c2

Student: _____

1. Water makes up _____ of the total body weight of an average adult.
A. 50-60%
B. 55-65%
C. 60-70%
D. 65-75%

2. Most of the water found in the body is in the
A. blood.
B. intracellular fluid compartment.
C. extracellular fluid compartment.
D. blood and extracellular fluid compartment.

3. Neutrons are uncharged particles found in the nucleus of an atom.
True False

4. An element with 5 protons, 5 neutrons, and 5 electrons would have an atomic number of 15.
True False

5. The atomic nucleus does not contain _____, which are negatively charged subatomic particles.
A. protons
B. electrons
C. neutrons

6. An element with 11 neutrons, 11 protons, and 11 electrons would have an atomic mass of __.
A. 11
B. 33
C. 22
D. cannot be determined

7. The _____ is the physical space which an electron occupies in an atom.
A. nucleus
B. orbital
C. energy level
D. Both orbital and energy level are correct.

8. The _____ electrons are the outermost electrons of an atom.
A. kernel
B. valence
C. atomic
D. anion

9. Isotopes have the same _____ number, but a different _____ number.
A. mass, atomic
B. neutron, mass
C. atomic, mass
D. atomic, proton

10. Which of the following is NOT true of isotopes of a given atom?
A. have the same number of neutrons
B. have the same number of protons
C. have different atomic masses
D. All of these choices are correct.

11. The term "chemical element" refers to the most common isotope of that element.
True False

12. Which of the following subatomic particles have negligible mass?
A. electrons
B. neutrons
C. protons
D. Both neutrons and protons.

13. Molecules with polar covalent bonds are hydrophilic.
True False

14. Negatively charged ions will migrate toward the anode in an electrical field.
True False

15. Hydrogen bonds form between the partially charged atoms of two polar molecules, such as the slightly negatively charged hydrogen atom of one water molecule and the slightly positively charged oxygen atom of another.
True False

16. Atoms sharing a pair of electrons form covalent bonds.
True False

17. When an atom loses one or more electrons, it
A. becomes positively charged.
B. becomes negatively charged.
C. is called an anion.
D. has no change in its charge.

18. When an atom gains one or more electrons, it
A. becomes positively charged.
B. has no change in its charge.
C. is called an anion.
D. is called a cation.

19. An atom with 5 protons, 5 neutrons, and 6 electrons would have a net charge of
A. -1.
B. -2.
C. +1.
D. +2.

20. _____ bonds are formed when atoms share electrons unequally.
A. Nonpolar covalent
B. Ionic
C. Polar covalent
D. van der Waals

21. Hydration spheres can be formed by compounds which contain _____ bonds.
A. nonpolar covalent
B. polar covalent
C. ionic
D. either polar covalent or ionic

22. Hydrophobic molecules would contain _____ bonds.
A. nonpolar covalent
B. polar covalent
C. hydrogen
D. ionic

23. Surface tension between water molecules occurs because adjacent water molecules form _____ bonds with each other.
A. nonpolar covalent
B. polar covalent
C. hydrogen
D. ionic

24. Bonds that are formed between oxygen and hydrogen atoms within water molecules are called
A. hydrogen bonds.
B. ionic bonds.
C. nonpolar covalent bonds.
D. polar covalent bonds.

25. The type of bond found in sodium chloride is
A. an ionic bond.
B. a polar covalent bond.
C. a hydrogen bond.
D. a nonpolar covalent bond.

26. Which of the following would be most easily broken?
A. a hydrogen bond
B. a nonpolar covalent bond
C. an ionic bond
D. a polar covalent bond

27. The pH of a solution is directly proportional to the hydrogen ion concentration of the solution.
True False

28. Acids release hydrogen ions into solutions.
True False

29. As the pH of the blood decreases, the amount of hydrogen ions in the blood would decrease.
True False

30. Water molecules form _____ ions when they associate with a hydrogen ion.
A. hydroxide
B. bicarbonate
C. hydronium
D. water

31. A solution of a pH above 7 is called _____.
A. acidic
B. neutral
C. basic

32. Bases will _____ protons in a solution.
A. accept
B. donate
C. ignore
D. repel

33. The primary buffer in the blood is the _____ buffer.
A. hydronium
B. ammonia
C. phosphate
D. bicarbonate

34. The pH of a solution increases as the _____ ion concentration decreases.
A. hydrogen
B. hydroxide
C. bicarbonate
D. sodium

35. In an acidic solution,
A. the OH^- ion concentration is greater than the H^+ ion concentration.
B. the OH^- ion concentration is less than the H^+ ion concentration.
C. the H^+ ion concentration is equal to the OH^- ion concentration.
D. the H^+ ion concentration is less than the OH^- ion concentration only if the solution is buffered.

