

Chapter 5

End-of-Chapter Questions

1. The elements from La to Yb are given this name.
2. The elements from Ac to No are given this name.
3. Give the common name for each of the following element groups:
(a) The Group 2 elements (b) the Group 15 elements
4. Give the common name for each of the following element groups:
(a) The Group 17 elements (b) the Group 16 elements
5. Classify each of the following elements as metals, semimetals, or nonmetals:
(a) tin (b) boron (c) iodine
6. Classify each of the following elements as metals, semimetals, or nonmetals:
(a) silicon (b) silver (c) sulfur
7. Classify each of the following elements according to their phase at room temperature (solid, liquid, or gas):
(a) boron (b) bromine (c) helium
8. Classify each of the following elements according to their phase at room temperature (solid, liquid, or gas):
(a) iodine (b) calcium (c) mercury
9. What is the maximum number of electrons in the following electron layers:
(a) the first layer (b) the second layer (c) the fourth layer
10. How many electrons are in the $n=2$ (second layer) for:
(a) oxygen (b) lithium (c) fluorine
11. How many electrons are in the outermost occupied layer for each of the following elements:
(a) calcium (b) iodine (c) aluminum
12. How many electrons does it take to fill a row of the:
(a) transition elements (b) the lanthanoids

13. Potassium, atomic number 19, has atoms of average atomic mass 39.1 u while argon, the element before it, atomic number 18, has a greater average atomic mass of 39.9 u. What does this observation tell you about the number of neutrons for each of the two elements?
14. Draw the electron dot symbols for:
(a) hydrogen (b) chlorine (c) sulfur