PHYS 201 SFQ on waves Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Distinguish a transverse wave from a longitudinal wave.

2. What is the relationship between the period and frequency of a periodic wave?

3. Express wave speed in terms of wavelength and frequency.

4. AM and FM radio waves are transverse waves that consist of electric and magnetic disturbances. These waves travel at a speed of 3.00×108 m/s. Find the wavelength of the radio waves emitted by AM 1340 kHz and FM 107.9 MHz.

5. Visible light has the wavelength range 400-750 nm. Calculate the frequency range. Assume a speed of light of 3.00 x 108 m/s.