36. A blood pH of 7.6 is
A. indicative of acidosis.
B. indicative of alkalosis.
C. in the normal physiological range.
D. indicates effective buffering by the bicarbonate/carbonic acid system.

37. Regarding acids and bases,
A. acids will increase the pH of a solution.
B. bases will decrease the pH of a solution.
C. acids will accept hydrogen ions in a solution.
D. bases will accept hydrogen ions in a solution.

38. Ammonia usually
A. acts as a base.
B. acts as an acid.
C. acts as a buffer.
D. ionizes to form a hydroxyl ion.

39. Organic acids contain carbonyl groups.
True False

40. Molecules that contain carbon and hydrogen atoms are
A. ionic.
B. inorganic.
C. organic.
D. carbonic.

41. Only L-stereoisomers are absorbed by the digestive tract and used to synthesize organic molecules.
True False

42. An ionized organic acid is designated with the suffix - ate.
True False

43. The ionized form of the organic lactic acid is lactate.
True False

44. _____ are molecules with the same ratio of atoms but different arrangements of atoms.
A. Isotopes
B. Structural isomers
C. Stereoisomers
D. Radioactive isotopes

45. How many single bonds can a carbon atom form if it is double-bonded to an oxygen atom?
A. 1
B. 2
C. 3
D. 4

46. A six-sided organic molecule with alternating double bonds is termed a(n)
A. aromatic compound.
B. ketone.
C. alcohol.
D. organic acid.

47. Ketones contain a(n) _____ group within the carbon chain.
A. hydroxyl
B. carbonyl
C. carboxyl
D. aromatic

48. Organic acids will contain
A. a carboxyl group.
B. a carbonyl group.
C. an amino group.
D. a hydroxyl group.

49. An example of an aromatic substance is
A. hexane.
B. cyclohexane.
C. fructose.
D. benzene.

50. Fats and carbohydrates are the primary energy stores in the body.
True False

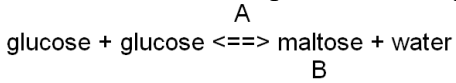
51. Glucose, galactose, and fructose can be considered structural isomers of each other.
True False

52. Fructose is a ketone.
True False

53. Covalent bonds are formed between monosaccharides through dehydration synthesis.
True False

54. The addition of water with the proper enzymes to a molecule is called
A. dehydration synthesis.
B. condensation.
C. hydrolysis.
D. combustion.

55. Which reaction represents a dehydration synthesis reaction?



A. Reaction A
B. Reaction B

56. Carbohydrate molecules have a ratio of twice as many oxygen atoms to carbon atoms.
True False

57. Sucrose is a disaccharide that is composed of _____ and _____.
A. glucose, glucose
B. glucose, galactose
C. glucose, fructose
D. fructose, galactose

58. Glycogen
A. is more highly branched than plant starch.
B. is a glycoprotein found in the liver.
C. is a glycolipid found in skeletal muscles.
D. is composed of alternating glucose and galactose molecules.

59. An example of a monosaccharide is
A. maltose.
B. sucrose.
C. glucose.
D. glycogen.

60. Glucose is stored as a polysaccharide to prevent osmosis of water into the cells.
True False

61. Which of the following is NOT a disaccharide?
A. fructose
B. sucrose
C. maltose
D. lactose

62. Which of the following polysaccharides cannot be digested by animals themselves?
A. glycogen
B. cellulose
C. starch
D. All of these can be digested by animals themselves.

