminal problems.

7. Wi-Fi jungle.

8. Advanced features in 802.11

Broad Questions:

1. Describe the types of wireless network elements.

2. Define highest level of wireless by infrastructure.

3. Give differences between wired link vs wireless link.

4. Describe 801.11 architecture.

5. Describe 802.11 MAC protocol.

6. Describe data transmission in both Ad-hoc and 802.11

7. Describe Bluetooth architecture.

8. Describe cellular architecture (2g)

9. Describe cellular architecture (3g).

Chapter 7

Short Notes/ Short questions:

1. What is multimedia networking application?

2. Types of redundancy in video.

3. What is content ingestion?

4. Define adaptive HTTP streaming.

5. Types of video streaming.

6. Properties of video.

Broad Questions:

1. Describe the properties of video and audio.

2. Describe the types of multimedia network application with characteristics.

3. Discuss the delays from video transmission to video playout by client using appropriate graph.

4 Discuss the types of video streaming (UDP, HTTP, Adaptive HTTP streaming)

Chapter 8

Short Notes/ Short questions:

1. 4 (four) properties of network securities.

2. What are the 2 (two) ways intruders can perform intrusion?

3. Types of cipher text attacks.

4. What is digital signature?

5. What is end-point authentication?

6. Define PGP.

7. Types of authentication protocol and how they work.

8. What happens if there is no authentication, no integrity and confidentiality?

Broad Questions:

1. Describe the 4 (four) properties of network securities.

2. Describe principles of cryptography with the types of cryptography and types of encryption.

3. What is firewall? Write down the types of firewalls and where are they used. Also mention 3 (three) goals of firewall.