1. Calculate the frequency of a photon whose wavelength is

(a) 6200 angstrom units,

(b) 1300 angstrom units,

(c) 120 angstrom units, and

(d) 0.15 angstrom units.

2. Calculate the wavelength of a photon whose frequency is

(a) 3.35 x 1014 hertz,

(b) 1.51 x 1015 hertz,

(c) 1.13 x 1016 hertz, and

(d) 6.43 x 1016 hertz.

Express your answers in meters and angstrom units.

3. Barium-137m emits 0.6616 MeV γ-rays.

(a) What is the wavelength of these gamma rays in Angstrom units?

(b) What is the frequency?

4. An atom absorbs a 3750 angstrom unit photon. How much energy (in eV) is absorbed?

5. A 140 keV photon is absorbed by an electron in a certain isotope, causing the electron to become unbound to the atom.

(a) What is the wavelength of the photon in angstrom units?

(b) What is the frequency of the photon?