63. Unsaturated fatty acids contain more hydrogen atoms than saturated fatty acids of the same length.
True False

64. Rapid, uncontrolled hydrolysis of body fats can result in ketoacidosis.
True False

65. Corticosteroids are a type of lipid commonly found in cell membranes.
True False

66. Steroids are derived from cholesterol.
True False

67. In order to maintain proper health, total dietary fat intake should not exceed _____ of total dietary energy intake.
A. 10%
B. 20%
C. 30%
D. 40%

68. Which of the following is NOT a type of lipid?
A. prostaglandins
B. triglycerides
C. cholesterol
D. glycogen

69. Lipids containing glycerol would include _____ and _____.
A. triglycerides, steroids
B. prostaglandins, phospholipids
C. triglycerides, phospholipids
D. steroids, prostaglandins

70. _____ are liver synthesized derivatives of free fatty acids that can be used as an immediate source of energy by many organs.
A. Glycerols
B. Ketone bodies
C. Steroids
D. Cholesterols

71. _____ are fatty acids with a cyclic hydrocarbon group.
A. Triglycerides
B. Prostaglandins
C. Proteins
D. Carbohydrates

72. This group of organic compounds acts as surfactants:
A. carbohydrates
B. phospholipids
C. nucleic acids
D. prostaglandins

73. In the formation of triglycerides,
A. hydroxyl and carbonyl groups interact.
B. amino and carbonyl groups interact.
C. carboxyl and amino groups interact.
D. carboxyl and hydroxyl groups interact.

74. Unsaturated fatty acids
A. contain one or more double bonds.
B. are usually liquid at room temperature.
C. contain a maximal number of hydrogen atoms.
D. Both contain one or more double bonds and are usually liquid at room temperature are correct.

75. Phospholipids
A. are glycolipids originally isolated from the prostate gland.
B. are major components of the cell membrane.
C. have a polar head and a nonpolar tail.
D. Both are major components of the cell membrane and have a polar head and a nonpolar tail are correct.

76. Ketosis
A. occurs when stored fats are rapidly degraded by the body.
B. stimulates an increased blood pH.
C. may lead to alkalosis.
D. occurs as the concentration of ketones in the urine decreases.

77. Which of the following describes a trans-fat?
A. Has carbon-carbon single bonds.
B. Has carbon-carbon double bonds with hydrogens on opposite sides of the bonds.
C. Has carbon-carbon double bonds with hydrogens on the same side of the bonds.
D. The fatty acids form a bent chain.

78. Which of the following is NOT true of steroids?
A. They have three 6-carbon rings joined to one 5-carbon ring.
B. They contain a variety of functional groups.
C. They are derived from palmitate.
D. They differ in the position of the double covalent bonds between the carbon atoms in the rings.

79. Which of the following is NOT a derivative of cholesterol?
A. corticosteroids
B. vitamin D_3
C. aldosterone
D. lecithin

80. All amino acids contain carboxyl and amino groups.
True False

81. The specific sequence of amino acids in a polypeptide is known as the primary protein structure.
True False

82. The white part of a cooked egg is due to denatured albumin proteins.
True False

83. _____ is a structural protein found in tendons and ligaments.
A. Collagen
B. Keratin
C. Myosin
D. Fibrin

84. Peptide bonds are formed by the process of
A. ketosis.
B. hydrolysis.
C. dehydration synthesis.
D. aromatization.

85. The secondary structure of proteins is/are
A. the linear arrangement of amino acids in the molecule.
B. alpha helix coils and beta-pleated sheet folds of a protein strand.
C. due to the interaction between protein subunits.
D. stabilized when a protein is denatured.

86. The primary structure of proteins is/are
A. the linear arrangement of amino acids in the molecule.
B. alpha helix coils and beta-pleated sheet folds of a protein strand.
C. due to the interaction between protein subunits.
D. stabilized when a protein is denatured.

87. The subunit of protein is the
A. fatty acid.
B. nucleic acid.
C. amino acid.
D. carboxylic acid.

88. How many different amino acids are known?
A. 10
B. 25
C. 30
D. 20

89. What holds a protein in its tertiary structure?
A. hydrogen bonds between nearby amino acids
B. weak chemical bonds between widely spaced amino acids
C. disulfide bonds between sulfur groups on cysteines
D. Both weak chemical bonds between widely spaced amino acids and disulfide bonds between sulfur groups on cysteines are correct.

90. Proteins that combine with other molecules are said to be condensed.
True False

91. The specific shape of a protein determines its function.
True False

92. A protein that is combined with another type of molecule like a carbohydrate is
A. conjugated.
B. denatured.
C. hydrolyzed.
D. complemented.

