

## PH4210 HW 4

**Due: Friday Nov 9, 2007**

1. Pollack & Stump 4.6(b) [5 pts]
2. Pollack & Stump 4.8 (you may want to use cylindrical coordinates and our prior results for the field on the z-axis due to a ring of charge). [10 pts]
3. Pollack & Stump 4.16(a) [10 pts]
4. Pollack & Stump 5.6 (To "describe" the surface charge density, actually compute it on the end plate of fixed potential  $V_0$ , and also on one of the grounded side surfaces- take the surface at  $y = 0$ .) [20 pts]
5. Pollack & Stump 5.7 [15 pts]
6. Pollack & Stump 5.30. [15 pts]  
Use a computer to evaluate the infinite sums as a number. [extra credit 5 pts]