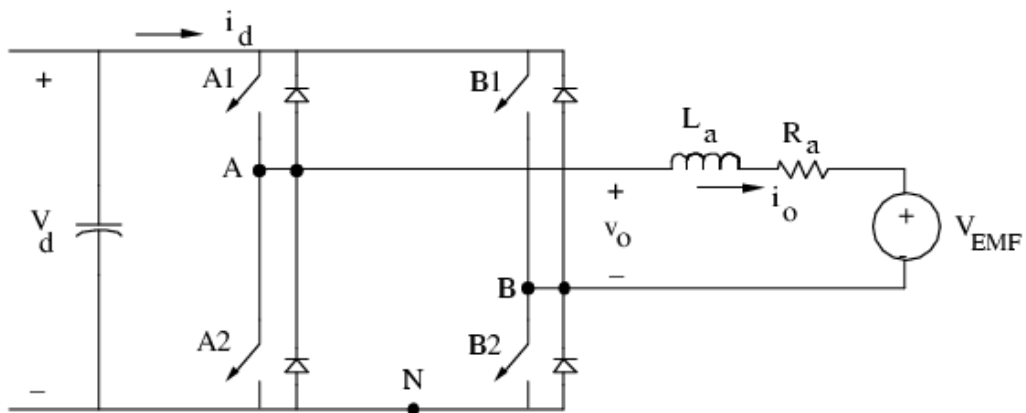# LAB 07

Full-Bridge, Bipolar-Switching dc-dc Converter

Nominal Values:

$V_d = 200$ V

$V_{EMF} = 79.5$ V

$R_a = 0.37\ \Omega$

$L_a = 1.5$ mH

$I_o(avg) = 10$ A

$f_s = 20$ kHz

duty-ratio D_1 of T_{A1} and $T_{B2} = 0.708$

$(\therefore v_{control} = 0.416$ V with $\hat{V}_{tri} = 1.0$ V$)$

1. Obtain the following waveforms
   - (a) voA, voB
   - (b) vo, io

2. Obtain average Vo and compare with analytical expression

3. Obtain peak-to-peak ripple in io and compare with analytical expression

4. Obtain average value Id and compare with analytical expression