Chapter 02 Test Bank

Student: _____

1. Anything that occupies space and has mass is called
   A. Volume
   B. Matter
   C. Weight
   D. Atomic

2. Which of the following is NOT an example of matter?
   A. A brick
   B. Water
   C. Air
   D. Heat

3. The simplest type of matter with unique physical and chemical properties is a(an)
   A. Molecule
   B. Proton
   C. Element
   D. Compound

4. Which element is found in the greatest abundance by weight in a human body?
   A. Hydrogen
   B. Carbon
   C. Oxygen
   D. Calcium

5. Which of the following particles is NOT found in the nucleus of an atom?
   A. Electron
   B. Proton
   C. Neutron
   D. All of the choices are found in the nucleus of an atom

6. Which subatomic particle is positively charged?
   A. Proton
   B. Neutron
   C. Electron
   D. Protons and electrons

7. By definition, the atomic number is equal to the number of _____ an atom has.
   A. Neutrons
   B. Electrons
   C. Protons
   D. Positrons

8. Since an atom is electrically neutral, which two subatomic particles are equal in number?
   A. Electrons and neutrons
   B. Electrons and protons
   C. Neutrons and protons

9. Which of the following is NOT true about isotopes?
   A. Isotopes are two or more forms of the same element
   B. Isotopes have different atomic numbers
   C. Isotopes have different mass numbers
   D. Some isotopes are radioactive

10. An atom that has more protons than electrons is called a(an)
    A. Cation
    B. Anion
    C. Isotope
    D. Molecule

11. A particle formed from the gain of electrons is called a(an)
    A. Cation
    B. Anion
    C. Isotope
    D. Molecule

12. An ionic bond is formed by the
    A. Sharing of electrons between two atoms
    B. Loss of electrons from two atoms
    C. Attraction between cations and anions
    D. Gain of electrons from two atoms

13. The symbol Mg^{2+} means that a magnesium atom has
    A. Gained two protons
    B. Gained two electrons
    C. Lost two protons
    D. Lost two electrons

14. Which ion is NOT correctly matched to its function in the body?
    A. Calcium - bones, teeth and muscle contraction
    B. Sodium - membrane potentials and water balance
    C. Iron - red blood cell formation
    D. Chloride - acid-base balance

15. In a covalent bond, electrons are
    A. Transferred between two atoms
    B. Lost from two atoms
    C. Shared between two atoms
    D. Gained from two atoms

16. When electron pairs are shared equally between two atoms, what type of bond is formed?
    A. Nonpolar covalent bond
    B. Ionic bond
    C. Polar covalent bond
    D. Hydrogen bond

17. When electron pairs are unequally shared between two atoms, what type of bond is formed?
    A. Nonpolar covalent bond
    B. Ionic bond
    C. Polar covalent bond
    D. Hydrogen bond

18. The attraction between a positive hydrogen "end" of a polar molecule and the negative "end" of another polar molecule is called a(an)
    A. Ionic bond
    B. Hydrogen bond
    C. Nonpolar covalent bond
    D. Polar covalent bond

19. What type of particle is formed from covalent bonds between two or more atoms?
    A. A molecule
    B. A compound
    C. An ion
    D. A mixture

20. Two or more different atoms that are chemically combined form a(an)
    A. Molecule
    B. Compound
    C. Ion
    D. Mixture

21. Which of the following is true of dissociation?
    A. Molecules dissociate in water
    B. Molecules come apart when dissolved in water
    C. Ionic compounds come apart when dissolved in water
    D. Water molecules can not surround ions in solution

22. Compounds that have the ability to conduct an electric current in solution are called
    A. Electrolytes
    B. Nonelectrolytes
    C. Isotopes
    D. Molecules

23. What type of reaction occurs when water is added to break down a large reactant into smaller products?

    A. Dehydration
    B. Synthesis
    C. Hydrolysis
    D. Reversible

24. What type of reaction occurs when water is removed to add reactants together?
    A. Dehydration
    B. Decomposition
    C. Hydrolysis
    D. Reversible

25. All the reactions in the body are collectively called
    A. Dehydration
    B. Metabolism
    C. Hydrolysis
    D. Synthesis

