Package Title: Test Bank
Course Title: Derrickson 1e
Chapter Number: 2

Question Type: Multiple Choice

1) An astronaut weighs less on the moon because

a) he has less mass
b) he has less matter
c) the force of gravity is less
d) the distance from the earth is less

Answer: c

Difficulty: Easy
Bloom's: Comprehension
Learning Objective: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

2) The lesser elements include

a) H
b) Ca
c) C
d) N

Answer: b

Difficulty: Easy
Bloom's: Knowledge
Learning Objective: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

3) An atom with 10 electrons would have

a) two shells, both full
b) two shells, first is full and second has ten openings
c) two shells, first is full and second has six openings
d) two shells, first is full and second has sixteen openings

Answer: a

Difficulty: Medium
Bloom's: Application

Learning Objective: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

4) What is the atomic number of an atom with 15 electrons, 15 protons, and 16 neutrons?

a) 16
b) 15
c) 31
d) 46

Answer: b

Difficulty: Easy
Bloom's: Knowledge
Learning Objective: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

5) How many neutrons does ^{37}Cl have, given an atomic number of 17?

a) 18
b) 17
c) 20
d) 37

Answer: c

Difficulty: Medium
Bloom's: Application
Learning Objective: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

6) Which of the following is a true statement about radioactive isotopes?

a) all have rapid decay times
b) all decay by losing neutrons, but remain the same element
c) all are unstable, decaying to more stable forms
d) the half-life refers to half the time required for complete decay

Answer: c

Difficulty: Easy
Bloom's: Comprehension
Learning Objective: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

Question type: Text entry

7) Chemical symbols are used to denote different _____; these are ordered in the periodic table based on the number of protons that they contain.

Answer: elements

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Learning Objective 2: LO 2.1.2 Describe the structures of atoms, ions, molecules, free radicals, and compounds.
Section Reference: 2.1 How Matter is Organized

8) The subatomic particles that are important in understanding most biological reactions include protons with positive charge, and _____ with no charge.

Answer: neutrons

Difficulty: Medium
Bloom's: Comprehension
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Learning Objective 2: LO 2.1.2 Describe the structures of atoms, ions, molecules, free radicals, and compounds.
Section Reference: 2.1 How Matter is Organized

9) The element _____ is the most plentiful anion in extracellular fluid.

Answer: chlorine

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Learning Objective 2: LO 2.1.2 Describe the structures of atoms, ions, molecules, free radicals, and compounds.
Section Reference: 2.1 How Matter is Organized

10) The ion _____ is the most plentiful cation in intracellular fluid.

Answer: potassium

Difficulty: Medium

Bloom's: Application
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Learning Objective 2: LO 2.1.2 Describe the structures of atoms, ions, molecules, free radicals, and compounds.
Section Reference: 2.1 How Matter is Organized

11) Molecules which share an atomic number but differ in number of neutrons are known as _____.

Answer: isotopes

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Learning Objective 2: LO 2.1.2 Describe the structures of atoms, ions, molecules, free radicals, and compounds.
Section Reference: 2.1 How Matter is Organized

Question type: Multiple choice

12) A sample is brought in for C-14 testing to determine its age. The scientist estimates that 1/8 of the C-14 has not yet decayed. Approximately how old is the sample?

a) 5,600 years
b) 112,000 years
c) 22,400 years
d) 16,800 years

Answer: d

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

13) Ionization occurs when an atom gains or loses

a) electrons
b) protons
c) neutrons
d) protons and neutrons

Answer: a

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

14) Free radicals are very reactive because they have an unpaired _____ that interacts with other molecules.

a) protons
b) electrons
c) neutrons
d) protons or electrons

Answer: b

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

15) How many atoms of oxygen are in a molecule of carbonic acid (H_2CO_3)?

a) 6
b) 1
c) 3
d) 2

Answer: c

Difficulty: Easy
Bloom's: Application
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

16) Select the molecule that is NOT a compound.

a) $CaCl_2$
b) H_2O
c) O_2
d) CH_4

Answer: C

Difficulty: Medium
Bloom's: Analysis

Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Section Reference: 2.1 How Matter is Organized

Question type: Text entry

17) _____ is another name for an atomic mass number, and one widely used to describe protein mass.

Answer: Dalton

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Learning Objective 2: LO 2.1.1 Identify the main chemical elements of the human body.
Section Reference: 2.1 How Matter is Organized

18) A molecule with an unpaired electron in the outermost shell is known as a/an _____ _____. These may contribute significantly to dementia, aging of cells, and even atherosclerosis.

