

Q-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<sup>st</sup>

1 0 0 1 1 0 0 1 ---- 2<sup>nd</sup>

1 1 1 0 0 0 1 0 ---- 3<sup>rd</sup>

0 0 1 0 0 1 0 0 ---- 4<sup>th</sup>

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 steps at receiver.

Q-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 5<sup>th</sup> packet that A transmit is lost but no ACK from B is ever lost.

Find out total frames required to be send by A to ensure all packets are received properly by B.

Q-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 5<sup>th</sup> packet that A transmit is lost but no ACK from B is ever lost.

Find out total frames required to be send by A to ensure all 10 packets are received properly by B.

Q-4: What are similarities and differences between stop and wait, Go-Back-N, Selective Repeat protocols.