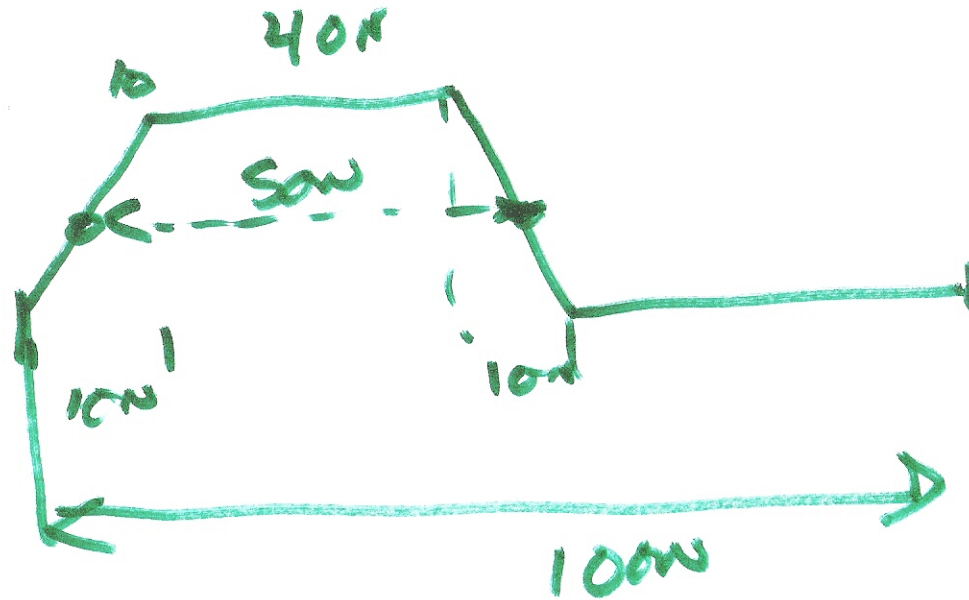


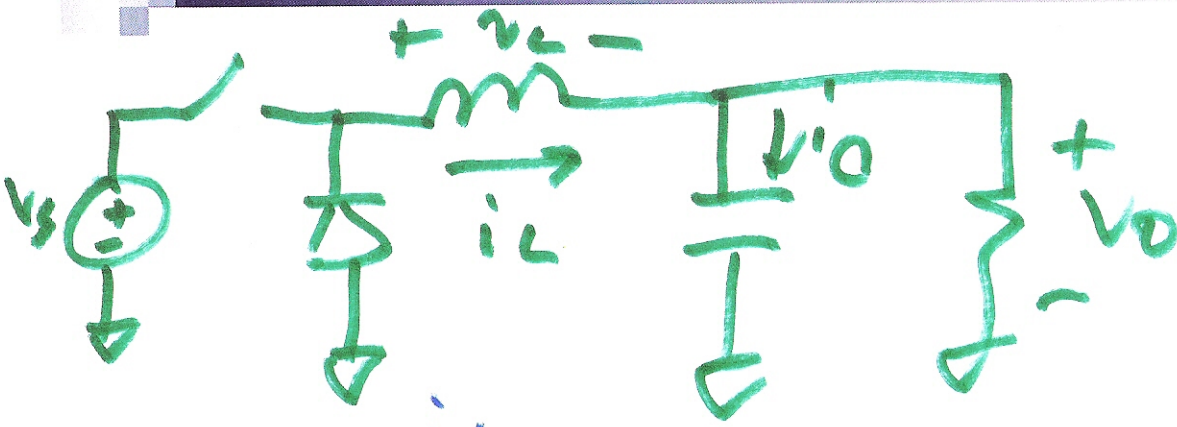
Lecture 18

OCT. 6, 2010



1)

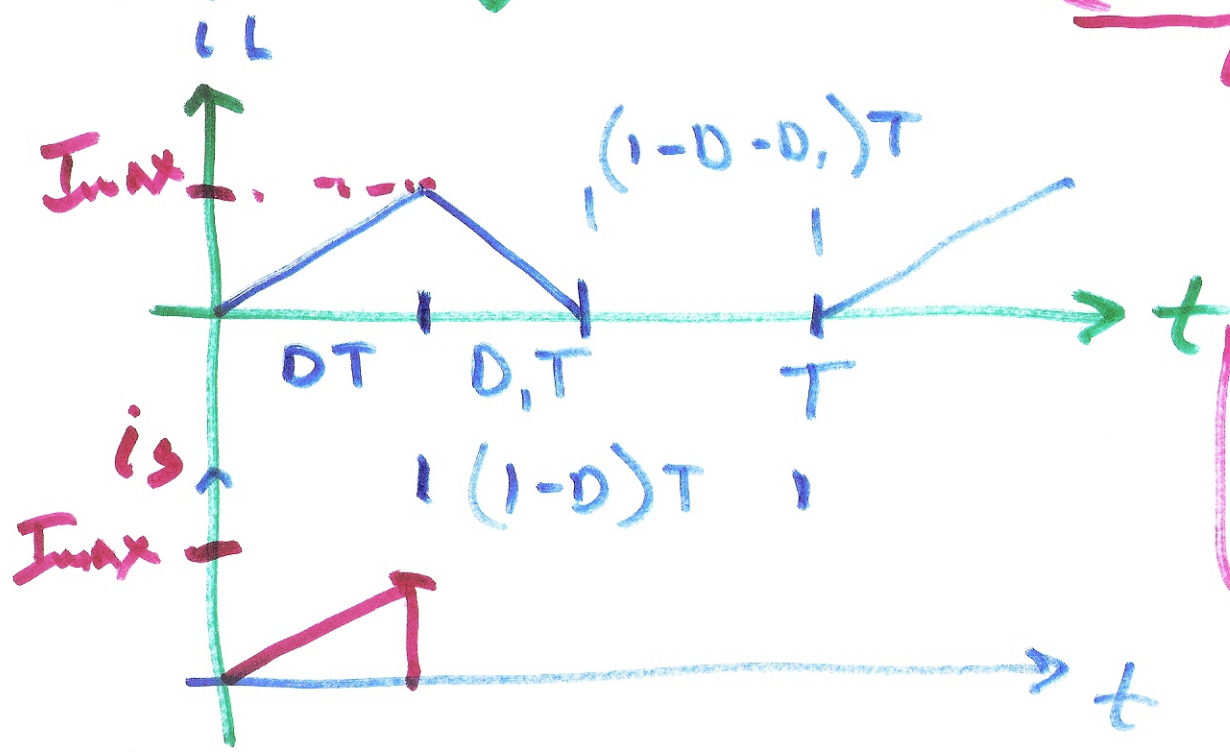
SEC. 6.11



$$V_L = V_s - V_o \quad (\text{closed})$$

$$V_L = -V_o \quad (\text{open})$$

$$\frac{(V_s - V_o)DT - V_o \cdot D_1 T}{L} = 0$$



$$\frac{V_o}{V_s} = \frac{D}{D + D_1}$$

$$V_L = L \frac{di}{dt}$$

2)

Average current

$$I_R = I_L = \frac{V_O}{R}$$

$$= \frac{I_{MAX}}{2} (D + D_1)$$

$$I_{MAX} = \frac{V_S - V_O}{L} \cdot D T$$

$$= + \frac{V_O}{L} \cdot D_1 T$$



$$V_O = V_S \left(\frac{D}{D + D_1} \right) = V_S \left(\frac{2D}{D + \sqrt{D^2 + \frac{8L}{RT}}} \right)$$

EQ. 6.96

$$\frac{8L}{RT} = \frac{8Lf}{R}$$

3)