26. The type of energy found in chemical bonds is
    A. Kinetic energy
    B. Mechanical energy
    C. Potential energy
    D. Electrical energy

27. The energy molecule used to transfer energy in cells is called
    A. Glucose
    B. ATP
    C. CO_2
    D. ADP

28. Which of the following will NOT affect the rate of a chemical reaction?
    A. Type of reactants
    B. Concentration of reactants
    C. Temperature
    D. Use of a catalyst
    E. All of the choices will affect the rate of a chemical reaction

29. Which of the following will decrease the rate of a chemical reaction?
    A. Increasing the concentration of reactants
    B. Using a catalyst
    C. Decreasing the temperature
    D. Changing to a more reactive reactant

30. What will increase the rate of a reaction without being permanently changed itself?
    A. A catalyst
    B. An isotope
    C. An acid
    D. A base

31. A substance that will accept a proton is a(an)
    A. Acid
    B. Base
    C. Catalyst
    D. Salt

32. What is the range for an acid on the pH scale?
    A. 0 to 4
    B. Less than 7.0
    C. Greater than 7.0
    D. 10 to 14

33. As the hydrogen ion concentration increases, the pH
    A. Increases
    B. Decreases
    C. Remains the same

34. What is the normal pH range for human blood?
    A. 7.0
    B. 4.0 to 7.0
    C. 7.35 to 7.45
    D. 6.8 to 8.0

35. A chemical that resists change in pH is called a(an)
    A. Acid
    B. Base
    C. Salt
    D. Buffer

36. What is the function of oxygen in living cells?
    A. To take energy from the food we eat to make ATP
    B. To maintain the pH of the blood
    C. A medium for chemical reactions
    D. To transport nutrients in the blood

37. Which of the following is NOT an inorganic molecule?
    A. Carbon dioxide
    B. Water
    C. Oxygen
    D. Glucose

38. Which of the following is NOT a function of water in the body?
    A. Transport of dissolved substances
    B. Maintaining body temperature
    C. Protection by lubricating body parts
    D. Providing energy for cell reactions

39. What are the building blocks of carbohydrates?
    A. Disaccharides
    B. Glycerol and fatty acids
    C. Amino acids
    D. Monosaccharides

40. Which of the following is NOT a polysaccharide of glucose?
    A. Triglyceride
    B. Glycogen
    C. Cellulose
    D. Starch

41. Which of the following is NOT a function of carbohydrates in the body?
    A. Energy
    B. Structure
    C. Bulk
    D. Regulation

42. The most common of the fats in the body are
    A. Steroids
    B. Diglycerides
    C. Triglycerides
    D. Monoglycerides

43. The building blocks of fats are
    A. Monoglycerides
    B. Monosaccharides
    C. Cholesterol and fatty acids
    D. Glycerol and fatty acids

44. Which type of fats do NOT contribute to the development of cardiovascular disease?
    A. Polyunsaturated fats
    B. Monounsaturated fats
    C. Saturated fats
    D. Diunsaturated fats

45. Which lipid group is NOT correctly matched to its function?
    A. Eicosanoids - regulation
    B. Fats - insulation
    C. Phospholipids - stored energy
    D. Steroids - bile salts for fat digestion

46. Which of the following is NOT true of phospholipids?
    A. Make up cell membranes
    B. Have two fatty acid chains
    C. Have a polar end made of fatty acids
    D. Have a nonpolar, hydrophobic end

47. Which of the following are NOT eicosanoids?
    A. Leukotrienes
    B. Cholesterol
    C. Prostaglandins
    D. Thromboxanes

48. The building blocks of proteins are
    A. Nucleic acids
    B. Amino acids
    C. Fatty acids
    D. Linolenic acids

49. The sequence of amino acids joined by peptide bonds is the _____ structure of a protein.
    A. Primary
    B. Secondary
    C. Tertiary
    D. Quaternary

50. The folding or bending of the polypeptide chain into an alpha-helix or beta-pleated sheet held by hydrogen bonds is the _____ structure of a protein.
    A. Primary
    B. Secondary
    C. Tertiary
    D. Quaternary

