Questions

1. What is the disadvantage of asynchronous transmission?
2. Describe stop-and-wait flow control.
3. Explain the CRC technique for error detection.
4. Describe the three HDLC transfer modes.
5. Briefly explain the Delta Modulation technique.
6. Define the Nyquist bandwidth.
7. Define the Shannon capacity formula.
8. What are the benefits of spread spectrum?
9. What is multiplexing?
10. Explain frequency-hopping spread spectrum with proper diagram.
11. Explain direct sequence spread spectrum with proper diagram.
12. Discuss the three versions of ARQ with proper diagram.
13. Explain the working of synchronous time division multiplexing (TDM) with proper diagram.
14. Explain the working of frequency division multiplexing (FDM) with proper diagram.
15. Explain the sliding-window flow control with proper diagram.
16. What is the advantage of sliding-window flow control compared to stop-and-wait flow control?
17. Find the Bipolar-AMI, Pseudoternary, Manchester, and Differential Manchester encoding for the binary data 100110111.
18. Explain the difference between datagram and virtual circuit operation.
19. Discuss the various Congestion control techniques.
20. Write short notes on:

- X.25
- Frame Relay

21. Write short notes on:
    - Internet Control Message Protocol (ICMP)
    - IPV6
22. Write short notes on:
    - Internet Group Management Protocol (IGMP)
    - Open Shortest Path First (OSPF)