

Answer on Question #37403 – Math - Other

Answer: (B)

New tokens are added at the rate of r bytes/sec which is 2Mbps in the given question.

Capacity of the token bucket (b) = 16 Mbits

Maximum possible transmission rate (M) = 10Mbps

So the maximum burst time = $b/(M-r) = 16/(10-2) = 2$ seconds

In the above formula, r is subtracted from M to calculate the maximum burst time. The reason for this subtraction is, new tokens are added at the rate of r while transmission happens at maximum transmission rate M .