

# Biology: Concepts and Connections, 6e (Campbell)

## Chapter 3

### The Molecules of Cells

#### Multiple-Choice Questions

- 1) Lactose intolerance is the inability to
- A) produce milk proteins.
  - B) produce lactose.
  - C) digest cellulose.
  - D) digest lactose.
  - E) digest milk fats.

Answer: D

Topic: Opening Essay

Skill: Factual Recall



...Together At Work

- 2) Lactose intolerance
- A) is common in people of all ages, from infancy to adulthood.
  - B) is most common in people of European descent.
  - C) can currently be treated by gene therapy to treat the underlying cause.
  - D) does not affect the consumption of beverages made from soy or rice.
  - E) is a fatal disease with no known treatment.

Answer: D

Topic: Opening Essay

Skill: Factual Recall

- 3) Organic compounds
- A) always contain nitrogen.
  - B) are synthesized only by animal cells.
  - C) always contain carbon.
  - D) can be synthesized only in a laboratory.
  - E) always contain oxygen.

Answer: C

Topic: 3.1

Skill: Factual Recall



- 4) Which of the following statements regarding carbon is *false*?
- A) Carbon has a tendency to form covalent bonds.
  - B) Carbon has the ability to bond with up to four other atoms.
  - C) Carbon has the capacity to form single and double bonds.
  - D) Carbon has the ability to bond together to form extensive, branched, or unbranched "carbon skeletons."

E) Carbon has the capacity to form polar bonds with hydrogen.

Answer: E

Topic: 3.1

Skill: Factual Recall

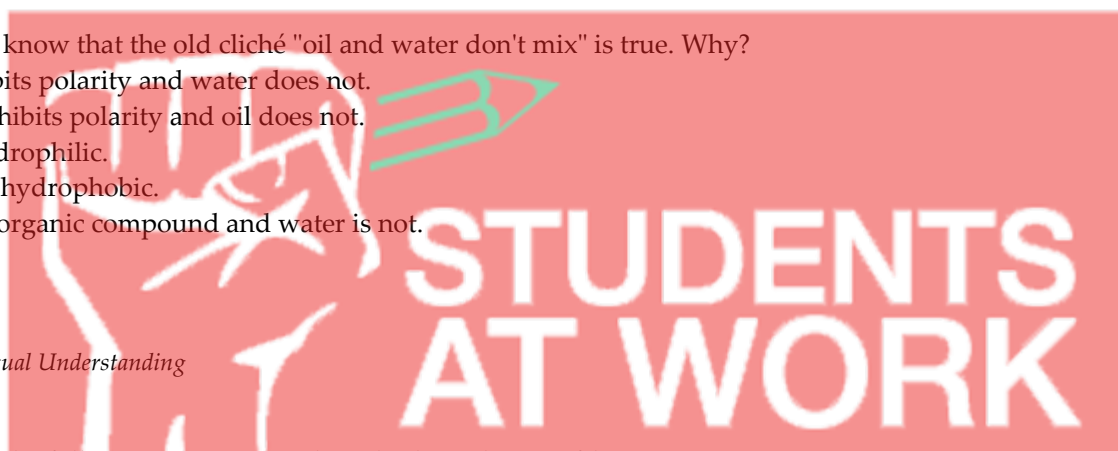
5) You now know that the old cliché "oil and water don't mix" is true. Why?

- A) Oil exhibits polarity and water does not.
- B) Water exhibits polarity and oil does not.
- C) Oil is hydrophilic.
- D) Water is hydrophobic.
- E) Oil is an organic compound and water is not.

Answer: B

Topic: 3.1

Skill: Conceptual Understanding



6) Which of the following statements about hydrocarbons is *false*?

- A) Hydrocarbons are inorganic compounds.
- B) Hydrocarbons are composed of a linked chain of carbon atoms, called a carbon skeleton.
- C) Hydrocarbons contain only carbon and hydrogen atoms.
- D) Hydrocarbons consist of atoms linked by single and double bonds.
- E) Hydrocarbons can form straight, branched or ringed structures.

