Due Date: 23-10-2-23

Assignment No. 2 –CLO2

Electromagnetic Field Theory

Electrostatics

1. A thin diameter disc of inner radius r and outer radius s carries a uniform surface charge density ρ_s. Determine the electric field intensity and electric flux density at any point on the z-axis when $z \geq 0$.
2. Consider three sheet of charges with opposite surface chare densities are placed along the z-axis at points a,b, and c respectively (a,b,c >0). Find the electric field intensity in between and outside these plates.
   (Even roll numbers should choose -,+,- sheets; odd roll numbers should choose +,-,+ sheets)
3. Discuss the fringing effect for the parallel plates of capacitors.
4. Discuss the methodology of driving the expression of equations of streamlines and their significance in emt.

End Problems (Engineering Electromagnetics by William H. Hayt 6th Edition)

2.16, 2.18 (only for point a), 2.23 (only for point a), 2.26, 2.28, 2.29, 3.7 , 3.8.