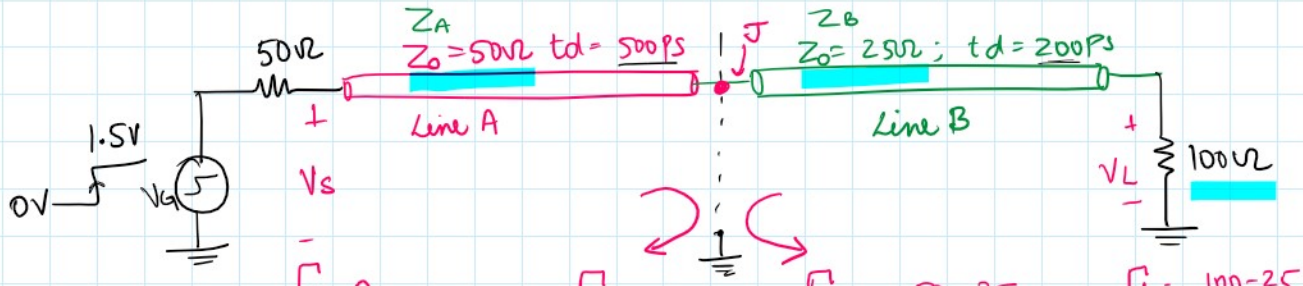
Lec-9

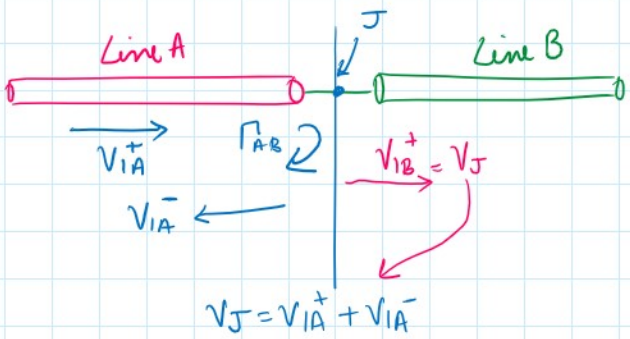
Friday, April 17, 2020 8:00 AM

Text book reading – Chapter 1 & Chapter 2 (upto and including 2.4)

Reflections at the junction of transmission lines.

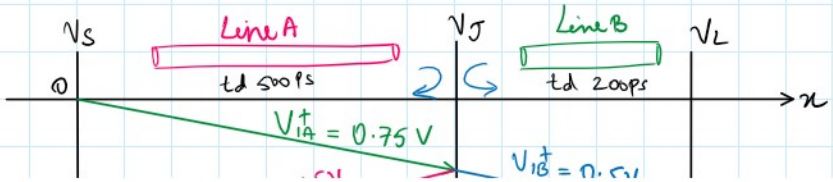


Boundary Condition : At the boundary / junction of two transmission lines, the voltage is same.



$V_{IA}^+ + V_{IA}^- = V_{IB}^+$ $\longrightarrow$ $V_{IA}^+ + \Gamma_{AB} V_{IA}^+ = (1 + \Gamma_{AB}) V_{IA}^+ = V_{IB}^+$

V_{IA}^+ : Incident wave. V_{IA}^- : Reflected wave. V_{IB}^+ : Transmitted wave.

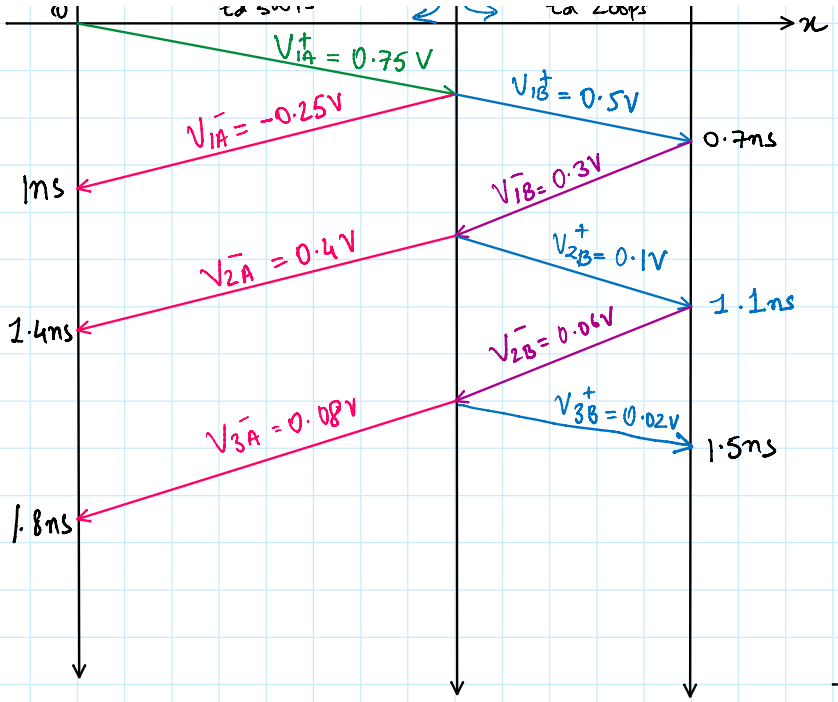


$\Gamma_G = 0$

$\Gamma_L = 3/5 = 0.6$

$\Gamma_{AB} = -\frac{1}{3}$

$\Gamma_{BA} = \frac{1}{3}$



$\Gamma_{BA} = \frac{1}{3}$

$V_{2B}^{+} = V_{1B}^{-} \cdot \Gamma_{BA}$

$V_{1B}^{-} + V_{2B}^{+} = V_{2A}^{-}$