51. The folding of the folds of a polypeptide into distinct three-dimensional structures called domains is the _____ structure of a protein.
    A. Primary
    B. Secondary
    C. Tertiary
    D. Quaternary

52. Two or more proteins that join to form a functional unit is the _____ structure of a protein.
    A. Primary
    B. Secondary
    C. Tertiary
    D. Quaternary

53. Which of the following functions of proteins is NOT correctly matched to the example?
    A. Structure - collagen as a framework
    B. Protection - transport of substances in the blood
    C. Regulation - enzymes controlling the rate of reactions
    D. Energy - produce ATP

54. Which of the following is NOT a function of proteins in the body?
    A. Protection
    B. Contraction
    C. Heredity
    D. Regulation

55. The destruction of the three-dimensional shape of a protein by heat or pH changes is called
    A. Denaturation
    B. Activation
    C. Dehydration
    D. Hydrolysis

56. A protein catalyst that increases the rate of a chemical reaction without being permanently changed is a(an)
    A. Isotope
    B. Domain
    C. Enzyme
    D. Denaturation

57. Which of the following is NOT true of enzymes?
    A. Lower activation energy for a reaction
    B. Can be used for many reactants
    C. Must fit like a lock and key to a reactant
    D. Can be used over and over again

58. What are the building blocks of nuclei acids?
    A. Amino acids
    B. Nucleotides
    C. Fatty acids
    D. Monosaccharides

59. Which of the following is NOT part of a nucleotide?
    A. Sugar
    B. Nitrogenous organic base
    C. Amino acid
    D. Phosphate

60. Which of the following is NOT true about DNA?
    A. Has the sugar deoxyribose
    B. Is a double helix
    C. Has the bases adenine, guanine, uracil and thymine
    D. Two bases join to form the "rungs" of the double helix

61. The sequence of organic bases in DNA that codes for a protein is called a(an)
    A. Gene
    B. Enzyme
    C. Polypeptide
    D. Dipeptide

62. Which of the following is NOT true about RNA?
    A. A single strand
    B. Had three different forms
    C. Has uracil instead of thymine
    D. Is the hereditary molecule

63. The mass of an object changes with location, while weight stays constant.
    True False

64. The atom is the smallest particle of an element that has all the properties of that element.
    True False

65. The mass number of an isotope is equal to the protons plus neutrons.
    True False

66. Nonpolar covalent bonds between atoms can create a polar molecule.
    True False

67. A hydrogen bond is a chemical bond between atoms.
    True False

68. Hydrogen bonds are important in creating the three-dimensional shapes of large molecules.
    True False

69. All molecules are compounds.
    True False

70. In equilibrium of reversible reactions, the amounts of reactants and products are equal.
    True False

71. Within limits, the more concentrated the reactants, the slower a reaction will proceed.
    True False

72. An increase in temperature will increase the rate of a chemical reaction.
    True False

73. Alkalosis occurs when the pH of the blood drops below 7.35.
    True False

74. Most of the chemical reactions in the body would not take place if water were not present.
    True False

75. Lipids have important roles in regulating the rates of chemical reactions in the body.
    True False

76. There are 20 different amino acids.
    True False

77. Polar sections of a polypeptide chain tend to face outward toward water in helping to create the tertiary structure of a protein.
    True False

78. The minimum amount of energy to start a chemical reaction is the activation energy.
    True False

79. Enzymes will raise the activation energy making it easier for a reaction to occur.
    True False

80. In DNA, the base adenine is the complement of thymine.
    True False

Chapter 02 Test Bank Key

1. Anything that occupies space and has mass is called
   A. Volume
   B. Matter
   C. Weight
   D. Atomic

Bloom's Level: 1. Remember
Learning Outcome: 02.01.01 Define the terms matter, mass, weight, element, and atom.
Section: 02.01
Topic: Chemistry

2. Which of the following is NOT an example of matter?
   A. A brick
   B. Water
   C. Air
   D. Heat

Bloom's Level: 5. Evaluate
Learning Outcome: 02.01.01 Define the terms matter, mass, weight, element, and atom.
Section: 02.01
Topic: Chemistry

3. The simplest type of matter with unique physical and chemical properties is a(an)
   A. Molecule
   B. Proton
   C. Element
   D. Compound

