

**Set 7—due 20 October**

- 1) Jackson 4.9. [20 points] (a)—10 points, (b)—4 points, (c)—6 points.
- 2) Jackson 4.13 [15 points]
- 3) Jackson 4.10 [10 points].
- 4) [15 points] A sphere of radius  $R$  is made of a uniaxial dielectric with dielectric constant  $\epsilon$  along two principal axes and dielectric constant  $\epsilon_3$  along the third. The sphere is placed in a uniform electric field, with arbitrary orientation. Find the torque on the sphere.