**SI WORKSHEET 16**

1. What is bond enthalpy? Bond making is an endothermic process and bond breaking is an exothermic process. If more energy is released in bond making than by bonds formed this is an example of a \_\_\_\_\_\_\_\_\_\_\_\_ reaction
2. Frequency and wavelength are \_\_\_\_\_\_\_\_ related. As one goes up the other ­­­\_\_\_\_\_\_\_\_\_\_\_. Energy and wavelength are \_\_\_\_\_\_\_\_ related. As one goes up the other \_\_\_\_\_\_\_\_\_\_\_.
3. A beam of red light at 675 nm has what frequency? How much energy is this?
4. What is the photoelectric effect?
5. What does Heisenberg’s Uncertainty Principle refer to?
6. Consider the line emission spectrum for Hydrogen: Is more energy released when an electron goes from the n=3🡪n=1 state or when n=5🡪n=3? How much energy is released when an electron goes from n=3🡪n=1?
7. Which of the following IS NOT an acceptable set of quantum numbers?
   1. {4, 3, 3, + ½}
   2. {1, 0, 0, -1/2}
   3. {2, 1, 2, +1/2}
   4. {3, 1, 0, -1/2}