Answer: A

Topic: 3.1

Skill: Factual Recall

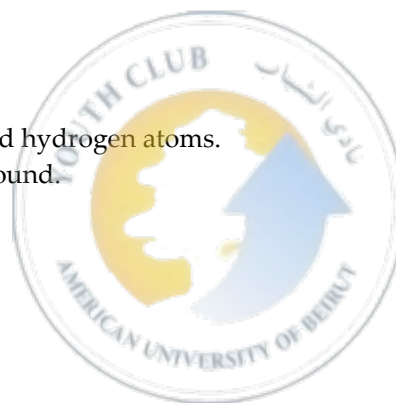
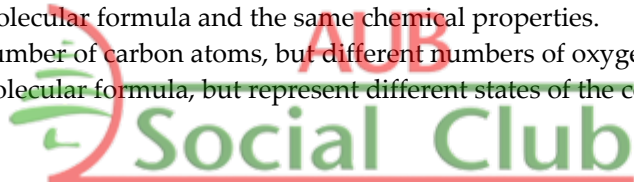
7) Propanol and isopropanol are isomers. This means that they have

- A) the same molecular formula, but different chemical properties.
- B) different molecular formulas, but the same chemical properties.
- C) the same molecular formula and the same chemical properties.
- D) the same number of carbon atoms, but different numbers of oxygen and hydrogen atoms.
- E) the same molecular formula, but represent different states of the compound.

Answer: A

Topic: 3.1

Skill: Factual Recall "Providing AUB Students with a Better Campus Life"



8) A hydroxyl group is

- A) also called a carbonyl group.
- B) characteristic of proteins.
- C) hydrophobic.
- D) characteristic of alcohols.
- E) basic.

Answer: D

Topic: 3.2

Skill: Factual Recall

9) Which of the following is a carboxyl group?

- A)  $\square$ C $\square$ O
- B)  $\square$ OH
- C)  $\square$ NH<sub>2</sub>
- D)  $\square$ COOH
- E)  $\square$ SH

Answer: C

Topic: 3.2

Skill: Factual Recall

10) Which of the following is an amino group?

- A)  $\square$ OH
- B)  $\square$ NH<sub>2</sub>
- C)  $\square$ COOH
- D)  $\square$ CO
- E)  $\square$ CH<sub>3</sub>

Answer: B

Topic: 3.2

Skill: Factual Recall



11) Which of the following statements about the functional groups of organic compounds is *false*?

- A) Functional groups help make organic compounds hydrophilic.
- B) Many biological molecules have two or more functional groups.
- C) Functional groups participate in chemical reactions.
- D) All functional groups include a carbon atom of the organic compound's skeleton.
- E) Functional groups help make organic compounds soluble in water.

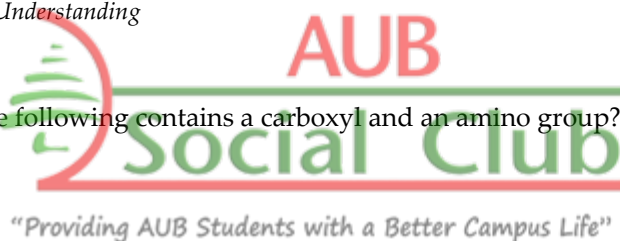
Answer: D

Topic: 3.2

Skill: Conceptual Understanding

12) Which of the following contains a carboxyl and an amino group?

- A) amino acids
- B) fats
- C) sugars
- D) ATP
- E) vinegar



Answer: A

Topic: 3.2

Skill: Factual Recall

13) Which of the following functional groups is capable of regulating gene expression?

