

Name: _____ Class: _____ Date: _____

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

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

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- 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

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

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- 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

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 _____.

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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 |

36. Na

ANSWER: f

37. Mg

ANSWER: i

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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