

**Chapter 2 Chemistry of Living Things**

1. Hydrogen is an example of an atom.

- a. True
- b. False

**ANSWER:** True

2. Medical imaging refers to invasive techniques and processes.

- a. True
- b. False

**ANSWER:** False

3. Electrolytes are responsible for the acidity or alkalinity of solutions and can conduct an electrical charge.

- a. True
- b. False

**ANSWER:** True

4. Fructose found in fruit and honey is an example of a disaccharide.

- a. True
- b. False

**ANSWER:** False

5. Phospholipids are lipids that contain cholesterol.

- a. True
- b. False

**ANSWER:** False

6. Enzymes are specialized protein molecules found in all living cells.

- a. True
- b. False

**ANSWER:** True

7. RNA structures are unique for each person and so are usable as a means of identification.

- a. True
- b. False

**ANSWER:** False

8. Another name for a base is alkali.

- a. True
- b. False

**ANSWER:** True

9. Buffers help a living organism to maintain a constant pH value.

- a. True
- b. False

**ANSWER:** True

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10. Nuclear medicine is a branch of medicine that uses radioactive isotopes to prevent, diagnose, and treat disease.  
a. True  
b. False

**ANSWER:** True

11. The study of the chemical reactions of living things is called \_\_\_\_\_.  
a. anatomy      b. biochemistry  
c. physiology      d. physics

**ANSWER:** b

12. Sitting in a chair is an example of \_\_\_\_\_ energy  
a. potential      b. kinetic  
c. ongoing

**ANSWER:** a

13. Atoms that are alike combine to form the next stage of matter, which is a(n) \_\_\_\_\_.  
a. compound      b. molecule  
c. element

**ANSWER:** c

14. Water makes up what percentage of our body weight?  
a. 35% to 40%      b. 55% to 65%  
c. 75% to 80%      d. Greater than 90%

**ANSWER:** b

15. Which of the following is an example of a lipid?  
a. Carbohydrate      b. Protein  
c. Fat      d. Enzyme

**ANSWER:** c

16. Triglycerides are a type of \_\_\_\_\_.  
a. protein      b. fat  
c. carbohydrate      d. glycogen

**ANSWER:** b

17. The nucleus of every human cell contains how many chromosomes?  
a. 23      b. 46  
c. 69      d. 92

**ANSWER:** b

18. The sour taste of lemons is due to the presence of a compound called a(n) \_\_\_\_\_.  
a. acid      b. base  
c. salt      d. pH

**ANSWER:** a

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19. When an acid and a base are combined, they form a salt and water. This type of reaction is called a(n) \_\_\_\_\_.  
a. negatively charged hydroxide ion  
b. neutralization  
c. ionization

**ANSWER:** b

20. A solution with a pH of 5 would tell you it is \_\_\_\_\_.  
a. acidic      b. alkaline  
c. neutral

**ANSWER:** a

21. Milk of magnesia is an example of a(n) \_\_\_\_\_ liquid.  
a. acid      b. base  
c. neutral

**ANSWER:** b

22. Which of the following is required for the body to function at an optimum level of health?  
a. Highly acidic level      b. Highly alkaline level  
c. State of homeostasis      d. None of the answers are correct.

**ANSWER:** c

23. Which of the following is an example of an extracellular fluid?  
a. Tears      b. Blood  
c. Fluid within the cell      d. Urine

**ANSWER:** b

24. Which of the following means many?  
a. Poly      b. Uni  
c. Intra      d. Di

**ANSWER:** a

25. Which of the following would best be described as a scanning procedure that provides visualization of fluid, soft tissue, and body structures without the use of radiation?  
a. Computed axial tomography (CAT, or CT, scan)  
b. Magnetic resonance imaging (MRI)  
c. Positron emission tomography (PET) scan  
d. Bone scan

**ANSWER:** b

26. Molecules that contain carbon, hydrogen, and oxygen are known as \_\_\_\_\_.

**ANSWER:** organic compounds

27. Molecules known as \_\_\_\_\_ are the building blocks of protein.

**ANSWER:** amino acids

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28. The smallest particles of elements that enter into chemical reactions are \_\_\_\_\_.

**ANSWER:** atoms

29. The number of protons in an atom is equal to the number of \_\_\_\_\_.

**ANSWER:** electrons

30. The number of elements found naturally in our world is \_\_\_\_\_.

**ANSWER:** 92  
ninety-two

31. The smallest unit of a compound is a(n) \_\_\_\_\_.

**ANSWER:** molecule

32. A positively or negatively charged particle is called a(n) \_\_\_\_\_.

**ANSWER:** ion

33. The four groups of organic compounds are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

**ANSWER:** carbohydrates, lipids, proteins, nucleic acids  
carbohydrates, proteins, nucleic acids, lipids  
carbohydrates, proteins, lipids, nucleic acids  
carbohydrates, nucleic acids, lipids, proteins  
lipids, proteins, nucleic acids, carbohydrates  
proteins, nucleic acids, lipids, carbohydrates  
proteins, lipids, nucleic acids, carbohydrates  
nucleic acids, lipids, proteins, carbohydrates

34. \_\_\_\_\_ is involved in the process of heredity.

**ANSWER:** DNA Deoxyribonucleic acid

35. Compounds can be classified into the following three groups: \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

**ANSWER:** acids, bases, salts  
acids, salts, bases  
bases, salts, acids  
bases, acids, salts  
salts, acids, bases  
salts, bases, acids

*Match the element name with its symbol.*

- a. calcium
- b. carbon
- c. hydrogen
- d. iron
- e. oxygen
- f. sodium
- g. potassium
- h. nitrogen
- i. magnesium
- j. phosphorus

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

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36. Na

ANSWER: f

37. Mg

ANSWER: i

38. O

ANSWER: e

39. K

ANSWER: g

40. N

ANSWER: h

41. Ca

ANSWER: a

42. P

ANSWER: j

43. Fe

ANSWER: d

44. C

ANSWER: b

45. H

ANSWER: c