

Homework 12
EE381-1 Electric & Magnetic Fields (Fall 2018)
Monday, November 26, 2018

- 1) PE8.3 Assume a proton, electric field in the $+z$ -direction, magnetic flux density in the $+y$ -direction, and velocity in the $+x$ -direction.
- 2) PE8.4 Assume $I_2 = 15$ A and $a = 20$ cm.
- 3) PE8.5 Assume coil has 30 turns. Also, determine the vector torque on the coil if an external magnetic field of $\vec{H} = 1.2\hat{a}_z$ MA/m is applied.
- 4) PE8.7 Also, (d) \vec{J}_b , and (e) \vec{J} .
- 5) 8.15
- 6) 8.27 Also, find \vec{B} and \vec{H} for $0 < \rho < a$. Hint: Ampere's law.

Due Friday, November 30, 2018