

Name: _____

Instructions: Answer each of the following questions to the best of your ability. Use the proper number of significant figures and units wherever necessary. You will have 10 minutes to complete this quiz.

1. (2 points) Rate the following in terms of increasing Energy (low energy on the left to high energy on the right).

Visible – Red Microwave Ultraviolet Visible – Green Infrared Visible – Blue

2. (4 points) What is the difference in frequency and energy for photons with wavelengths between 1152nm and 651nm.

3. (4 points) The question for the deBroglie wavelength is written below. What is the frequency and energy of the wavelength associated with a 9.11×10^{-31} kg electron moving at 1.0×10^{-7} m/s.

$$\lambda = \frac{h}{mc}$$

$c = 3.00 \times 10^8$ m/s $h = 6.626 \times 10^{-34}$ J*s