ECE 4643: Power Electronics

Course Project: Part II

Due to 2:00 PM, November8, 2019

Design a DC regulator (Buck-Boost converter) that is supplied from 40 V DC for the following specifications:

1– Output DC voltage varies between 12–90.

2– $|\Delta v_O| \leq 7\%$ and $|\Delta i_O| \leq 10\%$.

3– Load variations: $0.5 \leq I_O \leq 2.5$ A for which V_O does not change and $|\Delta V| \leq \pm 10\%$.

The designed PEC is be implemented using MATLAB/SIMULINK