Answer: free radical

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.1 Explain the organization of atoms, ions, molecules, and compounds in the human body.
Learning Objective 2: LO 2.1.2 Describe the structures of atoms, ions, molecules, free radicals, and compounds.
Section Reference: 2.1 How Matter is Organized

Question type: Multiple choice

19) An atom that will likely form a cation

a) has only one or two electrons in its valence shell
b) has six or seven electrons in its valence shell
c) has a valence shell that is half full
d) has a valence shell that is completely full

Answer: a

Difficulty: Medium
Bloom's: Analysis
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.

Section Reference: 2.2 Chemical Bonds

20) Select the atom that would most likely form an anion from the following.

a) Ca
b) K
c) F
d) Ca and K

Answer: c

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

21) Which of the following atoms could form a triple covalent bond?

a) C
b) Ca
c) O
d) H

Answer: a

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

Question type: Text entry

22) An ionic compound which breaks apart into positive and negative ions in solution is called a/an _____.

Answer: electrolyte

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

23) Covalent bonds where electron sharing is equal are more specifically termed _____ covalent bonds.

Answer: nonpolar

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

24) In polar covalent bonds, the element which has partial negative charge has greater _____ than the other atoms.

Answer: electronegativity

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

Question type: Multiple choice

25) In order for an atom to form a triple bond, it must

a) have at least three electrons in its valence shell
b) be missing at least three electrons from its valence shell
c) bind to an atom from a different element
d) have at least three electrons or be missing three electrons from its valence shell

Answer: d

Difficulty: Medium
Bloom's: Analysis
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

26) The molecule _____ has a polar covalent bond.

a) O_2
b) CH_4
c) N_2
d) CO_2

Answer: d

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

27) Short-term bonding between two molecules due to a temporary change in electron distribution is termed

a) ionic bonding
b) covalent bonding
c) van der Waals interaction
d) hydrogen bonding

Answer: c

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

28) Van der Waals interactions can be interrupted if

a) two molecules are too far apart
b) two molecules are too close
c) two molecules are already using hydrogen bonds
d) two molecules are too close or too far apart

Answer: d

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.2 Explain the importance of chemical bonds to reactions in the human body.
Section Reference: 2.2 Chemical Bonds

29) For the chemical reaction $2NH_3 \rightarrow N_2 + \_\_\_ H_2$, how many H_2 molecules will be produced for every two NH_3 that react?

a) 2
b) 3
c) 1
d) It depends on how many N_2 are formed.

Answer: b

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.3 Identify the types of chemical reactions that occur in the human body.
Section Reference: 2.3 Chemical Reactions

30) According to the law of mass action, if the concentration of CO_2 decreases in the reaction $CO_2 + H_2O \leftarrow \rightarrow H_2CO_3$, then

a) the reaction rate in the forward direction will increase
b) the reaction rate in the reverse direction will increase
c) the equilibrium will be disrupted
d) the equilibrium will be disrupted and the reaction rate in the reverse direction will increase

Answer: d

Difficulty: Hard
Bloom's: Synthesis
Learning Objective 1: LO 2.3 Identify the types of chemical reactions that occur in the human body.
Section Reference: 2.3 Chemical Reactions

31) Water is an excellent solvent for substances

a) that are held together by ionic bonds
b) that are held together by non-polar covalent bonds
c) that are hydrophobic
d) that form bonds by sharing electrons equally

Answer: a

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

32) Fill in the terms to make this sentence correct: When the _____ is dissolved into the _____, it forms a _____.

a) solution; solute; solvent
b) solute; solvent; solution
c) solvent; solution; solute
d) solute; solution; solvent

Answer: b

Difficulty: Easy
Bloom's: Comprehension

Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

33) Many ions are dissolved in the plasma of the blood. In this case the ions are the

a) solvent
b) solution
c) solute
d) solvent and solution

Answer: c

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

34) You are given an unknown liquid that mixes well with oil. From this, you determine that

a) the liquid would also mix well with water
b) the liquid would be a good solvent for salts
c) the liquid is likely hydrophilic
d) the liquid is likely hydrophobic
e) the liquid is likely hydrophilic, meaning it will mix well with water and is a good solvent for salts

Answer: d

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

Question type: Text entry

35) When a chemical reaction is at _____ _____, the rate of forward and reverse reactions are equal.