Bloom's Level: 1. Remember
Learning Outcome: 02.01.01 Define the terms matter, mass, weight, element, and atom.
Section: 02.01
Topic: Chemistry

4. Which element is found in the greatest abundance by weight in a human body?
   A. Hydrogen
   B. Carbon
   C. Oxygen
   D. Calcium

Bloom's Level: 5. Evaluate
Learning Outcome: 02.01.01 Define the terms matter, mass, weight, element, and atom.
Section: 02.01
Topic: Chemistry

5. Which of the following particles is NOT found in the nucleus of an atom?
   A. Electron
   B. Proton
   C. Neutron
   D. All of the choices are found in the nucleus of an atom

Bloom's Level: 1. Remember
Learning Outcome: 02.01.02 Describe the structure of an atom.
Section: 02.01
Topic: Chemistry

6. Which subatomic particle is positively charged?
   A. Proton
   B. Neutron
   C. Electron
   D. Protons and electrons

Bloom's Level: 1. Remember
Learning Outcome: 02.01.02 Describe the structure of an atom.
Section: 02.01
Topic: Chemistry

7. By definition, the atomic number is equal to the number of _____ an atom has.
   A. Neutrons
   B. Electrons
   C. Protons
   D. Positrons

Bloom's Level: 1. Remember
Learning Outcome: 02.01.03 Define atomic number, mass number, and isotope.
Section: 02.01
Topic: Chemistry

8. Since an atom is electrically neutral, which two subatomic particles are equal in number?
   A. Electrons and neutrons
   B. Electrons and protons
   C. Neutrons and protons

Bloom's Level: 3. Apply
Learning Outcome: 02.01.03 Define atomic number, mass number, and isotope.
Section: 02.01
Topic: Chemistry

9. Which of the following is NOT true about isotopes?
   A. Isotopes are two or more forms of the same element
   B. Isotopes have different atomic numbers
   C. Isotopes have different mass numbers
   D. Some isotopes are radioactive

Bloom's Level: 5. Evaluate
Learning Outcome: 02.01.03 Define atomic number, mass number, and isotope.
Section: 02.01
Topic: Chemistry

10. An atom that has more protons than electrons is called a(an)
   A. Cation
   B. Anion
   C. Isotope
   D. Molecule

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

11. A particle formed from the gain of electrons is called a(an)
   A. Cation
   B. Anion
   C. Isotope
   D. Molecule

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

12. An ionic bond is formed by the
   A. Sharing of electrons between two atoms
   B. Loss of electrons from two atoms
   C. Attraction between cations and anions
   D. Gain of electrons from two atoms

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

13. The symbol Mg^{2+} means that a magnesium atom has
   A. Gained two protons
   B. Gained two electrons
   C. Lost two protons
   D. Lost two electrons

Bloom's Level: 2. Understand
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

14. Which ion is NOT correctly matched to its function in the body?
A. Calcium - bones, teeth and muscle contraction
B. Sodium - membrane potentials and water balance
C. Iron - red blood cell formation
D. Chloride - acid-base balance

Bloom's Level: 5. Evaluate
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

15. In a covalent bond, electrons are
A. Transferred between two atoms
B. Lost from two atoms
C. Shared between two atoms
D. Gained from two atoms

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

16. When electron pairs are shared equally between two atoms, what type of bond is formed?
A. Nonpolar covalent bond
B. Ionic bond
C. Polar covalent bond
D. Hydrogen bond

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

17. When electron pairs are unequally shared between two atoms, what type of bond is formed?
A. Nonpolar covalent bond
B. Ionic bond
C. Polar covalent bond
D. Hydrogen bond

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

18. The attraction between a positive hydrogen "end" of a polar molecule and the negative "end" of another polar molecule is called a(an)
A. Ionic bond
B. Hydrogen bond
C. Nonpolar covalent bond
D. Polar covalent bond

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

19. What type of particle is formed from covalent bonds between two or more atoms?
A. A molecule
B. A compound
C. An ion
D. A mixture