93. Which of the following is NOT a function of proteins in the body?
A. carriers for membrane transport
B. enzymes
C. compose genes
D. receptors for regulator molecules

94. Keratin and collagen are considered _____ proteins.
A. functional
B. structural
C. fibrous
D. Both structural and fibrous are correct.

95. In DNA, cytosine forms a complementary base pair with adenine.
True False

96. The nitrogenous base adenine is a
A. purine.
B. pyrimidine.
C. steroid.
D. prostaglandin.

97. Which of the following is NOT a component of DNA?
A. phosphate
B. deoxyribose sugar
C. guanine
D. uracil

98. The human genome refers to
A. all living human beings.
B. the total variations in human cells.
C. all of the genes in the cell.
D. human mutations caused by gene defects.

99. The "spiral staircase" structure of DNA is referred to as the
A. tertiary structure.
B. spiral structure.
C. the double helix.
D. the twist of life.

100. Which of the following is NOT one of the three types of RNA?
A. dRNA
B. tRNA
C. rRNA
D. mRNA

101. The base that is NOT found in RNA is
A. thymine.
B. guanine.
C. cytosine.
D. uracil.

102. Which of the following is NOT a difference between DNA and RNA?
A. They have different sugars.
B. RNA is a single strand, while DNA is a double strand.
C. DNA has thymine, while RNA has uracil.
D. They both can leave the nucleus to perform their functions.

103. The backbone of a DNA molecule is a chain of
A. alternating deoxyribose sugar and phosphate.
B. alternating phosphate and nitrogen.
C. alternating nitrogenous bases.
D. alternating deoxyribose and ribose sugars.

c2 Key

1. Water makes up _____ of the total body weight of an average adult.
A. 50-60%
B. 55-65%
C. 60-70%
D. 65-75%

Bloom's: Remembering
Fox - Chapter 02 #1

2. Most of the water found in the body is in the
A. blood.
B. intracellular fluid compartment.
C. extracellular fluid compartment.
D. blood and extracellular fluid compartment.

Bloom's: Remembering
Fox - Chapter 02 #2

3. Neutrons are uncharged particles found in the nucleus of an atom.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #3

4. An element with 5 protons, 5 neutrons, and 5 electrons would have an atomic number of 15.
FALSE

Bloom's: Applying
Fox - Chapter 02 #4

5. The atomic nucleus does not contain _____, which are negatively charged subatomic particles.
A. protons
B. electrons
C. neutrons

Bloom's: Remembering
Fox - Chapter 02 #5

6. An element with 11 neutrons, 11 protons, and 11 electrons would have an atomic mass of __.
A. 11
B. 33
C. 22
D. cannot be determined

Bloom's: Applying
Fox - Chapter 02 #6

7. The _____ is the physical space which an electron occupies in an atom.
A. nucleus
B. orbital
C. energy level
D. Both orbital and energy level are correct.

Bloom's: Remembering
Fox - Chapter 02 #7

8. The _____ electrons are the outermost electrons of an atom.
A. kernel
B. valence
C. atomic
D. anion

Bloom's: Remembering
Fox - Chapter 02 #8

9. Isotopes have the same _____ number, but a different _____ number.
A. mass, atomic
B. neutron, mass
C. atomic, mass
D. atomic, proton

Bloom's: Remembering
Fox - Chapter 02 #9

10. Which of the following is NOT true of isotopes of a given atom?
A. have the same number of neutrons
B. have the same number of protons
C. have different atomic masses
D. All of these choices are correct.

Bloom's: Remembering
Fox - Chapter 02 #10

11. The term "chemical element" refers to the most common isotope of that element.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #11

12. Which of the following subatomic particles have negligible mass?
A. electrons
B. neutrons
C. protons
D. Both neutrons and protons.

Bloom's: Remembering
Fox - Chapter 02 #12

13. Molecules with polar covalent bonds are hydrophilic.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #13

14. Negatively charged ions will migrate toward the anode in an electrical field.
FALSE

Bloom's: Understanding
Fox - Chapter 02 #14

15. Hydrogen bonds form between the partially charged atoms of two polar molecules, such as the slightly negatively charged hydrogen atom of one water molecule and the slightly positively charged oxygen atom of another.
FALSE

Bloom's: Understanding
Fox - Chapter 02 #15

16. Atoms sharing a pair of electrons form covalent bonds.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #16

17. When an atom loses one or more electrons, it
A. becomes positively charged.
B. becomes negatively charged.
C. is called an anion.
D. has no change in its charge.