- A)  $\square$ OH
- B)  $\square$ NH<sub>2</sub>
- C)  $\square$ COOH

- D)  $\square$ CO  
E)  $\square$ CH<sub>3</sub>

Answer: E

Topic: 3.2

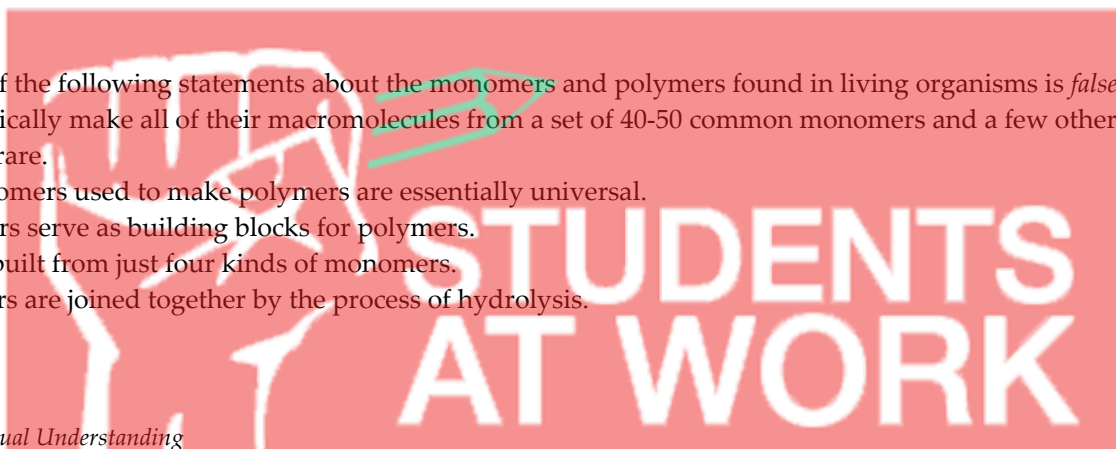
Skill: Factual Recall

- 14) Which of the following statements about the monomers and polymers found in living organisms is *false*?
- A) Cells typically make all of their macromolecules from a set of 40-50 common monomers and a few other ingredients that are rare.
- B) The monomers used to make polymers are essentially universal.
- C) Monomers serve as building blocks for polymers.
- D) DNA is built from just four kinds of monomers.
- E) Monomers are joined together by the process of hydrolysis.

Answer: E

Topic: 3.3

Skill: Conceptual Understanding



...Together At Work

- 15) Which of the following statements about dehydration synthesis is *false*?
- A) One monomer loses a hydrogen atom, and the other loses a hydroxyl group.
- B) Electrons are shared between atoms of the joined monomers.
- C) H<sub>2</sub>O is formed as the monomers are joined.
- D) Covalent bonds are formed between the monomers.
- E) Animal digestive systems utilize this process to break down food.

Answer: E

Topic: 3.3

Skill: Factual Recall

- 16) The results of dehydration synthesis can be reversed by
- A) condensation.
- B) hydrolysis.
- C) polymerization.
- D) the addition of an amino group.
- E) the addition of a phosphate group.

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Answer: B

Topic: 3.3

Skill: Factual Recall



- 17) Which list below consists of *only* polymers?
- A) sugars, amino acids, nucleic acids, lipids
- B) proteins, lipids, nucleic acids, amino acids
- C) proteins, lipids, nucleic acids, polysaccharides
- D) proteins, lipids, nucleotides, sugars
- E) polysaccharides, lipids, amino acids, nucleic acids

Answer: C

Topic: 3.3

Skill: Conceptual Understanding

18) What is the general function of enzymes within a cell?

- A) to promote the synthesis of monomers
- B) to induce chemical reactions
- C) to stop chemical reactions
- D) to speed up chemical reactions
- E) to reverse the direction of chemical reactions

Answer: D

Topic: 3.3

Skill: Factual Recall

19) The molecular formula of most monosaccharides represents a multiple of

- A)  $\text{CH}_3\text{O}$ .
- B)  $\text{CH}_2\text{O}$ .
- C)  $\text{CHO}$ .
- D)  $\text{CHO}_2$ .
- E)  $\text{CHO}_3$ .

Answer: B

Topic: 3.4

Skill: Factual Recall

20) A molecule with the formula  $\text{C}_{55}\text{H}_{110}\text{O}_{55}$  is probably a(n)

- A) oil.
- B) steroid.
- C) wax.
- D) protein.
- E) polysaccharide.

Answer: E

Topic: 3.4

Skill: Application



21) Many names for sugars end in the suffix

- A) -acid.
- B) -ose.
- C) -hyde.
- D) -ase.
- E) -ing.

Answer: B

Topic: 3.4

Skill: Factual Recall

- 22) Sucrose is formed
- from two glucose molecules.
  - from two monosaccharides through dehydration synthesis.
  - when ionic bonds link two monosaccharides.
  - when water molecules are added to two monosaccharides.
  - when glucose and lactose are combined.