Bloom's Level: 1. Remember
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

20. Two or more different atoms that are chemically combined form a(an)
A. Molecule
B. Compound
C. Ion
D. Mixture

Bloom's Level: 1. Remember
Learning Outcome: 02.01.06 Distinguish between a molecule and a compound. Define dissociate, electrolyte, and nonelectrolyte.
Section: 02.01
Topic: Chemistry

21. Which of the following is true of dissociation?
A. Molecules dissociate in water
B. Molecules come apart when dissolved in water
C. Ionic compounds come apart when dissolved in water
D. Water molecules can not surround ions in solution

Bloom's Level: 5. Evaluate
Learning Outcome: 02.01.06 Distinguish between a molecule and a compound. Define dissociate, electrolyte, and nonelectrolyte.
Section: 02.01
Topic: Chemistry

22. Compounds that have the ability to conduct an electric current in solution are called
A. Electrolytes
B. Nonelectrolytes
C. Isotopes
D. Molecules

Bloom's Level: 1. Remember
Learning Outcome: 02.01.06 Distinguish between a molecule and a compound. Define dissociate, electrolyte, and nonelectrolyte.
Section: 02.01
Topic: Chemistry

23. What type of reaction occurs when water is added to break down a large reactant into smaller products?
A. Dehydration
B. Synthesis
C. Hydrolysis
D. Reversible

Bloom's Level: 1. Remember
Learning Outcome: 02.02.07 Describe and give an example of synthesis, decomposition, dehydration, hydrolysis, and reversible reactions.
Section: 02.02
Topic: Chemistry

24. What type of reaction occurs when water is removed to add reactants together?
A. Dehydration
B. Decomposition
C. Hydrolysis
D. Reversible

Bloom's Level: 1. Remember
Learning Outcome: 02.02.07 Describe and give an example of synthesis, decomposition, dehydration, hydrolysis, and reversible reactions.
Section: 02.02
Topic: Chemistry

25. All the reactions in the body are collectively called
A. Dehydration
B. Metabolism
C. Hydrolysis
D. Synthesis

Bloom's Level: 1. Remember
Learning Outcome: 02.02.08 Define potential, kinetic, mechanical, and chemical energy.
Section: 02.02
Topic: Chemistry

26. The type of energy found in chemical bonds is
A. Kinetic energy
B. Mechanical energy
C. Potential energy
D. Electrical energy

Bloom's Level: 1. Remember
Learning Outcome: 02.02.08 Define potential, kinetic, mechanical, and chemical energy.
Section: 02.02
Topic: Chemistry

27. The energy molecule used to transfer energy in cells is called
A. Glucose
B. ATP
C. CO2
D. ADP

Bloom's Level: 1. Remember
Learning Outcome: 02.02.09 Describe the chemical potential energy changes that occur during the synthesis and decomposition of adenosine triphosphate (ATP).
Section: 02.02
Topic: Chemistry

28. Which of the following will NOT affect the rate of a chemical reaction?
A. Type of reactants
B. Concentration of reactants
C. Temperature
D. Use of a catalyst
E. All of the choices will affect the rate of a chemical reaction

Bloom's Level: 5. Evaluate
Learning Outcome: 02.02.10 List the factors that affect the rate of chemical reactions.
Section: 02.02
Topic: Chemistry

29. Which of the following will decrease the rate of a chemical reaction?
A. Increasing the concentration of reactants
B. Using a catalyst
C. Decreasing the temperature
D. Changing to a more reactive reactant

Bloom's Level: 5. Evaluate
Learning Outcome: 02.02.10 List the factors that affect the rate of chemical reactions.
Section: 02.02
Topic: Chemistry

30. What will increase the rate of a reaction without being permanently changed itself?
A. A catalyst
B. An isotope
C. An acid
D. A base

Bloom's Level: 1. Remember
Learning Outcome: 02.02.10 List the factors that affect the rate of chemical reactions.
Section: 02.02
Topic: Chemistry

31. A substance that will accept a proton is a(an)
A. Acid
B. Base
C. Catalyst
D. Salt

Bloom's Level: 1. Remember
Learning Outcome: 02.03.11 Define acid and base, and differentiate between a strong acid or base and a weak acid or base.
Section: 02.03
Topic: Chemistry

