1) Explain why mechanical waves travel faster in a solid than in a gas (such as air).

2) For a fixed temperature, do all frequencies of sound travel at the same velocity? Explain.
   (Hint: Use the wave speed equation and the speed of sound at a certain temperature equation.)

3) What determines if an electromagnetic wave is in the visible part of the EM Spectrum or not?
   (Hint: There are 2 possible answers)

4) Why do astronauts on the moon have to communicate by radio even when close to one another?