Answer: B

Topic: 3.5

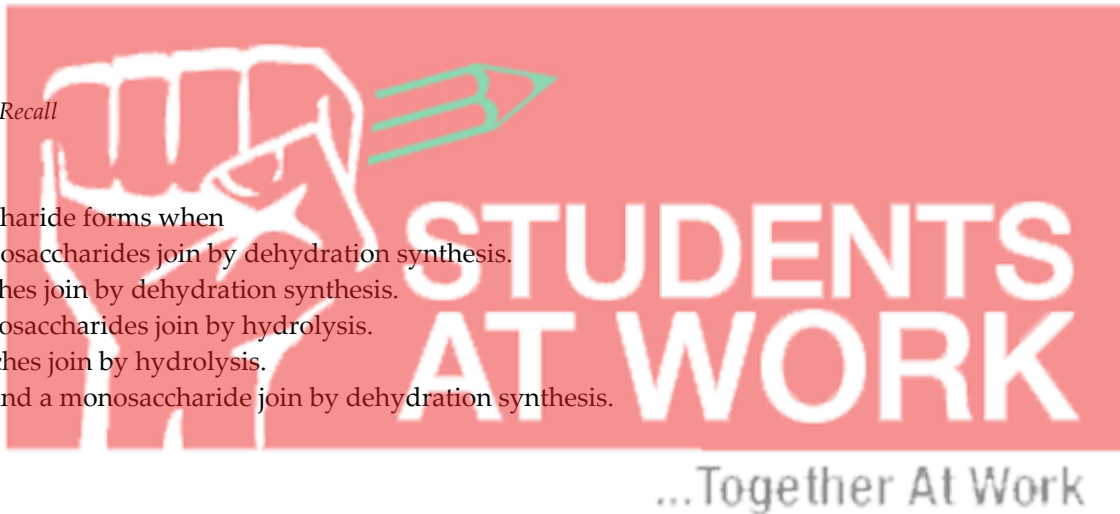
Skill: Factual Recall

- 23) A disaccharide forms when
- two monosaccharides join by dehydration synthesis.
  - two starches join by dehydration synthesis.
  - two monosaccharides join by hydrolysis.
  - two starches join by hydrolysis.
  - a starch and a monosaccharide join by dehydration synthesis.

Answer: A

Topic: 3.5

Skill: Factual Recall



- 24) High-fructose corn syrup is composed primarily of a polysaccharide called
- sucrose.
  - starch.
  - hydrocarbon.
  - cellulose.
  - lactose.

Answer: B

Topic: 3.6

Skill: Factual Recall

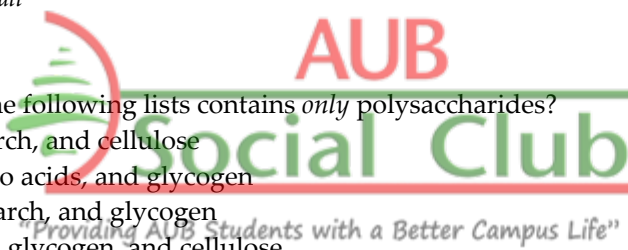
- 25) Which of the following lists contains *only* polysaccharides?

- sucrose, starch, and cellulose
- starch, amino acids, and glycogen
- cellulose, starch, and glycogen
- nucleotides, glycogen, and cellulose
- fructose, cellulose, and glucose

Answer: C

Topic: 3.7

Skill: Factual Recall



- 26) Cellulose differs from starch in that
- the monomers of cellulose are held together by covalent bonds, whereas the monomers of starch are held together by hydrogen bonds.
  - glycogen is formed by plants and cellulose by animals.
  - most animals cannot break down cellulose, whereas starch is easily digested.

- D) starch is made of glucose monomers, whereas cellulose is made of fructose monomers.  
 E) cellulose is highly branched, whereas starch is unbranched.

Answer: C

Topic: 3.7

Skill: Factual Recall

27) Foods that are high in fiber are most likely derived from

- A) plants.  
 B) dairy products.  
 C) red meats.  
 D) fish.  
 E) poultry.

Answer: A

Topic: 3.7

Skill: Conceptual Understanding



28) Cows can derive nutrients from cellulose because

- A) they produce the enzymes that break down cellulose.  
 B) they chew their food so thoroughly that cellulose fibers are broken down.  
 C) their intestinal tract contains cellulose-hydrolyzing microorganisms.  
 D) they convert cellulose into starch, which is easily broken down in the intestinal tract.  
 E) their intestinal tract contains termites, which can break down cellulose.

Answer: C

Topic: 3.7

Skill: Factual Recall

29) The storage form of carbohydrates is \_\_\_\_\_ in animals and \_\_\_\_\_ in plants.

- A) starch . . . glycogen  
 B) glycogen . . . starch  
 C) cellulose . . . glycogen  
 D) glycogen . . . cellulose  
 E) chitin . . . glycogen

Answer: B

Topic: 3.7

Skill: Factual Recall



30) Which of the following organisms contain the polysaccharide chitin?

- A) animals and plants  
 B) plants and bacteria  
 C) fungi and insects  
 D) insects and plants  
 E) crustaceans and bacteria

Answer: C

Topic: 3.7

Skill: Factual Recall

- 31) An oil may be converted into a substance that is solid at room temperature by
- A) adding hydrogens, decreasing the number of double bonds in the molecules.
  - B) removing water, causing a dehydration synthesis reaction to occur.
  - C) removing hydrogens, increasing the number of double bonds.
  - D) cooling it, so that double bonds form and the fats solidify.
  - E) adding water and shaking it vigorously.