32. What is the range for an acid on the pH scale?
A. 0 to 4
B. Less than 7.0
C. Greater than 7.0
D. 10 to 14

Bloom's Level: 1. Remember
Learning Outcome: 02.03.11 Define acid and base, and differentiate between a strong acid or base and a weak acid or base.
Section: 02.03
Topic: Chemistry

33. As the hydrogen ion concentration increases, the pH
A. Increases
B. Decreases
C. Remains the same

Bloom's Level: 1. Remember
Learning Outcome: 02.03.11 Define acid and base, and differentiate between a strong acid or base and a weak acid or base.
Section: 02.03
Topic: Chemistry

34. What is the normal pH range for human blood?
A. 7.0
B. 4.0 to 7.0
C. 7.35 to 7.45
D. 6.8 to 8.0

Bloom's Level: 1. Remember
Learning Outcome: 02.03.11 Define acid and base, and differentiate between a strong acid or base and a weak acid or base.
Section: 02.03
Topic: Chemistry

35. A chemical that resists change in pH is called a(an)
A. Acid
B. Base
C. Salt
D. Buffer

Bloom's Level: 1. Remember
Learning Outcome: 02.03.12 Describe the pH scale, and define salt and buffer.
Section: 02.03
Topic: Chemistry

36. What is the function of oxygen in living cells?
A. To take energy from the food we eat to make ATP
B. To maintain the pH of the blood
C. A medium for chemical reactions
D. To transport nutrients in the blood

Bloom's Level: 1. Remember
Learning Outcome: 02.04.13 Explain the importance of oxygen and carbon dioxide to living organisms.
Section: 02.04
Topic: Chemistry

37. Which of the following is NOT an inorganic molecule?
A. Carbon dioxide
B. Water
C. Oxygen
D. Glucose

Bloom's Level: 3. Apply
Learning Outcome: 02.04.13 Explain the importance of oxygen and carbon dioxide to living organisms.
Section: 02.04
Topic: Chemistry

38. Which of the following is NOT a function of water in the body?
A. Transport of dissolved substances
B. Maintaining body temperature
C. Protection by lubricating body parts
D. Providing energy for cell reactions

Bloom's Level: 5. Evaluate
Learning Outcome: 02.04.14 List the properties of water that make it important for living organisms.
Section: 02.04
Topic: Chemistry

39. What are the building blocks of carbohydrates?
A. Disaccharides
B. Glycerol and fatty acids
C. Amino acids
D. Monosaccharides

Bloom's Level: 1. Remember
Learning Outcome: 02.05.15 Describe the chemical structure of carbohydrates, and state the role of carbohydrates in the body.
Section: 02.05
Topic: Chemistry

40. Which of the following is NOT a polysaccharide of glucose?
A. Triglyceride
B. Glycogen
C. Cellulose
D. Starch

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.15 Describe the chemical structure of carbohydrates, and state the role of carbohydrates in the body.
Section: 02.05
Topic: Chemistry

41. Which of the following is NOT a function of carbohydrates in the body?
A. Energy
B. Structure
C. Bulk
D. Regulation

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.15 Describe the chemical structure of carbohydrates, and state the role of carbohydrates in the body.
Section: 02.05
Topic: Chemistry

42. The most common of the fats in the body are
A. Steroids
B. Diglycerides
C. Triglycerides
D. Monoglycerides

Bloom's Level: 1. Remember
Learning Outcome: 02.05.16 List and describe the importance of the major types of lipids.
Section: 02.05
Topic: Chemistry

43. The building blocks of fats are
A. Monoglycerides
B. Monosaccharides
C. Cholesterol and fatty acids
D. Glycerol and fatty acids

Bloom's Level: 1. Remember
Learning Outcome: 02.05.16 List and describe the importance of the major types of lipids.
Section: 02.05
Topic: Chemistry

44. Which type of fats do NOT contribute to the development of cardiovascular disease?
A. Polyunsaturated fats
B. Monounsaturated fats
C. Saturated fats
D. Diunsaturated fats

Bloom's Level: 1. Remember
Learning Outcome: 02.05.16 List and describe the importance of the major types of lipids.
Section: 02.05
Topic: Chemistry

