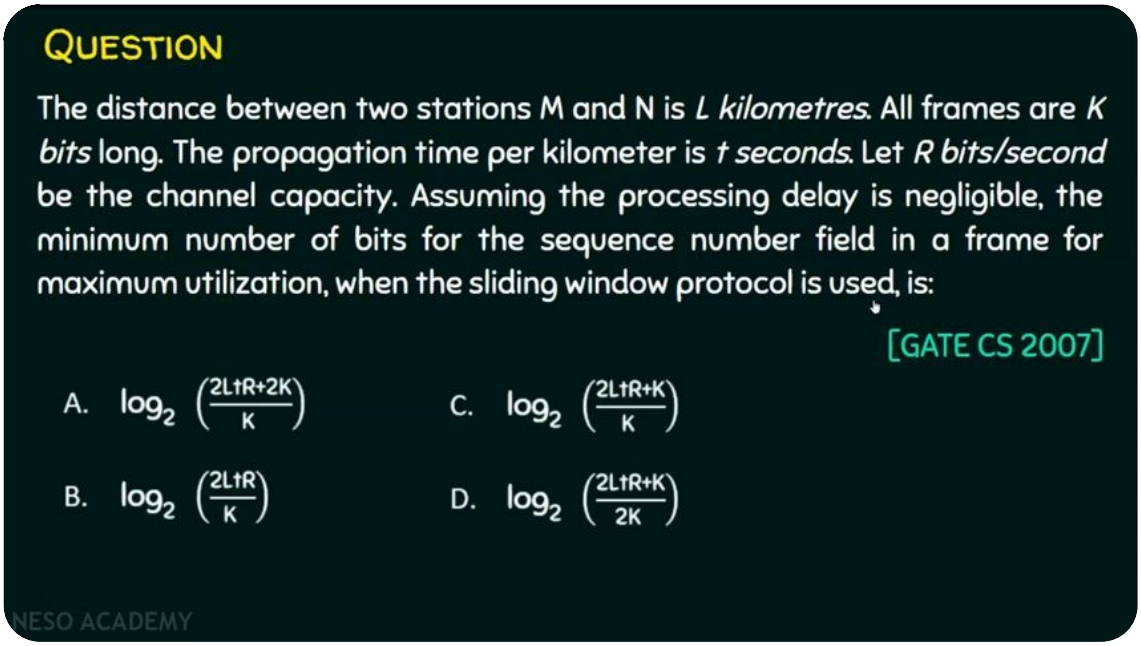
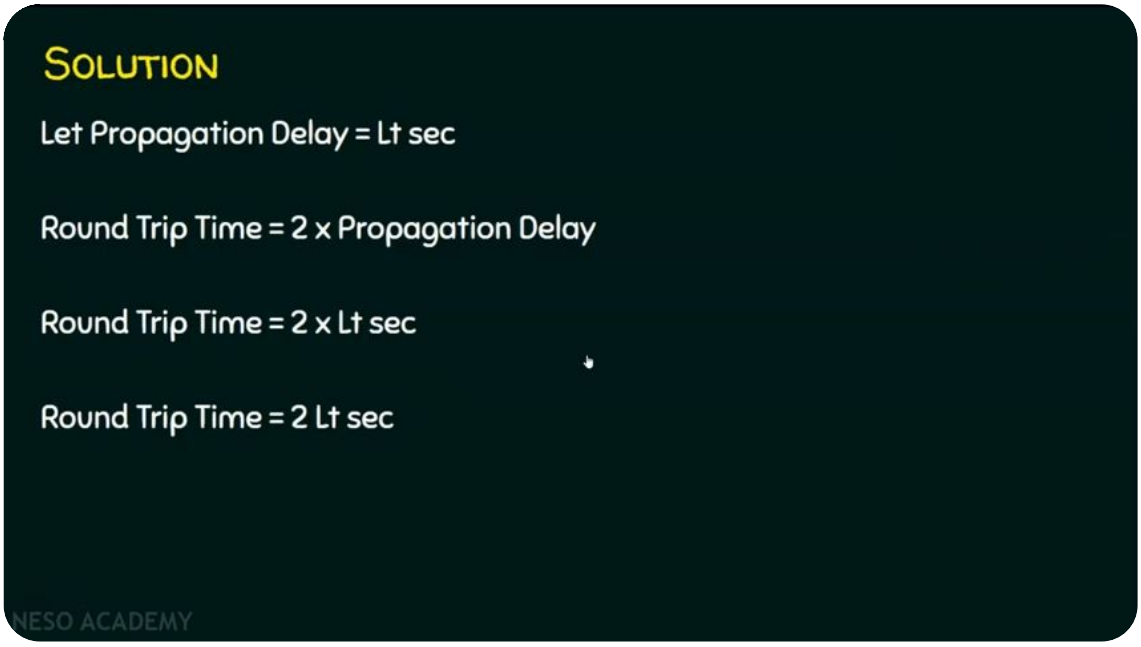
00:43



02:14



02:39

02:39

SOLUTION

No. of frames = $\left(\frac{2LtR}{K}\right)$

NESO ACADEMY

03:25

QUESTION

The distance between two stations M and N is *L kilometres*. All frames are *K bits* long. The propagation time per kilometer is *t seconds*. Let *R bits/second* be the channel capacity. Assuming the processing delay is negligible, the minimum number of bits for the sequence number field in a frame for maximum utilization, when the sliding window protocol is used, is:

[GATE CS 2007]

A. $\log_2\left(\frac{2LtR+2K}{K}\right)$

B. $\log_2\left(\frac{2LtR}{K}\right)$ ✓

C. $\log_2\left(\frac{2LtR+K}{K}\right)$

D. $\log_2\left(\frac{2LtR+K}{2K}\right)$

NESO ACADEMY