Answer: chemical equilibrium

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.3 Identify the types of chemical reactions that occur in the human body.
Learning Objective 2: LO 2.3.1 Define a chemical reaction.
Section Reference: 2.3 Chemical Reactions

36) Compounds which lack carbon molecules, and usually, complexity, are _____ compounds.

Answer: inorganic

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

37) Organic compounds must at a minimum contain the element _____.

Answer: carbon

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

38) When colute particles are large enough to scatter light, the liquid is technically a/an _____; this differs from a suspension where particles may precipitate.

Answer: colloid

Difficulty: Hard
Bloom's: Evaluation
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Learning Objective 2: LO 2.4.2 Distinguish among solutions, colloids, and suspensions.
Section Reference: 2.4 Inorganic Compounds and Solutions

39) Concentration of a solution is expressed by _____ when the units refer to number of moles of solute per liter of solution.

Answer: molarity

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Learning Objective 2: LO 2.4.2 Distinguish among solutions, colloids, and suspensions.
Section Reference: 2.4 Inorganic Compounds and Solutions

Question type: Multiple choice

40) Sweating cools the body because

a) the water in the sweat is cooler than the body temperature
b) the salts in the sweat utilize the energy in body heat to dissociate
c) the water in sweat uses a large amount of body heat to evaporate
d) water has a low heat of vaporization, which means the water is cooler when it evaporates

Answer: c

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

41) When water levels in the body decrease below normal, one would have

a) more difficulty maintaining body temperature
b) lower heat of vaporization
c) more lubrication at joints
d) a higher heat capacity

Answer: a

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

42) You are given a sample of a cloudy liquid and set it on the desk. A few minutes later, you notice a layer of something on the bottom and the liquid appears to be clearing. Based on your observations, you can say with certainty that this sample is a

a) solution
b) colloid
c) suspension
d) solution and suspension

Answer: c

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

43) A 100 mM solution of $CaCl_2$ has _____ mEq/L

a) 100
b) 200
c) 300
d) 400

Answer: d

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

44) A 20% glucose solution can be made by adding

a) 20 moles of glucose to enough water to make 1 L
b) 20 moles of glucose to enough water to make 100 ml
c) 20 grams of glucose to enough water to make 1 L
d) 20 grams of glucose to enough water to make 100 ml

Answer: d

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

45) A sample of body fluid has a pH of 7.0. You can determine from this that

a) the fluid is in a state of acidosis
b) the fluid is in a state of alkalosis
c) the fluid is the appropriate pH because all body fluids are neutral
d) the fluid may be appropriate or acidic compared to normal values, depending upon what type of fluid it is (blood, urine, etc)

Answer: d

Difficulty: Medium
Bloom's: Analysis
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

46) Buffers play a role in maintaining pH by

a) absorbing excess H^+
b) releasing additional H^+
c) destroying excess H^+
d) absorbing or releasing H^+

Answer: d

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.4 Explain the functions of inorganic compounds and solutions in the human body.
Section Reference: 2.4 Inorganic Compounds and Solutions

47) What properties of carbon make it such a good atom to help form organic molecules?

a) it forms covalent bonds
b) it can bind with many other elements
c) it can form a variety of structures (straight, branched…)
d) it can form covalent bonds with a large variety of elements to form a wide range of structures

Answer: d

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

48) When two biological monomers join together, it is termed dehydration synthesis because

a) it must occur in a dry environment
b) a water molecule is released from each monomer
c) a water molecule is produced by the reaction
d) other molecules in the area are dehydrated by the reaction

Answer: c

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

49) These two functional groups are always found on the monomers of a protein.

a) carboxyl and amino
b) hydroxyl and carbonyl
c) sulfhydryl and ester
d) phosphate and sulfhydryl

Answer: a

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

50) The reverse of dehydration synthesis is

a) dehydration lysis
b) dimerization
c) rehydration synthesis
d) hydrolysis

Answer: d

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

Question type: Text entry

51) Large molecules formed by covalent bonding of many identical or similar building-blocks are called _____.

Answer: polymers

Difficulty: Medium
Bloom's: Comprehension
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

52) _____ _____ is the reaction that joins two monomers.

Answer: Dehydration synthesis

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Learning Objective 2: LO 2.5.2 Identify the building blocks and functions of carbohydrates, lipids, proteins, and nucleic acids.
Section Reference: 2.5 Organic Compounds

53) Polymers are broken down to monomers by a type of reaction called _____; this requires the addition of water molecules.