Bloom's: Understanding
Fox - Chapter 02 #17

18. When an atom gains one or more electrons, it
A. becomes positively charged.
B. has no change in its charge.
C. is called an anion.
D. is called a cation.

Bloom's: Remembering
Fox - Chapter 02 #18

19. An atom with 5 protons, 5 neutrons, and 6 electrons would have a net charge of
A. -1.
B. -2.
C. +1.
D. +2.

Bloom's: Understanding
Fox - Chapter 02 #19

20. _____ bonds are formed when atoms share electrons unequally.
A. Nonpolar covalent
B. Ionic
C. Polar covalent
D. van der Waals

Bloom's: Remembering
Fox - Chapter 02 #20

21. Hydration spheres can be formed by compounds which contain _____ bonds.
A. nonpolar covalent
B. polar covalent
C. ionic
D. either polar covalent or ionic

Bloom's: Understanding
Fox - Chapter 02 #21

22. Hydrophobic molecules would contain _____ bonds.
A. nonpolar covalent
B. polar covalent
C. hydrogen
D. ionic

Bloom's: Understanding
Fox - Chapter 02 #22

23. Surface tension between water molecules occurs because adjacent water molecules form _____ bonds with each other.
A. nonpolar covalent
B. polar covalent
C. hydrogen
D. ionic

Bloom's: Remembering
Fox - Chapter 02 #23

24. Bonds that are formed between oxygen and hydrogen atoms within water molecules are called
A. hydrogen bonds.
B. ionic bonds.
C. nonpolar covalent bonds.
D. polar covalent bonds.

Bloom's: Remembering
Fox - Chapter 02 #24

25. The type of bond found in sodium chloride is
A. an ionic bond.
B. a polar covalent bond.
C. a hydrogen bond.
D. a nonpolar covalent bond.

Bloom's: Understanding
Fox - Chapter 02 #25

26. Which of the following would be most easily broken?
A. a hydrogen bond
B. a nonpolar covalent bond
C. an ionic bond
D. a polar covalent bond

Bloom's: Understanding
Fox - Chapter 02 #26

27. The pH of a solution is directly proportional to the hydrogen ion concentration of the solution.
FALSE

Bloom's: Understanding
Fox - Chapter 02 #27

28. Acids release hydrogen ions into solutions.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #28

29. As the pH of the blood decreases, the amount of hydrogen ions in the blood would decrease.
FALSE

Bloom's: Understanding
Fox - Chapter 02 #29

30. Water molecules form _____ ions when they associate with a hydrogen ion.
A. hydroxide
B. bicarbonate
C. hydronium
D. water

Bloom's: Remembering
Fox - Chapter 02 #30

31. A solution of a pH above 7 is called _____.
A. acidic
B. neutral
C. basic

Bloom's: Remembering
Fox - Chapter 02 #31

32. Bases will _____ protons in a solution.
A. accept
B. donate
C. ignore
D. repel

Bloom's: Remembering
Fox - Chapter 02 #32

33. The primary buffer in the blood is the _____ buffer.
A. hydronium
B. ammonia
C. phosphate
D. bicarbonate

Bloom's: Remembering
Fox - Chapter 02 #33

34. The pH of a solution increases as the _____ ion concentration decreases.
A. hydrogen
B. hydroxide
C. bicarbonate
D. sodium

Bloom's: Understanding
Fox - Chapter 02 #34

35. In an acidic solution,
A. the OH^- ion concentration is greater than the H^+ ion concentration.
B. the OH^- ion concentration is less than the H^+ ion concentration.
C. the H^+ ion concentration is equal to the OH^- ion concentration.
D. the H^+ ion concentration is less than the OH^- ion concentration only if the solution is buffered.

Bloom's: Understanding
Fox - Chapter 02 #35

36. A blood pH of 7.6 is
A. indicative of acidosis.
B. indicative of alkalosis.
C. in the normal physiological range.
D. indicates effective buffering by the bicarbonate/carbonic acid system.

Bloom's: Understanding
Fox - Chapter 02 #36

37. Regarding acids and bases,
A. acids will increase the pH of a solution.
B. bases will decrease the pH of a solution.
C. acids will accept hydrogen ions in a solution.
D. bases will accept hydrogen ions in a solution.

