Tutorial 6

1. Calculate checksum at sender send and verify checksum at receiver end for given 4 inputs of 8 bits each.
   1 0 1 0 1 0 1 0 ---- 1 st
   1 0 0 1 1 0 0 1 ---- 2 nd
   1 1 1 0 0 0 1 0 ---- 3 rd
   0 0 1 0 0 1 0 0 ---- 4 th
   Note: Calculate checksum of 8 bits and for finding checksum add all 4 inputs in one step at sender and 4 input and checksum in one step at receiver.
2. Station A ----(9 packets) ---- > Station B using sliding window (window size =3) in Go-Back-N protocol.
   • All packets are available for transmission.
   • Every 5th packet that A transmit is lost but no ACK from B is ever lost.
   Find out total frames required to be sent by A to ensure all packets are received properly by B.
3. Station A ----(10 packets) ---- > Station B using sliding window (window size =4) in Go-Back-N protocol.
   • All packets are available for transmission.
   • Every 5th packet that A transmit is lost but no ACK from B is ever lost.
   Find out total frames required to be sent by A to ensure all 10 packets are received properly by B.
4. What are similarities and differences between stop and wait, Go-Back-N, Selective Repeat protocols.
5. The TCP segment has a field in its header for ***rwnd***. What is it and how is that field used ?
6. Explain in your words and idea the difference between Flow control and Congestion Control.
7. Why is it that voice and video traffic is often sent over TCP rather than UDP on today's Internet?
8. Why is it written as TCP/IP and UDP/IP more often than just TCP and UDP alone?