Problem 1

Consider an HTTP client that wants to retrieve a Web document at a given URL. The IP address of the HTTP server is initially unknown. What transport- and application-layer protocols besides HTTP are needed in this scenario?

Problem 2

Review the section on "Peer-to-Peer File Distribution" of Chapter 2. Please then write (with your own words) the ONE-PAGE summary of the paper.

Problem 3

Draw the FSM for the receiver side of Protocol rdt 3.0. [NOTE: you need to explain the reasoning process on how you come out the final answer.]
Problem 4

The transport layer handles the transmission error by requesting the damaged segments to be retransmitted. If the probability of a segment being damaged is \( p \), what is the mean number of the transmissions required to send a segment? You can assume the acknowledgements are never lost for solving this question. [NOTE: you need to explain the reasoning process on how you come out the final answer.]