Bloom's: Understanding
Fox - Chapter 02 #37

38. Ammonia usually
A. acts as a base.
B. acts as an acid.
C. acts as a buffer.
D. ionizes to form a hydroxyl ion.

Bloom's: Remembering
Fox - Chapter 02 #38

39. Organic acids contain carbonyl groups.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #39

40. Molecules that contain carbon and hydrogen atoms are
A. ionic.
B. inorganic.
C. organic.
D. carbonic.

Bloom's: Remembering
Fox - Chapter 02 #40

41. Only L-stereoisomers are absorbed by the digestive tract and used to synthesize organic molecules.
FALSE

Bloom's: Understanding
Fox - Chapter 02 #41

42. An ionized organic acid is designated with the suffix - ate.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #42

43. The ionized form of the organic lactic acid is lactate.
TRUE

Bloom's: Understanding
Fox - Chapter 02 #43

44. _____ are molecules with the same ratio of atoms but different arrangements of atoms.
A. Isotopes
B. Structural isomers
C. Stereoisomers
D. Radioactive isotopes

Bloom's: Remembering
Fox - Chapter 02 #44

45. How many single bonds can a carbon atom form if it is double-bonded to an oxygen atom?
A. 1
B. 2
C. 3
D. 4

Bloom's: Applying
Fox - Chapter 02 #45

46. A six-sided organic molecule with alternating double bonds is termed a(n)
A. aromatic compound.
B. ketone.
C. alcohol.
D. organic acid.

Bloom's: Remembering
Fox - Chapter 02 #46

47. Ketones contain a(n) _____ group within the carbon chain.
A. hydroxyl
B. carbonyl
C. carboxyl
D. aromatic

Bloom's: Remembering
Fox - Chapter 02 #47

48. Organic acids will contain
A. a carboxyl group.
B. a carbonyl group.
C. an amino group.
D. a hydroxyl group.

Bloom's: Remembering
Fox - Chapter 02 #48

49. An example of an aromatic substance is
A. hexane.
B. cyclohexane.
C. fructose.
D. benzene.

Bloom's: Remembering
Fox - Chapter 02 #49

50. Fats and carbohydrates are the primary energy stores in the body.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #50

51. Glucose, galactose, and fructose can be considered structural isomers of each other.
TRUE

Bloom's: Understanding
Fox - Chapter 02 #51

52. Fructose is a ketone.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #52

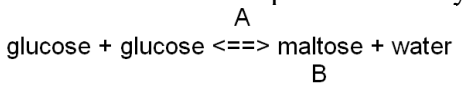
53. Covalent bonds are formed between monosaccharides through dehydration synthesis.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #53

54. The addition of water with the proper enzymes to a molecule is called
A. dehydration synthesis.
B. condensation.
C. hydrolysis.
D. combustion.

Bloom's: Remembering
Fox - Chapter 02 #54

55. Which reaction represents a dehydration synthesis reaction?



A. Reaction A
B. Reaction B

Bloom's: Understanding
Fox - Chapter 02 #55

56. Carbohydrate molecules have a ratio of twice as many oxygen atoms to carbon atoms.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #56

57. Sucrose is a disaccharide that is composed of _____ and _____.
A. glucose, glucose
B. glucose, galactose
C. glucose, fructose
D. fructose, galactose

Bloom's: Remembering
Fox - Chapter 02 #57

58. Glycogen
A. is more highly branched than plant starch.
B. is a glycoprotein found in the liver.
C. is a glycolipid found in skeletal muscles.
D. is composed of alternating glucose and galactose molecules.

Bloom's: Remembering
Fox - Chapter 02 #58

59. An example of a monosaccharide is
A. maltose.
B. sucrose.
C. glucose.
D. glycogen.

Bloom's: Remembering
Fox - Chapter 02 #59

60. Glucose is stored as a polysaccharide to prevent osmosis of water into the cells.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #60

61. Which of the following is NOT a disaccharide?
A. fructose
B. sucrose
C. maltose
D. lactose

Bloom's: Remembering
Fox - Chapter 02 #61

62. Which of the following polysaccharides cannot be digested by animals themselves?
A. glycogen
B. cellulose
C. starch
D. All of these can be digested by animals themselves.

