Multiple choice. Indicate the best answer.

1. Which wave phenomenon is most closely associated with our ability to view 3-D movies?
   1. Diffraction
   2. Interference
   3. Reflection
   4. Polarization
   5. The Doppler Effect
2. Which wave phenomenon is most closely associated with the colors we see on soap bubbles?
   1. Diffraction
   2. Interference
   3. Reflection
   4. Polarization
   5. The Doppler Effect
3. Which wave phenomenon is most closely associated with the red-shift of the spectrum of distant stars?
   1. Diffraction
   2. Interference
   3. Reflection
   4. Polarization
   5. The Doppler Effect
4. Which of the following can electromagnetic radiation NOT travel through?
   1. Air
   2. Water
   3. Glass
   4. The vacuum of empty space
   5. None of the above

**Long Answer. Answer the following questions.**

1. Describe how light travels in terms of electric and magnetic fields.
2. Compare and contrast light waves and water waves, describing and providing examples of how they exhibit similar phenomena, and also pointing out differences in how they propagate.