Preparation Assignment Due Dec. 4, 2000
Fields and Waves I, Fall 2000

1. Define the index of refraction. What is the relation of the index of refraction of a material and the intrinsic impedance of that material?

2. A plane wave in free space is given as $E = \cos(wt - k_1 z - k_2 y)(3\vec{a}_x - 5\vec{a}_y + 2\vec{a}_z)$ and impinges on a good conductor in the half space y>0. Find the amplitude of the perpendicular and parallel polarized components of the wave.