Sharif University of Technology

Electromagnetism 3
Problem Set 2

Boundary Value Problems

Department of Physics, Sharif University of Technology.

Due Date: 29th October 2024

***Solve only 7 problems out of the following 14 problems.

1 Electric Quadrupole Focusing Fields for Particle Accelerator

Problem 2.20 of Jackson 1999.

2 Conducting Sphere with Different Parts at Different Potential

Problem 2.22 of Jackson 1999. Problem 7.10 of Zangwill 2013.

3 Infinite Conducting plate

Problems 3.12, 3.17, 3.18, 3.19, and 3.20 of Jackson 1999.

4 Potential Problem in Wedge Region

Problem 2.19, 2.24, 2.25, and 3.22 of Jackson 1999.

5 Neumann Green's Function

Problems 3.26 and 3.27, of Jackson 1999.