

Name \_\_\_\_\_

Period \_\_\_\_\_

**Chemistry**  
**Review Questions on Light**

$$C = 3.00 \times 10^8 \text{ m/s} \quad h = 6.626 \times 10^{-34} \text{ Js}$$

- 1) What is the frequency of some visible light whose wavelength is  $6.00 \times 10^{-7} \text{ m}$ ?
  
  
  
  
  
  
  
  
  
  
- 2) What is the energy of a photon of the light in question number 1?
  
  
  
  
  
  
  
  
  
  
- 3) What is the wavelength of some visible light whose frequency is  $4.0 \times 10^{14} \text{ Hz}$ ?
  
  
  
  
  
  
  
  
  
  
- 4) What is the frequency and energy of a radio wave whose wavelength is  $3.17 \text{ m}$ ?
  
  
  
  
  
  
  
  
  
  
- 5) What is the wavelength and frequency of a wave whose energy is  $3.25 \times 10^{-19} \text{ J}$ ?

## Electron Orbital Diagrams

1) Write the electron orbital diagram (with arrows) for the following elements:

a) Na

b) F

c) O

d) Ne

e) V

2) Write the electron orbital diagram (with arrows) for the following ions:

a)  $\text{Na}^+$

b)  $\text{O}^{2-}$

c)  $\text{Mg}^{2+}$

d)  $\text{Al}^{3+}$

e)  $\text{Cl}^-$