Answer: hydrolysis

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

54) Cellulose is a polysaccharide, formed from _____ by plants.

Answer: glucose

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Learning Objective 2: LO 2.5.2 Identify the building blocks and functions of carbohydrates, lipids, proteins, and nucleic acids.
Section Reference: 2.5 Organic Compounds

55) The term _____ applies to phospholipids, and denotes molecules which have both polar and nonpolar regions.

Answer: amphipathic

Difficulty: Hard
Bloom's: Evaluation
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Learning Objective 2: LO 2.5.2 Identify the building blocks and functions of carbohydrates, lipids, proteins, and nucleic acids.
Section Reference: 2.5 Organic Compounds

Question type: Multiple choice

56) Sucrose is an example of

a) a carbohydrate
b) a disaccharide
c) an organic molecule
d) a disaccharide, carbohydrate, and organic molecule

Answer: d

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.

Section Reference: 2.5 Organic Compounds

57) Nutritionists are encouraging the public to consume less sugar, but there are many names for "sugar." Which of the following ingredients would not increase "sugar" levels in the blood.

a) dates
b) cellulose
c) maltose
d) lactose

Answer: b

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

58) A polyunsaturated fatty-acid will

a) have no double bonds and a maximum number of hydrogens
b) have at least two double bonds and fewer than maximum number of hydrogens
c) all double bonds and very few hydrogens
d) be solid at room temperature

Answer: b

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

59) What is the benefit of having glycogen stored in skeletal muscle?

a) It is linked to lots of water, so it prevents dehydration.
b) Glycogen can easily be broken into glucose molecules, so a source of energy is very close.
c) The water stored in glycogen makes muscle cells appear larger, and therefore stronger.
d) The branching of glycogen helps link muscle fibers to each other.

Answer: b

Difficulty: Medium
Bloom's: Analysis
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

60) What is the correct arrangement of the phospholipid bilayer (two layers)?

a) tails together with polar heads facing out
b) heads together with non-polar tails facing out
c) polar heads of one layer next to the tails of the next layer
d) It depends on the temperature. (At higher temperatures, more tails move to the outside of the layers.)

Answer: a

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

61) Lipids have many functions in the body, but NOT

a) aiding in inflammatory reactions
b) regulating sexual functions
c) storing energy
d) forming nucleic acids

Answer: d

Difficulty: Easy
Bloom's: Knowledge
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

62) A patient's body is not effectively fighting off a bacterial infection. The type of protein that is most likely malfunctioning is

a) structural
b) regulatory
c) immunological
d) transport

Answer: c

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

63) A chain of twenty amino acids is termed a

a) dipeptide
b) tripeptide
c) peptide
d) polypeptide

Answer: d

Difficulty: Easy
Bloom's: Comprehension
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

64) Predict which combination of attributes will result in the highest percentage saturation of a group of proteins.

a) high affinity and low concentrations of ligand
b) low affinity and low concentrations of ligand
c) high affinity and high concentrations of ligand
d) low affinity and high concentrations of ligand

Answer: c

Difficulty: Medium
Bloom's: Analysis
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

65) A single type of ligand may fail to bind to a protein if complete _____ has been reached.

a) specificity
b) affinity
c) saturation
d) competition

Answer: c

Difficulty: Medium
Bloom's: Application
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Section Reference: 2.5 Organic Compounds

Question type: Text entry

66) Lipids derived from arachidonic acid are called _____.

Answer: eicosanoids

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.

Learning Objective 2: LO 2.5.2 Identify the building blocks and functions of carbohydrates, lipids, proteins, and nucleic acids.
Section Reference: 2.5 Organic Compounds

67) Alpha helix and beta sheet motifs in proteins are the level of _____ structure.

Answer: secondary

Difficulty: Medium
Bloom's: Comprehension
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Learning Objective 2: LO 2.5.2 Identify the building blocks and functions of carbohydrates, lipids, proteins, and nucleic acids.
Section Reference: 2.5 Organic Compounds

68) Cysteine is a critical amino acid component of many proteins because it is capable of forming very strong _____ bridges, which provides very strong force to shape tertiary structure.

Answer: disulfide

Difficulty: Hard
Bloom's: Application
Learning Objective 1: LO 2.5 Explain the functions of organic compounds in the human body.
Learning Objective 2: LO 2.5.2 Identify the building blocks and functions of carbohydrates, lipids, proteins, and nucleic acids.
Section Reference: 2.5 Organic Compounds