Physical Principles in Living Systems Name:

Electromagnetic Spectrum Period:

Use Chapter 3, Section 1 of your textbook to answer the questions below.

Section 1: The Electromagnetic Spectrum (p.76)

1. Bees can see a kind of light called _____ light.

2. Look at Figure 1. Bees see the flower as being blue, but we see it as being _____ .

_____ 3. How are ultraviolet light and visible light similar?
a. Neither form of light can be seen by bees.
b. Neither form of light can be seen by humans.
c. Both forms of light are energy that travels as waves.
d. Both forms of light can be seen by humans.

LIght: An Electromagnetic Wave (p.76)

_____ 4. How is light different from other kinds of waves?
a. Light does not need to travel through matter.
b. Light cannot travel through empty space.
c. Light must travel through matter.
d. Light cannot travel through matter.

5. Light is an _____ wave.

_____ 6. What is an electromagnetic wave made of?
a. changing chemical fields
b. changing electric and magnetic fields
c. changing gravitational fields
d. changing motion fields

A Spectrum of Waves (p.77)

_____ 7. Which of the following is NOT an EM wave?
a. radio wave b. infrared wave c. water wave d. X ray

8. The entire range of EM waves is called the _____ spectrum.

9. Look at Figure 2. Of all of the different kinds of EM waves, which makes up the smallest band within the electromagnetic spectrum? _____

Wavelength and the EM Spectrum (p.77)

_____ 10. How do EM waves differ from each other?
a. Each EM wave has a different sound.
b. Each EM wave has a different wavelength.
c. Each EM wave is made of different matter.
d. Each EM wave has a different weight.

11. The distance between identical points on two waves is called _____ .