

Name: _____

Homework from the book:

Ch 7 Multiple Choice: 1-5, 7-12, 15-17, 22, 24, 36-40 Exercises 15, 17, 19

Ch 8: Multiple Choice: 2, 4, 5, 78, 14, 16, 17, 20, 23, 26, 34

Take home quiz:

1) 1. Which one or more of the following can be explained by the quantum theory of light?

A. interference B. diffraction C. the photoelectric effect

2) The bright-line spectrum produced by the excited atoms of an element contains wavelengths that are

- A. the same for all elements
- B. characteristic of the particular element
- C. evenly distributed throughout the entire visible spectrum
- D. different from the wavelengths in its dark-line spectrum

3) The nucleus of an atom cannot be said to

A. contain most of the atom's mass. B. be small in size C. be electrically neutral D. deflect alpha particles that come near it

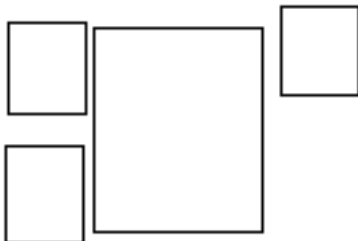
4) The half-life of a certain radioactive isotope is 6 h. If we start out with 10 g of the isotope, after 1 day there will be

A. none left B. 0.625 g left C. 1.6 g left D. 2.5 g left

5) Which of the following correctly lists electromagnetic waves in order from longest to shortest wavelength?

- A) microwaves, ultraviolet, visible light, gamma rays
- B) gamma rays, ultraviolet, infrared, microwaves
- C) radio waves, infrared, gamma rays, ultraviolet
- D) radio waves, infrared, visible light, X-rays

6) An atom has 27 protons, 29 neutrons and 25 electrons. Describe this atom using the format described in class.



7) **Nuclear reactions**

