

**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  $M$ .