

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) _____ are a type of subatomic particle contained in atoms. 1) _____
A) Neutrons B) Electrons C) Protons D) All of the above
- 2) A subatomic particle with a positive electrical charge is called a(n): 2) _____
A) neutron. B) proton.
C) electron. D) None of the above.
- 3) A(n) _____ is a subatomic particle with a negative charge. 3) _____
A) neutron B) electron
C) proton D) None of the above
- 4) The atomic number of an atom is its total number of: 4) _____
A) neutrons. B) protons and electrons.
C) protons and neutrons. D) protons.
- 5) The mass number of an isotope is its total number of: 5) _____
A) neutrons and electrons. B) protons and neutrons.
C) electrons. D) protons.
- 6) _____ are atoms or molecules with an electric charge. 6) _____
A) Ions B) Anions C) Cations D) All of the above
- 7) _____ are chemical bonds created by the electrical attraction between anions and cations. 7) _____
A) Hydrogen bonds B) Sodium bonds
C) Covalent bonds D) Ionic bonds
- 8) Chemical bonds created by the sharing of electrons with other atoms are called: 8) _____
A) sodium bonds. B) ionic bonds.
C) covalent bonds. D) hydrogen bonds.
- 9) _____ is the energy of motion. 9) _____
A) Work B) Potential energy
C) Kinetic energy D) None of the above
- 10) _____ is stored energy. 10) _____
A) Work B) Potential energy
C) Kinetic energy D) None of the above
- 11) _____ is a form of decomposition reaction. 11) _____
A) Catabolism B) Digestion C) Hydrolysis D) All of the above
- 12) _____ assembles larger molecules from smaller components. 12) _____
A) Dehydration synthesis B) Anabolism
C) A synthesis reaction D) All of the above

- 13) _____ is the amount of energy required to start a reaction. 13) _____
 A) Activation energy B) Potential energy
 C) Beginning energy D) None of the above
- 14) _____ are compounds that accelerate chemical reactions without themselves being permanently changed. Enzymes are an example of these compounds. 14) _____
 A) Colloids B) Crystalloids C) Catalysts D) All of the above
- 15) Reactions that *release* energy are said to be: 15) _____
 A) inderogenic. B) exerogenic. C) anderogenic. D) enderogenic.
- 16) Reactions that *absorb* energy are said to be: 16) _____
 A) anderogenic. B) enderogenic. C) inderogenic. D) exerogenic.
- 17) _____ are the essential elements and molecules obtained from the diet. 17) _____
 A) Metabolites B) Nutrients
 C) Both A and B. D) None of the above
- 18) Molecules synthesized or broken down by chemical reactions inside our body are called: 18) _____
 A) nutrients. B) metabolites.
 C) Both A and B. D) None of the above.
- 19) _____ are compounds that stabilize pH by either removing or replacing hydrogen ions. 19) _____
 A) Carbohydrates B) Electrolytes C) Catalysts D) Buffers
- 20) Fat is the combination of fatty acids and: 20) _____
 A) cholesterol. B) steroids. C) glycerol. D) glycogen.
- 21) Sodium, potassium, calcium, and magnesium are examples of: 21) _____
 A) lipids. B) proteins. C) cations. D) anions.
- 22) Sulfate, biphosphate, bicarbonate, and chloride are examples of: 22) _____
 A) lipids. B) cations. C) proteins. D) anions.
- 23) Atoms of an element that contain different numbers of neutrons are: 23) _____
 A) neutral elements. B) natural elements.
 C) isotopes. D) mass elements.
- 24) Surface tension is an example of what kind of chemical bond? 24) _____
 A) Hydrogen B) Covalent C) Ionic D) Sodium
- 25) A reaction where molecules are shuffled around, such as $AB + CD \rightarrow AD + CB$, is called a what? 25) _____
 A) Synthesis reaction B) Reversible reaction
 C) Decomposition reaction D) Exchange reaction
- 26) _____ is when the rates of two reactions are in balance. 26) _____
 A) Reversible B) Equal balance
 C) Equilibrium D) None of the above

- 27) What reaction breaks molecules into smaller fragments (for example, $AB \rightarrow A + B$)? 27) _____
A) Exchange reaction B) Reversible reaction
C) Decomposition reaction D) Synthesis reaction
- 28) Inorganic compounds do not contain hydrogen and _____ atoms. 28) _____
A) sulfur B) magnesium C) carbon D) oxygen
- 29) What is a uniform mixture of fluid solvent and dissolved solutes called? 29) _____
A) A solvent liquid B) A hydrolized fluid
C) A solution D) None of the above
- 30) Which is the organic molecule that contains carbon, hydrogen, and oxygen in a ratio near 1:2:1? 30) _____
Examples of this organic molecule include the sugars and starches that make up roughly half of the typical U.S. diet.
A) Polysaccharide B) Lipid
C) Carbohydrate D) Monosaccharide

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 31) Water is an excellent solvent. 31) _____
- 32) Water has a very low heat capacity. 32) _____
- 33) Water is not an essential reactant in the chemical reactions of living organisms. 33) _____
- 34) An acid is any substance that breaks apart in solution and releases hydrogen ions. 34) _____
- 35) A base is a substance that removes hydrogen ions from a solution. 35) _____
- 36) Energy cannot be destroyed; it can only be converted from one form to another. 36) _____
- 37) The number of electrons in an atom's outer shell determines its chemical properties. 37) _____
- 38) Salt dissolves into sodium and chloride, the most abundant ions in body fluids. 38) _____
- 39) Triglycerides are the rarest forms of fat in the body. 39) _____
- 40) Testosterone and estrogen are examples of steroids. 40) _____

Answer Key

Testname: UNTITLED3

- 1) D
- 2) B
- 3) B
- 4) D
- 5) B
- 6) D
- 7) D
- 8) C
- 9) C
- 10) B
- 11) D
- 12) D
- 13) A
- 14) C
- 15) B
- 16) B
- 17) B
- 18) B
- 19) D
- 20) C
- 21) C
- 22) D
- 23) C
- 24) A
- 25) D
- 26) C
- 27) C
- 28) C
- 29) C
- 30) C
- 31) TRUE
- 32) FALSE
- 33) FALSE
- 34) TRUE
- 35) TRUE
- 36) TRUE
- 37) TRUE
- 38) TRUE
- 39) FALSE
- 40) TRUE