Answer: A

Topic: 3.8

Skill: Application

- 32) A diet high in animal products and hydrogenated vegetable margarine may increase the risk for atherosclerosis. This is because
- A) most animal fats are unsaturated and most hydrogenated vegetable margarines contain high levels of steroids.
  - B) most hydrogenated vegetable margarines are hydrogenated oils and most animal products contain high levels of phospholipids.
  - C) most animal fats are used for energy storage and most hydrogenated vegetable margarines contain high levels of unsaturated fats.
  - D) most animal fats are saturated and many hydrogenated vegetable margarines contain high levels of trans fats.
  - E) most animal products contain high levels of unsaturated oils and most hydrogenated vegetable margarines contain anabolic steroids.

Answer: D

Topic: 3.8

Skill: Conceptual Understanding

- 33) Because water and oil don't mix, water is not very effective at washing away oily dirt. The ability of soap to mix with both water and oily dirt allows dirt to be washed away. Which statement provides the most logical chemical explanation for this phenomenon?
- A) Soap molecules have both positively and negatively charged regions. The positively charged regions are attracted to water; the negatively charged regions are attracted to oil.
  - B) Soap molecules have both positively and negatively charged regions. The negatively charged regions are attracted to water; the positively charged regions are attracted to oil.
  - C) Soap molecules carry no charge. As a result, soap can form an effective bridge between charged water molecules and neutral oil molecules.
  - D) Soap molecules have charged regions and neutral regions. The charged regions are attracted to water molecules; the neutral regions are attracted to oils.
  - E) Soap molecules have charged regions and neutral regions. The neutral regions are attracted to water molecules; the charged regions are attracted to oils.

Answer: D

Topic: 3.8

Skill: Application

- 34) Fatty acids are
- A) composed of carbon, hydrogen, and oxygen in a 1:2:1 ratio.
  - B) composed of carbon, hydrogen, glycerol, and a phosphate group.
  - C) hydrophobic.
  - D) composed of four linked rings.
  - E) components of DNA.



Answer: C

Topic: 3.8

Skill: Conceptual Understanding

35) Which of the following statements regarding triglyceride molecules is *false*?

- A) Triglycerides consist of three fatty acids attached to a glycerol.
- B) Triglycerides are hydrophobic.
- C) Triglycerides play a role in energy storage.
- D) Triglycerides are a type of fat.
- E) Triglycerides are part of a signal pathway.

Answer: E

Topic: 3.8

Skill: Factual Recall

36) Fatty acids with double bonds between some of their carbons are said to be

- A) unsaturated.
- B) saturated.
- C) completely hydrogenated.
- D) triglycerides.
- E) monoglycerides.

Answer: A

Topic: 3.8

Skill: Factual Recall

37) The development of atherosclerotic disease can result from a diet high in

- A) fiber.
- B) protein.
- C) saturated fats.
- D) sugars.
- E) complex carbohydrates.

Answer: C

Topic: 3.8

Skill: Application



38) If you were to add olive oil to your food as part of a diet to lower your risk of atherosclerotic disease, you would use olive oil that

- A) is liquid at room temperature.
- B) is hydrogenated.
- C) is modified to be solid at room temperature.
- D) has lard added to it.
- E) contains high levels of trans fats.

Answer: A

Topic: 3.8

Skill: Application

39) Which of the following statements about animal cell lipids is *false*?

- A) Fats are a form of lipid that function to store energy.
- B) Phospholipids are important components of cell membranes.
- C) Steroids are lipids that function as signaling molecules.
- D) Many lipids function as enzymes.
- E) Cholesterol is a type of lipid that is a component of cell membranes and steroid hormones.

