

Printed Name: _____.

PHYSICS 331

MISSION 2: ELECTROSTATICS (37+3)PTS)

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

Problem 14 (2pt) Problem 2.2 (field from pair of point charges)

Problem 15 (3pt) Problem 2.3 (field from line-segment, at point on the end)

Problem 16 (2pt) Problem 2.4 (note: I would try to use Example 2.2 and superposition with the necessary geometry to solve this)

Problem 17 (3pt) Problem 2.12 (thank me for not assigning 2.7)

Problem 18 (4pts) Problems 2.16 & 2.24 about spherically symmetric shell charge

(a.) find the electric field as described in 2.16

(b.) find the potential as requested in 2.24

Problem 19 (4pts) Problems 2.14 & 2.23 about infinite line charge:

(a.) find the electric field as described in 2.14

(b.) find the potential as requested in 2.23

Problem 20 (3pts) Problem 2.18 (field for slab of charge)

Problem 21 (3pts) Problem 2.21 (which field is physically possible \vec{E} and find potential for that field)

Problem 22 (4pts) Problems 2.22 & 2.29 (find potential for solid sphere)

(a.) find the potential from the electric field as indicated by Problem 2.22

(b.) find the potential from an integral over the charge distribution as requested in Problem 2.29

Problem 23 (3pts) Problem 2.30 (check on Poisson's equation)

Problem 24 (3pts) Problem 2.31 (check on boundary conditions)

Problem 25 (3pts) Problem 2.32 (energy to assemble)

Problem 26 (3pts) Problem 2.37 (energy due to spherical configuration)