Bloom's: Remembering
Fox - Chapter 02 #62

63. Unsaturated fatty acids contain more hydrogen atoms than saturated fatty acids of the same length.
FALSE

Bloom's: Understanding
Fox - Chapter 02 #63

64. Rapid, uncontrolled hydrolysis of body fats can result in ketoacidosis.
TRUE

Bloom's: Understanding
Fox - Chapter 02 #64

65. Corticosteroids are a type of lipid commonly found in cell membranes.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #65

66. Steroids are derived from cholesterol.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #66

67. In order to maintain proper health, total dietary fat intake should not exceed _____ of total dietary energy intake.
A. 10%
B. 20%
C. 30%
D. 40%

Bloom's: Remembering
Fox - Chapter 02 #67

68. Which of the following is NOT a type of lipid?
A. prostaglandins
B. triglycerides
C. cholesterol
D. glycogen

Bloom's: Remembering
Fox - Chapter 02 #68

69. Lipids containing glycerol would include _____ and _____.
A. triglycerides, steroids
B. prostaglandins, phospholipids
C. triglycerides, phospholipids
D. steroids, prostaglandins

Bloom's: Remembering
Fox - Chapter 02 #69

70. _____ are liver synthesized derivatives of free fatty acids that can be used as an immediate source of energy by many organs.
A. Glycerols
B. Ketone bodies
C. Steroids
D. Cholesterols

Bloom's: Remembering
Fox - Chapter 02 #70

71. _____ are fatty acids with a cyclic hydrocarbon group.
A. Triglycerides
B. Prostaglandins
C. Proteins
D. Carbohydrates

Bloom's: Remembering
Fox - Chapter 02 #71

72. This group of organic compounds acts as surfactants:
A. carbohydrates
B. phospholipids
C. nucleic acids
D. prostaglandins

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Fox - Chapter 02 #72

73. In the formation of triglycerides,
A. hydroxyl and carbonyl groups interact.
B. amino and carbonyl groups interact.
C. carboxyl and amino groups interact.
D. carboxyl and hydroxyl groups interact.

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Fox - Chapter 02 #73

74. Unsaturated fatty acids
A. contain one or more double bonds.
B. are usually liquid at room temperature.
C. contain a maximal number of hydrogen atoms.
D. Both contain one or more double bonds and are usually liquid at room temperature are correct.

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Fox - Chapter 02 #74

75. Phospholipids
A. are glycolipids originally isolated from the prostate gland.
B. are major components of the cell membrane.
C. have a polar head and a nonpolar tail.
D. Both are major components of the cell membrane and have a polar head and a nonpolar tail are correct.

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Fox - Chapter 02 #75

76. Ketosis
A. occurs when stored fats are rapidly degraded by the body.
B. stimulates an increased blood pH.
C. may lead to alkalosis.
D. occurs as the concentration of ketones in the urine decreases.

Bloom's: Understanding
Fox - Chapter 02 #76

77. Which of the following describes a trans-fat?
A. Has carbon-carbon single bonds.
B. Has carbon-carbon double bonds with hydrogens on opposite sides of the bonds.
C. Has carbon-carbon double bonds with hydrogens on the same side of the bonds.
D. The fatty acids form a bent chain.

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Fox - Chapter 02 #77

78. Which of the following is NOT true of steroids?
A. They have three 6-carbon rings joined to one 5-carbon ring.
B. They contain a variety of functional groups.
C. They are derived from palmitate.
D. They differ in the position of the double covalent bonds between the carbon atoms in the rings.

Bloom's: Remembering
Fox - Chapter 02 #78

79. Which of the following is NOT a derivative of cholesterol?
A. corticosteroids
B. vitamin D_3
C. aldosterone
D. lecithin

Bloom's: Remembering
Fox - Chapter 02 #79

80. All amino acids contain carboxyl and amino groups.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #80

81. The specific sequence of amino acids in a polypeptide is known as the primary protein structure.
TRUE

Bloom's: Remembering
Fox - Chapter 02 #81

82. The white part of a cooked egg is due to denatured albumin proteins.
TRUE

Bloom's: Understanding
Fox - Chapter 02 #82

83. _____ is a structural protein found in tendons and ligaments.
A. Collagen
B. Keratin
C. Myosin
D. Fibrin

Bloom's: Remembering
Fox - Chapter 02 #83

84. Peptide bonds are formed by the process of
A. ketosis.
B. hydrolysis.
C. dehydration synthesis.
D. aromatization.

Bloom's: Understanding
Fox - Chapter 02 #84

85. The secondary structure of proteins is/are
A. the linear arrangement of amino acids in the molecule.
B. alpha helix coils and beta-pleated sheet folds of a protein strand.
C. due to the interaction between protein subunits.
D. stabilized when a protein is denatured.