Answer: D

Topic: 3.8, 3.9

Skill: Factual Recall

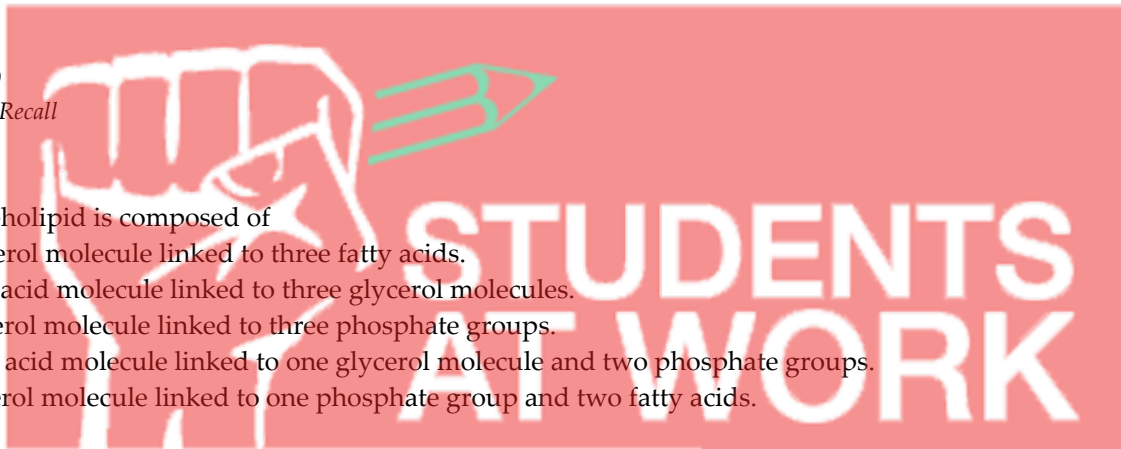
40) A phospholipid is composed of

- A) one glycerol molecule linked to three fatty acids.
- B) one fatty acid molecule linked to three glycerol molecules.
- C) one glycerol molecule linked to three phosphate groups.
- D) one fatty acid molecule linked to one glycerol molecule and two phosphate groups.
- E) one glycerol molecule linked to one phosphate group and two fatty acids.

Answer: E

Topic: 3.9

Skill: Factual Recall



41) Which of the following substances is a lipid?

- A) DNA
- B) glucose
- C) cellulose
- D) steroids
- E) enzymes

Answer: C

Topic: 3.9

Skill: Factual Recall

42) A major type of lipid found in cell membranes is

- A) cellulose.
- B) triglycerides.
- C) phospholipids.
- D) glycerol.
- E) waxes.



Answer: C

Topic: 3.9

Skill: Factual Recall

43) Which of the following statements about anabolic steroids is *false*?

- A) They cause a general buildup of muscle mass.
- B) They often cause the body to reduce its normal output of sex hormones.
- C) They chemically resemble testosterone.
- D) They promote bone growth.

E) They can stimulate mood swings and violent behavior.

Answer: D

Topic: 3.10

Skill: Factual Recall

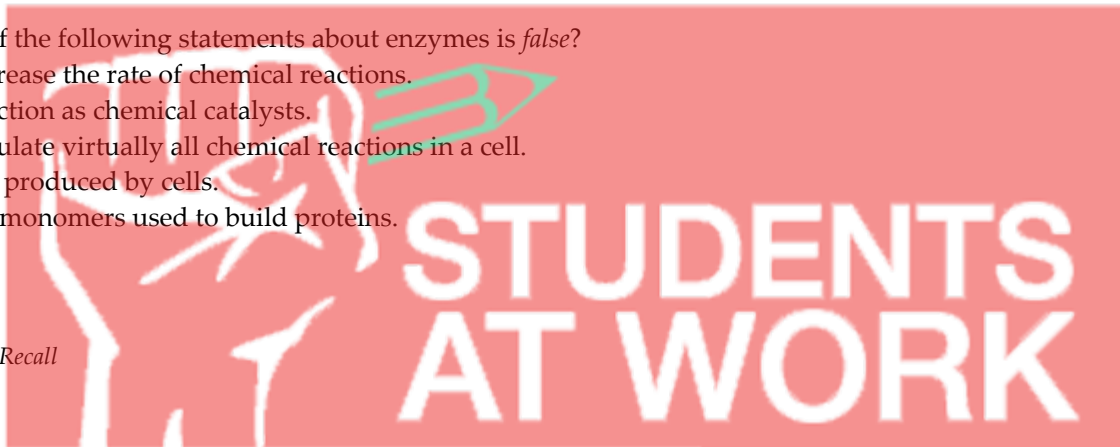
44) Which of the following statements about enzymes is *false*?

- A) They increase the rate of chemical reactions.
- B) They function as chemical catalysts.
- C) They regulate virtually all chemical reactions in a cell.
- D) They are produced by cells.
- E) They are monomers used to build proteins.

Answer: E

Topic: 3.11

Skill: Factual Recall



45) Which one of the following would be correctly classified as a protein?

- A) cholesterol
- B) starch
- C) enzymes
- D) cellulose
- E) liposaccharide

Answer: C

Topic: 3.11

Skill: Conceptual Understanding

46) Structural proteins

- A) include receptor molecules.
- B) respond to environmental changes.
- C) include hemoglobin.
- D) anchor cell parts.
- E) bond to hormones.

Answer: D

Topic: 3.11

Skill: Application



47) A scientist suspects that the food in an ecosystem may have been contaminated with radioactive nitrogen over a period of months. Which of the following substances could be examined for radioactivity to test the hypothesis?

