## Assignment 3

## PHGN361

Homework due Feb. 2 (solutions posted on Monday and first exam on Feb. 2)

1. Chapter 1 problems 55,58 .
2. A measurement of the electric field near the ground yields a value $-100 \hat{y} \mathrm{~N} / \mathrm{C}$. A measurement at $y=10 \mathrm{~m}$ yields $-90 \hat{y} \mathrm{~V} / \mathrm{m}$. Assume the field points perpendicular to the earth. What is the charge density in atmosphere (assume it is uniform).
3. Chapter 2 problems 36, 39, 40, 43(PMC), 51(PMC)
