## **Chapter 2** The Chemistry of Life

## **Chapter Vocabulary Review**

**Completion** *On the lines provided, complete the following sentences.* 

- **1.** Protons and neutrons together form the \_\_\_\_\_\_\_, which is at the center of the atom.
- **2.** A pure substance that consists entirely of one type of atom is called a(an) \_\_\_\_\_\_.
- **3.** A chemical \_\_\_\_\_\_\_ is a substance formed by the combination of two or more elements in definite proportions.
- **4.** The two main types of chemical bonds are \_\_\_\_\_\_ and
- **5.** The slight attractions that develop between the oppositely charged regions of nearby molecules are called \_\_\_\_\_\_.

**Short Answer** *On the lines provided, answer the following questions.* 

- **6.** How do a sodium atom and a sodium ion differ?
- 7. How do cohesion and adhesion differ?
- **8.** In a salt solution, why is water the solvent and salt the solute?
- **9.** How do acids and bases differ?
- **10.** Describe the roles of a catalyst and a substrate in a chemical reaction.

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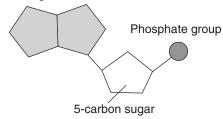
**Matching** *On the lines provided, write the letter of the definition that best matches each term.* 

- \_\_\_\_\_\_ **11.** polymer
  - \_\_\_\_ **12.** amino acid
- \_\_\_\_\_\_ 13. monosaccharide
  - \_\_\_\_\_ **14.** isotopes
  - \_\_\_\_ **15.** buffer
- \_\_\_\_\_\_ **16.** nucleic acid
- \_\_\_\_\_\_ 17. enzyme
  - \_\_\_\_ 18. chemical reaction
  - \_\_\_\_\_ **19.** lipid

- a. atoms of the same element that differ in the number of neutrons
- b. dissolved compound that prevents sharp swings in pH
- c. large compound formed by the joining of small compounds, called monomers
- d. catalyst that speeds up chemical reactions in cells
- e. monomer of a protein
- f. process that produces a new set of chemicals
- g. single sugar molecule
- h. stores and transmits genetic information
- i. used to store energy

**Labeling Diagrams** For questions 20 and 21, identify the diagram as one of the following: nucleotide, amino acid, or lipid. Place your answer on the lines provided below each diagram.

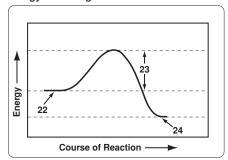
20. Nitrogenous base



21.

**Labeling Diagrams** *On the lines provided, label the parts of the reaction as one of the following:* products, reactants, *or* activation energy.

## **Energy-Releasing Reaction**



22. \_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_