

Physics 161, spring 2015

HW # 10

Due Wednesday 22 April by the end of the day.

This week's problems are all from Chapter 10: Electric Fields in Matter. Problems 1 – 4 have answers in chapter 12, but make sure to try to solve them on your own first.

1. PM 10.2 Force on a dielectric
2. PM 10.8. Force from an induced dipole
3. PM 10.12 Boundary conditions on D
4. PM 10.14 Boundary conditions on E and B

5. PM 10.15 Charge densities on a capacitor
6. PM 10.17 Maximum energy storage
7. PM 10.24 Field lines of a dipole

8. PM 10.37 E at the center of a polarized sphere
9. PM 10.41 Discontinuity of $D_{||}$
10. PM 10.42 Energy density in a dielectric