Bloom's: Remembering
Fox - Chapter 02 #85

86. The primary structure of proteins is/are
A. the linear arrangement of amino acids in the molecule.
B. alpha helix coils and beta-pleated sheet folds of a protein strand.
C. due to the interaction between protein subunits.
D. stabilized when a protein is denatured.

Bloom's: Remembering
Fox - Chapter 02 #86

87. The subunit of protein is the
A. fatty acid.
B. nucleic acid.
C. amino acid.
D. carboxylic acid.

Bloom's: Remembering
Fox - Chapter 02 #87

88. How many different amino acids are known?
A. 10
B. 25
C. 30
D. 20

Bloom's: Remembering
Fox - Chapter 02 #88

89. What holds a protein in its tertiary structure?
A. hydrogen bonds between nearby amino acids
B. weak chemical bonds between widely spaced amino acids
C. disulfide bonds between sulfur groups on cysteines
D. Both weak chemical bonds between widely spaced amino acids and disulfide bonds between sulfur groups on cysteines are correct.

Bloom's: Remembering
Fox - Chapter 02 #89

90. Proteins that combine with other molecules are said to be condensed.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #90

91. The specific shape of a protein determines its function.
TRUE

Bloom's: Understanding
Fox - Chapter 02 #91

92. A protein that is combined with another type of molecule like a carbohydrate is
A. conjugated.
B. denatured.
C. hydrolyzed.
D. complemented.

Bloom's: Remembering
Fox - Chapter 02 #92

93. Which of the following is NOT a function of proteins in the body?
A. carriers for membrane transport
B. enzymes
C. compose genes
D. receptors for regulator molecules

Bloom's: Understanding
Fox - Chapter 02 #93

94. Keratin and collagen are considered _____ proteins.
A. functional
B. structural
C. fibrous
D. Both structural and fibrous are correct.

Bloom's: Remembering
Fox - Chapter 02 #94

95. In DNA, cytosine forms a complementary base pair with adenine.
FALSE

Bloom's: Remembering
Fox - Chapter 02 #95

96. The nitrogenous base adenine is a
A. purine.
B. pyrimidine.
C. steroid.
D. prostaglandin.

Bloom's: Remembering
Fox - Chapter 02 #96

97. Which of the following is NOT a component of DNA?
A. phosphate
B. deoxyribose sugar
C. guanine
D. uracil

Bloom's: Remembering
Fox - Chapter 02 #97

98. The human genome refers to
A. all living human beings.
B. the total variations in human cells.
C. all of the genes in the cell.
D. human mutations caused by gene defects.

Bloom's: Remembering
Fox - Chapter 02 #98

99. The "spiral staircase" structure of DNA is referred to as the
A. tertiary structure.
B. spiral structure.
C. the double helix.
D. the twist of life.

Bloom's: Remembering
Fox - Chapter 02 #99

100. Which of the following is NOT one of the three types of RNA?
A. dRNA
B. tRNA
C. rRNA
D. mRNA

Bloom's: Remembering
Fox - Chapter 02 #100

101. The base that is NOT found in RNA is
A. thymine.
B. guanine.
C. cytosine.
D. uracil.

Bloom's: Remembering
Fox - Chapter 02 #101

102. Which of the following is NOT a difference between DNA and RNA?
A. They have different sugars.
B. RNA is a single strand, while DNA is a double strand.
C. DNA has thymine, while RNA has uracil.
D. They both can leave the nucleus to perform their functions.

Bloom's: Remembering
Fox - Chapter 02 #102

103. The backbone of a DNA molecule is a chain of
A. alternating deoxyribose sugar and phosphate.
B. alternating phosphate and nitrogen.
C. alternating nitrogenous bases.
D. alternating deoxyribose and ribose sugars.

Bloom's: Remembering
Fox - Chapter 02 #103

c2 Summary

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