

## Unit 2 – Ch 5.1 – Wave Properties & Atomic Spectra

### WAVE PROPERTIES:

- **Wavelength** –  $\lambda$  (\_\_\_\_\_) –
  - Unit =
- **Frequency** –  $\nu$  (\_\_\_\_\_) –
  - Unit =
- \_\_\_\_\_ of wavelength and frequency = \_\_\_\_\_
  - **C = Speed of Light:** \_\_\_\_\_
  - **FORMULA:** \_\_\_\_\_
- \_\_\_\_\_ Proportional:
  - As wavelength \_\_\_\_\_, frequency \_\_\_\_\_.

Ex #1: What is the wavelength of an electromagnetic wave with a frequency of  $1.50 \times 10^{13}$  Hz ( $s^{-1}$ ) ?  
What type of wave is emitted?

Ex #2: Calculate the frequency of a photon (light) with a wavelength of  $4.34 \times 10^{-7}$  m.  
What type of wave is emitted?

- **Einstein's Contribution:**
  - Confirmed that light as **BOTH** \_\_\_\_\_ and \_\_\_\_\_ natures.
  - **PHOTON:**