45. Which lipid group is NOT correctly matched to its function?
A. Eicosanoids - regulation
B. Fats - insulation
C. Phospholipids - stored energy
D. Steroids - bile salts for fat digestion

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.16 List and describe the importance of the major types of lipids.
Section: 02.05
Topic: Chemistry

46. Which of the following is NOT true of phospholipids?
A. Make up cell membranes
B. Have two fatty acid chains
C. Have a polar end made of fatty acids
D. Have a nonpolar, hydrophobic end

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.16 List and describe the importance of the major types of lipids.
Section: 02.05
Topic: Chemistry

47. Which of the following are NOT eicosanoids?
A. Leukotrienes
B. Cholesterol
C. Prostaglandins
D. Thromboxanes

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.16 List and describe the importance of the major types of lipids.
Section: 02.05
Topic: Chemistry

48. The building blocks of proteins are
A. Nucleic acids
B. Amino acids
C. Fatty acids
D. Linolenic acids

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

49. The sequence of amino acids joined by peptide bonds is the _____ structure of a protein.
A. Primary
B. Secondary
C. Tertiary
D. Quaternary

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

50. The folding or bending of the polypeptide chain into an alpha-helix or beta-pleated sheet held by hydrogen bonds is the _____ structure of a protein.
A. Primary
B. Secondary
C. Tertiary
D. Quaternary

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

51. The folding of the folds of a polypeptide into distinct three-dimensional structures called domains is the _____ structure of a protein.
A. Primary
B. Secondary
C. Tertiary
D. Quaternary

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

52. Two or more proteins that join to form a functional unit is the _____ structure of a protein.
A. Primary
B. Secondary
C. Tertiary
D. Quaternary

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

53. Which of the following functions of proteins is NOT correctly matched to the example?
A. Structure - collagen as a framework
B. Protection - transport of substances in the blood
C. Regulation - enzymes controlling the rate of reactions
D. Energy - produce ATP

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

54. Which of the following is NOT a function of proteins in the body?
A. Protection
B. Contraction
C. Heredity
D. Regulation

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

55. The destruction of the three-dimensional shape of a protein by heat or pH changes is called
A. Denaturation
B. Activation
C. Dehydration
D. Hydrolysis

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

56. A protein catalyst that increases the rate of a chemical reaction without being permanently changed is a(an)
A. Isotope
B. Domain
C. Enzyme
D. Denaturation

Bloom's Level: 1. Remember
Learning Outcome: 02.05.18 Define enzymes and explain how they work.
Section: 02.05
Topic: Chemistry

57. Which of the following is NOT true of enzymes?
A. Lower activation energy for a reaction
B. Can be used for many reactants
C. Must fit like a lock and key to a reactant
D. Can be used over and over again

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.18 Define enzymes and explain how they work.
Section: 02.05
Topic: Chemistry

58. What are the building blocks of nuclei acids?
A. Amino acids
B. Nucleotides
C. Fatty acids
D. Monosaccharides

Bloom's Level: 1. Remember
Learning Outcome: 02.05.19 Contrast the structure and function of deoxyribonucleic acid (DNA) and ribonucleic acid (RNA).
Section: 02.05
Topic: Chemistry

59. Which of the following is NOT part of a nucleotide?
A. Sugar
B. Nitrogenous organic base
C. Amino acid
D. Phosphate

Bloom's Level: 5. Evaluate
Section: 02.05
Topic: Chemistry

60. Which of the following is NOT true about DNA?
A. Has the sugar deoxyribose
B. Is a double helix
C. Has the bases adenine, guanine, uracil and thymine
D. Two bases join to form the "rungs" of the double helix

Bloom's Level: 5. Evaluate
Section: 02.05
Topic: Chemistry

61. The sequence of organic bases in DNA that codes for a protein is called a(an)
A. Gene
B. Enzyme
C. Polypeptide
D. Dipeptide

Bloom's Level: 1. Remember
Section: 02.05
Topic: Chemistry

62. Which of the following is NOT true about RNA?
A. A single strand
B. Had three different forms
C. Has uracil instead of thymine
D. Is the hereditary molecule

