Assignment No. 2 –CLO2
Electromagnetic Field Theory
Electrostatics

Section 1: [20]

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.

Section 2: [30]

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

2.10, 2.16, 2.17 (part a and b), 2.18 (only for point a), 2.19, 2.23 (only for point a), 2.26, 2.28, 2.29, 2.30.