

1. Consider an end system X that wants to send a 8MB file to another end system Y in a packet-switched network. Each package is 64KiB. There are two routers between X and Y using store and forward transmission with a transmission rate of 5Mbps. Propagation delay and processing delay can be ignored. How much time does it take for the first package to arrive completely at end system Y?
 - a. 315 ms
 - b. 236 ms
 - c. 157 ms
 - d. 79 ms
2. Consider the same situation as in the previous question. How much time does it take until the last bit is received in end system Y?
 - a. 247 ms
 - b. 2479 ms
 - c. 4 s
 - d. 1 s
3. Ignoring propagation and processing delays, sending one packet of L bits from source to destination over a path consisting of N links each of rate R has a total delay of
 - a. $\frac{L}{R}$
 - b. $\frac{N}{R}$
 - c. $N \times \frac{L}{R}$
 - d. $(N + 1) \times \frac{L}{R}$
4. What is the size of a MAC address?
 - a. 24 bits
 - b. 42 bits
 - c. 36 bits
 - d. 48 bits
5. In a Time Division Multiplexing link, if there are n sources of the same data rate, how many slots are there in a frame?
 - a. N
 - b. $N \times 2$
 - c. $\frac{N}{2}$
 - d. 2^N