# Opti 380A – Intermediate Optics Lab I – Fall 2009

## Post-Lab Questions for Lab 5: Wave Motion

Post-lab questions are due at the beginning of lecture on the Monday following your lab.

1.) Draw a sketch of the electromagnetic wave associated with light. Show the relationship between the E and H fields. Show and label the wavelength, assuming the light comes from a red laser diode at $\lambda$ = 650nm. How fast does this wave travel if the wave is traveling in air? In water (n = 1.33)?

2.) What caused the dark lines in Part A (ripple tank) that were parallel to the straight barrier in the reflection experiment? What is the relationship between the dark-line spacing and the wavelength of the incident wave?