**Practice Questions on sliding window protocols:**

**Example-1.**In Stop and wait protocol every 4th packet is lost and we need to send total 10 packets so how many transmission it took to send all the packets?

**Explanation –**

1 2 3 4 5 6 7 8 9 10 (Initially)

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1 2 3 4 4 5 6 7 8 9 10 (Packet no. 4 retransmitted)

^

1 2 3 4 4 5 6 7 7 8 9 10 (Packet no. 10 retransmitted)

^

1 2 3 4 4 5 6 7 7 8 9 10 10 (Result)

So, we retransmitted packet number 4, 7, 10 Total count = 13

**Example-2.**In GB3 if every 5th packet is lost & we need to send 10 packets so how many retransmissions are required ?

**Explanation –**

1 2 3 4 5 6 7 | 8 9 10

^ $ (packet no. 5 lost)

1 2 3 4 5 6 7 5 6 7 8 9 | 10

\* ^ $

1 2 3 4 5 6 7 5 6 7 8 9 7 8 9 10

\* ^ $

1 2 3 4 5 6 7 5 6 7 8 9 7 8 9 10 9 10 (count starts from \* till ^)

(from ^ to $ retransmission is done)

**Note –** From the Last packet is window size to lost pocket we resend the entire window. Total no. of transmissions = 18

**Example-3.**In SR Ws = 5 and we are sending 10 packets where every 5th packet is lost find number of retransmissions?

**Explanation –**

1 2 3 4 5 6 7 8 9 10

^

1 2 3 4 5 5 6 7 8 9 10

^

1 2 3 4 5 5 6 7 8 9 9 10

We see here there is no role of Window size in SR only the lost packet is resent. Total transmissions = 12