- A) the cell walls of plants growing in the ecosystem
- B) the hair produced by humans living in the ecosystem
- C) the sugars produced during photosynthesis by plants growing in the ecosystem
- D) the cholesterol in the cell membranes of organisms living in the ecosystem
- E) the adipose tissue from animals living in the ecosystem

Answer: B

Topic: 3.11; 3.12

Skill: Application

- 48) Amino acids can be distinguished from one another by
- A) the number of R groups found on the amino acid molecules.
  - B) the chemical properties of their R groups.
  - C) the type of bond between the R group and the rest of the amino acid molecule.
  - D) the chemical properties of their amino and carboxyl groups.
  - E) the number of alpha carbons present in the amino acid molecules

Answer: B

Topic: 3.12

Skill: Factual Recall

- 49) Proteins differ from one another because
- A) the peptide bonds linking amino acids differ from protein to protein.
  - B) the sequence of amino acids in the polypeptide chain differs from protein to protein.
  - C) each protein contains its own unique sequence of sugar molecules.
  - D) the number of nucleotides found in each protein varies from molecule to molecule.
  - E) the number of nitrogen atoms in each amino acid varies.

Answer: B

Topic: 3.12

Skill: Conceptual Understanding

- 50) Glucose molecules are to starch as \_\_\_\_\_ are to proteins.

- A) oils
- B) amino acids
- C) fatty acids
- D) monosaccharides
- E) lards

Answer: B

Topic: 3.12

Skill: Conceptual Understanding

- 51) Peptide bonds
- A) are used to form amino acids.
  - B) form between fatty acids.
  - C) are formed by a hydrolysis reaction.
  - D) link amino acids.
  - E) bind monosaccharides.

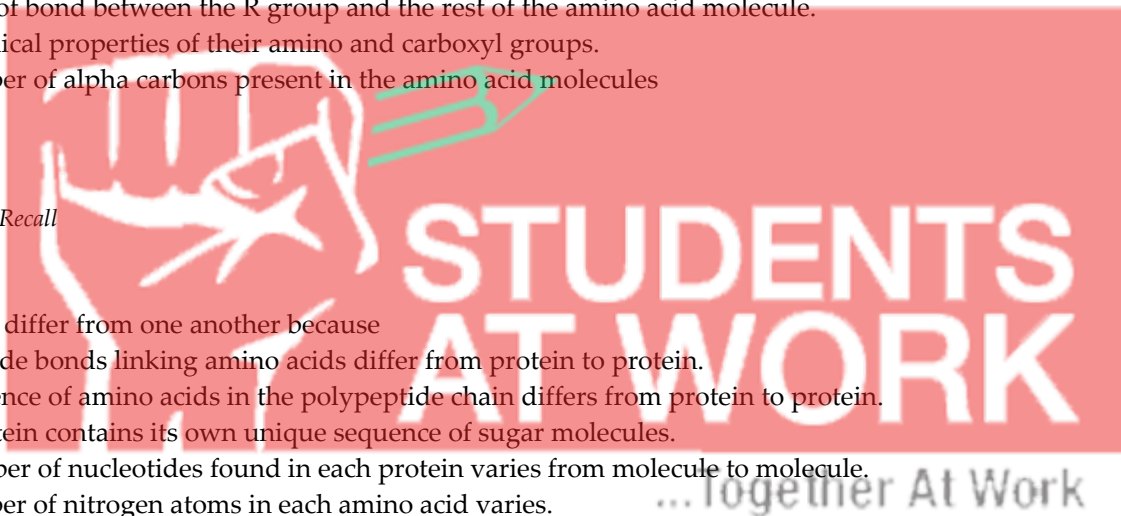
Answer: D

Topic: 3.12

Skill: Factual Recall

- 52) Which of the following characteristics of protein will remain intact if the protein is denatured?

- A) the shape of the protein



- B) the function of the protein
- C) the solubility of the protein in water
- D) the number of amino acids in the protein
- E) the binding properties of the protein