Bloom's Level: 5. Evaluate
Learning Outcome: 02.05.19 Contrast the structure and function of deoxyribonucleic acid (DNA) and ribonucleic acid (RNA).
Section: 02.05
Topic: Chemistry

63. The mass of an object changes with location, while weight stays constant.
FALSE

Bloom's Level: 1. Remember
Learning Outcome: 02.01.01 Define the terms matter, mass, weight, element, and atom.
Section: 02.01
Topic: Chemistry

64. The atom is the smallest particle of an element that has all the properties of that element.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.01.01 Define the terms matter, mass, weight, element, and atom.
Section: 02.01
Topic: Chemistry

65. The mass number of an isotope is equal to the protons plus neutrons.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.01.03 Define atomic number, mass number, and isotope.
Section: 02.01
Topic: Chemistry

66. Nonpolar covalent bonds between atoms can create a polar molecule.
FALSE

Bloom's Level: 2. Understand
Learning Outcome: 02.01.04 Explain ionic and covalent bonding. Distinguish between nonpolar and polar covalent bonds.
Section: 02.01
Topic: Chemistry

67. A hydrogen bond is a chemical bond between atoms.
FALSE

Bloom's Level: 1. Remember
Learning Outcome: 02.01.05 Describe hydrogen bonds.
Section: 02.01
Topic: Chemistry

68. Hydrogen bonds are important in creating the three-dimensional shapes of large molecules.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.01.05 Describe hydrogen bonds.
Section: 02.01
Topic: Chemistry

69. All molecules are compounds.
FALSE

Bloom's Level: 1. Remember
Learning Outcome: 02.01.06 Distinguish between a molecule and a compound. Define dissociate, electrolyte, and nonelectrolyte.
Section: 02.01
Topic: Chemistry

70. In equilibrium of reversible reactions, the amounts of reactants and products are equal.
FALSE

Bloom's Level: 1. Remember
Learning Outcome: 02.02.07 Describe and give an example of synthesis, decomposition, dehydration, hydrolysis, and reversible reactions.
Section: 02.02
Topic: Chemistry

71. Within limits, the more concentrated the reactants, the slower a reaction will proceed.
FALSE

Bloom's Level: 1. Remember
Learning Outcome: 02.02.07 Describe and give an example of synthesis, decomposition, dehydration, hydrolysis, and reversible reactions.
Section: 02.02
Topic: Chemistry

72. An increase in temperature will increase the rate of a chemical reaction.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.02.10 List the factors that affect the rate of chemical reactions.
Section: 02.02
Topic: Chemistry

73. Alkalosis occurs when the pH of the blood drops below 7.35.
FALSE

Bloom's Level: 1. Remember
Learning Outcome: 02.03.12 Describe the pH scale, and define salt and buffer.
Section: 02.03
Topic: Chemistry

74. Most of the chemical reactions in the body would not take place if water were not present.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.04.14 List the properties of water that make it important for living organisms.
Section: 02.04
Topic: Chemistry

75. Lipids have important roles in regulating the rates of chemical reactions in the body.
FALSE

Bloom's Level: 2. Understand
Learning Outcome: 02.05.16 List and describe the importance of the major types of lipids.
Section: 02.05
Topic: Chemistry

76. There are 20 different amino acids.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

77. Polar sections of a polypeptide chain tend to face outward toward water in helping to create the tertiary structure of a protein.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.05.17 Describe the different structural levels of proteins.
Section: 02.05
Topic: Chemistry

78. The minimum amount of energy to start a chemical reaction is the activation energy.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.05.18 Define enzymes and explain how they work.
Section: 02.05
Topic: Chemistry

79. Enzymes will raise the activation energy making it easier for a reaction to occur.
FALSE

Bloom's Level: 1. Remember
Learning Outcome: 02.05.18 Define enzymes and explain how they work.
Section: 02.05
Topic: Chemistry

80. In DNA, the base adenine is the complement of thymine.
TRUE

Bloom's Level: 1. Remember
Learning Outcome: 02.05.19 Contrast the structure and function of deoxyribonucleic acid (DNA) and ribonucleic acid (RNA).
Section: 02.05
Topic: Chemistry

Chapter 02 Test Bank Summary

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