

Printed Name: _____.

PHYSICS 331

MISSION 4: ELECTROSTATICS IN MATTER (37+3)PTS

Problems mentioned refer to David Griffith's *Introduction to Electrodynamics*, 5th edition.

Problem 35 (5pt) Problem 4.4 (force of attraction neutral polarized atom)

Problem 36 (6pt) Problem 4.6 (method of images, plane with few charges)

Problem 37 (5pt) Problem 4.8 (energy of interaction for dipoles)

Problem 38 (6pt) Problem 4.14 (neutrality maintained via bound charge balanced)

Problem 39 (6pt) Problem 4.15 (dielectric shell, contrasts methods)

Problem 40 (6pt) Problem 4.24 (conducting sphere, coated with insulator, find E-field)

Problem 41 (6pt) Problem 4.26 (conducting sphere, coated with insulator, find energy)