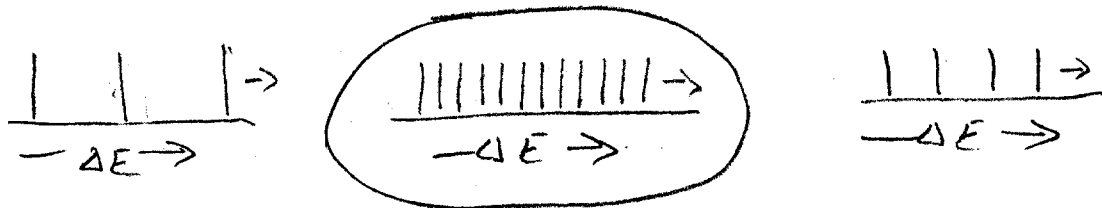
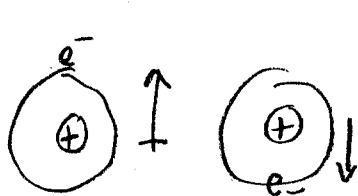


## Practice Quiz

1. From the spectra below for three different particles in the same size box, which corresponds to the particle with the most mass.



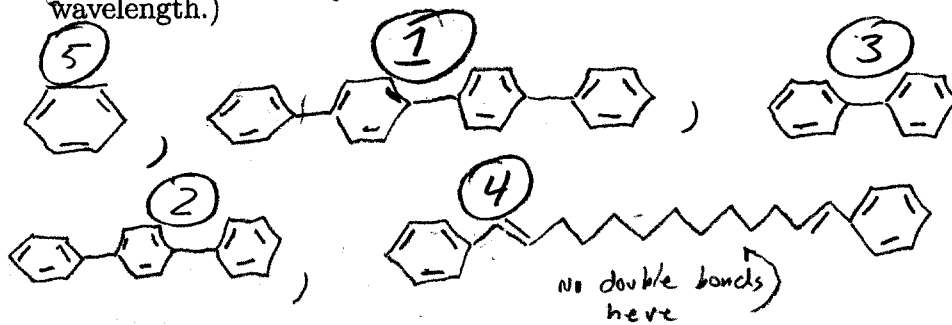
2. Explain why atoms can't exist in classical theory.



Oscillating dipoles emit radiation  
 → Atom would lose energy



3. Order the following molecules according to what wavelengths of light you would expect them to absorb. (order from longest to shortest wavelength.)



4. Draw a vibrational spectrum for a mixture of diatomic gases: gas1, gas2 and gas3. Gas 2 has the greatest force constant and gas 1 has the smallest force constant. All gases are roughly the same mass. Be sure to label the peaks of your spectrum.

