

1. Describe the reasons that we need flow control in transportation layer. What is the solution proposed in TCP protocol? Repeat the above questions for congestion problem. (20%)
2. A company is granted the site address 201.70.64.0. The company needs fourteen subnets. Design the subnets. What is the subnet mask? What is the maximum number of hosts in each subnet? Write down the total sub-network addresses. (20%)
3. Given a bit sequence 1010011110 and a CRC generator 1011, find the CRC. (20%)
4. Describe the mechanism of CSMA/CA and explain why wireless LAN uses CSMA/CA instead of CSMA/CD as its medium access control protocol. (20%)
5. Explain the principle that a connection-oriented concurrent server can handle multiple clients. (20%)