(3.1) Find the magnetic field on the axis of the rotating circular disk considered in Problem 5.6. (5 points)

(3.2 − 3.4) Griffiths 5.34, 5.35, and 5.36. In 5.36 you need only find the dipole moment. (3 + 2 + 2 points)

3.5(a) Re-read Section 5.1.3. A straight horizontal segment of copper wire carries a current of 28A. What is the magnitude and direction of the magnetic field that levitates the wire on earth?

3.5(b) Please read the first part of section 6.1.2. A circular loop of wire of radius 12cm carries a current of 13A. What is the field at the center? Suppose we place a small loop of radius 0.82cm with 50 turns and carrying a current of 1.3A. The plane of the second loop is at right angles to that of the first loop. Calculate the torque on the second loop making simplifying approximations. Please state the approximations explicitly. (3 + 4 points)

(3.6) For extra credit do Griffiths 5.61 on page 254. (5 points)