Similarly during $(1-D)T_s$ period

$$\frac{di_L}{dt} = \frac{\Delta i_L}{\Delta t} = \frac{\Delta i_L}{(1-D)T_s} = \frac{V_s - V_o}{L} \quad \rightarrow (2)$$

$$(1) \Rightarrow L = \frac{V_s D}{\Delta i_L f_s}$$

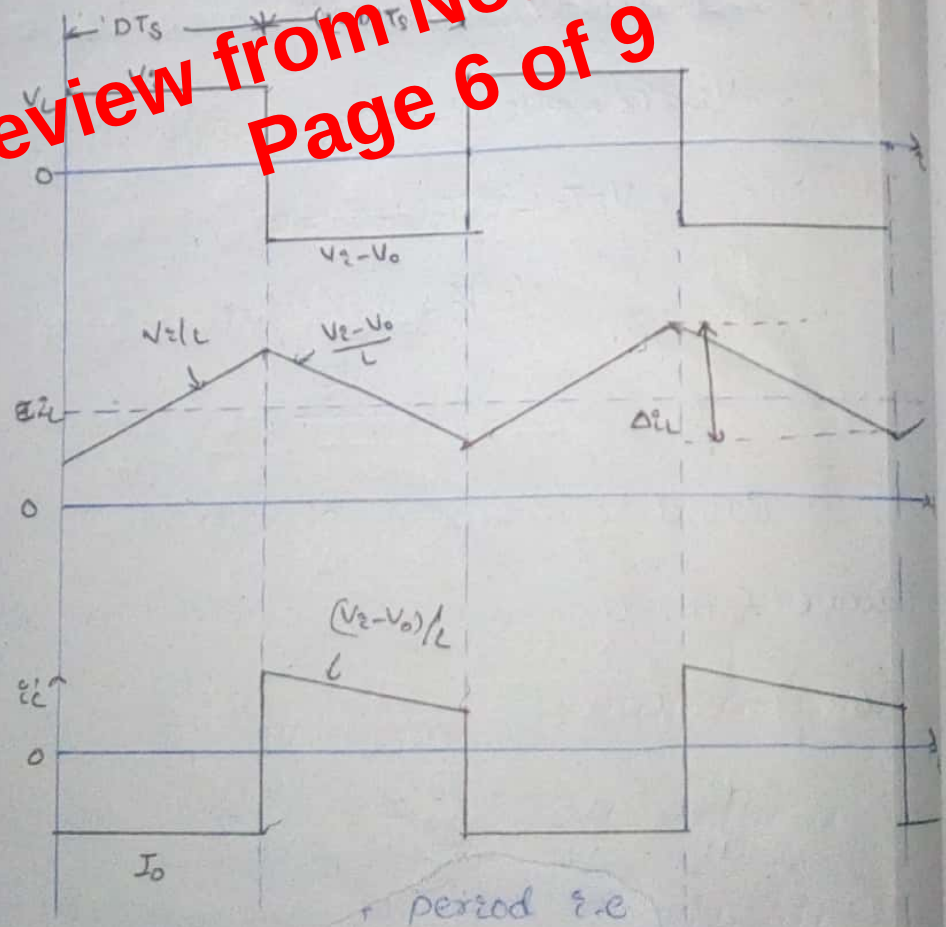
$$\Delta i_L = \frac{V_s D}{L f_s} \rightarrow \text{ripple current}$$

Similar to buck converter

$$\Delta Q = C \Delta V_o = I_o D T_s$$

$$C = \frac{I_o D}{\Delta V_o f_s}$$

$$\Delta V_o = \frac{I_o D}{C f_s} \rightarrow \text{ripple voltage}$$



period i.e

tage across inductor.