Unit 3 Review

Part II

Define the following:

1. Wavelength
2. Frequency
3. Amplitude
4. Speed of light
5. Planck’s constant

Short Answer:

1. What is the charge of an atom having 4 protons and 6 electrons?
2. What types of atomic orbitals are in the sixth principal energy level?
3. How many valence electrons are there in an atom of germanium?
4. How many valence electrons are there in an atom of xenon?
5. How many electrons do each of the four sublevels hold?
6. How many electrons are present in the d sublevel of a neutral atom of platinum?
7. Write the electron configuration for the following elements:
8. Pt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. Rb \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. Nd \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. Write the noble gas configuration for each of the following elements:
13. Sn [\_\_]\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. Y [\_\_]\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. K [\_\_]\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
16. Ce [\_\_]\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
17. Draw the Lewis dot diagram for each of the following elements:
18. Potassium c. Arsenic

1. Krypton d. Strontium
2. What is the wavelength of a photon having a frequency of 9.85 x 108 Hz?
3. Calculate the frequency of a photon having energy of 8.45 x 10-21 J.
4. Calculate the energy of a photon with a wavelength of 5.23 x 10-3 m.