

## Chapter 2, The Chemistry of Life

### “Apply What You Know” Answers

- p. 47—Ionic bonds are not common in the body because the body is mostly water, and ionic compounds quickly dissociate in water.
- p. 50—Temperature is a measure of heat energy, not its equivalent. A given amount of heat raises the temperature of some substances more than it does others, showing that the two are not equivalent. For example, 1 calorie raises the temperature of liquid nitrogen four times as much as it does the same amount of water.
- p. 53—A blood pH of 7.20 is called acidosis because it is on the acidic side of normal (7.40).
- p. 59—The general formula of carbohydrates is essentially carbon plus water:  $(\text{CH}_2\text{O})_n$ —hence the name carbo- (carbon) + -hydr (water).
- p. 70—Enzymes are very sensitive to pH and temperature disturbances, so it is important for the body to homeostatically maintain pH and temperature close to the set point.