Answer: D

Topic: 3.13

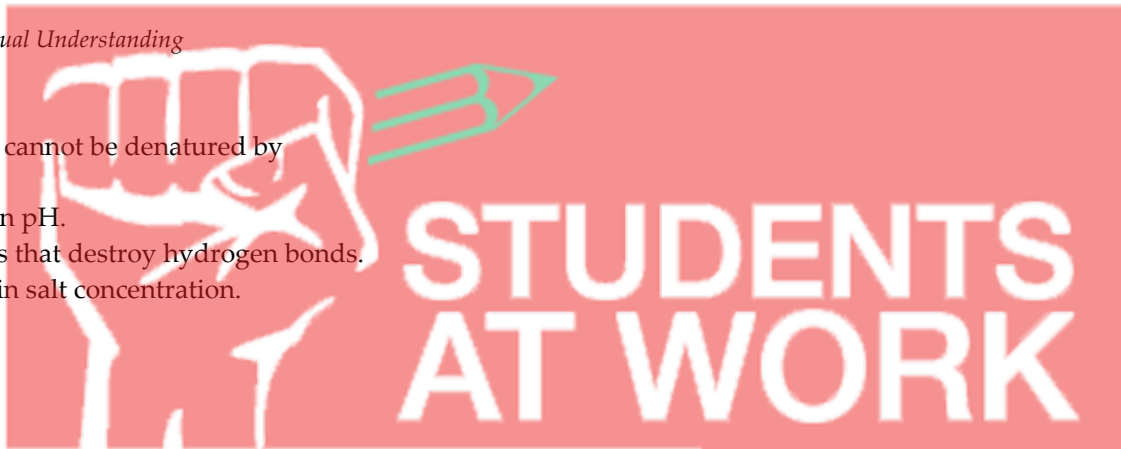
Skill: Conceptual Understanding

- 53) Proteins cannot be denatured by
- A) heat.
  - B) changes in pH.
  - C) chemicals that destroy hydrogen bonds.
  - D) changes in salt concentration.
  - E) freezing.

Answer: E

Topic: 3.13

Skill: Conceptual Understanding



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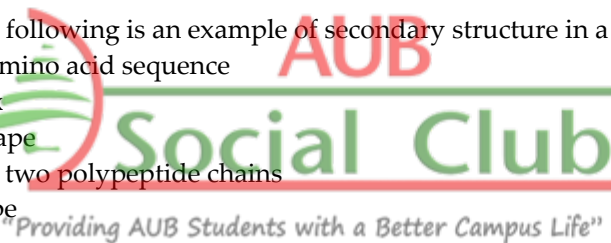
- 54) The primary structure of a protein is
- A) an  $\alpha$  helix or a pleated sheet.
  - B) the amino acid sequence of the polypeptide chain.
  - C) composed of two or more polypeptide chains.
  - D) maintained by hydrogen bonds.
  - E) composed of irregular folds.

Answer: B

Topic: 3.14

Skill: Factual Recall

- 55) Which of the following is an example of secondary structure in a protein?
- A) a particular amino acid sequence
  - B) an alpha helix
  - C) a globular shape
  - D) the joining of two polypeptide chains
  - E) a fibrous shape



Answer: B

Topic: 3.14

Skill: Factual Recall

- 56) The tertiary structure of a polypeptide refers to
- A) its size.
  - B) the presence of pleated sheets.
  - C) the amino acids of which it is made.
  - D) the overall three-dimensional structure.
  - E) the number of R groups it contains.

Answer: D

Topic: 3.14

Skill: Factual Recall

57) A protein containing more than one polypeptide chain exhibits the \_\_\_\_\_ level of protein structure.

- A) primary
- B) secondary
- C) tertiary
- D) quaternary
- E) infinite

Answer: D

Topic: 3.14

Skill: Factual Recall

58) Mad cow disease serves as an example of how interdependent \_\_\_\_\_ and \_\_\_\_\_ are to protein.

- A) solubility . . . texture
- B) form . . . construction
- C) structure . . . function
- D) adaptability . . . development
- E) validity . . . reliability

Answer: C

Topic: 3.14

Skill: Factual Recall

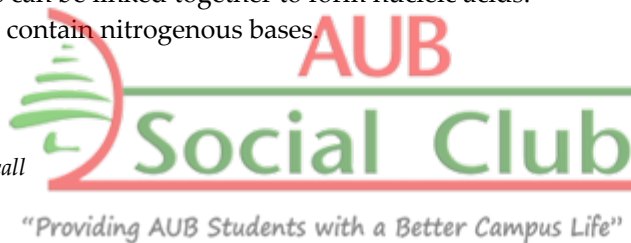
59) Which of the following statements regarding nucleotides is *false*?

- A) Nucleotides have a nitrogenous base backbone.
- B) Nucleotides contain sugar molecules.
- C) Nucleotides contain phosphate groups.
- D) Nucleotides can be linked together to form nucleic acids.
- E) Nucleotides contain nitrogenous bases.

Answer: A

Topic: 3.16

Skill: Factual Recall



60) Which of the following options correctly pairs a polymer and its monomer?

- A) cellulose, amino acids
- B) triglyceride, steroid
- C) DNA, nucleotides
- D) collagen, nucleic acids
- E) RNA, ribose

Answer: C

Topic: 3.16

Skill: Conceptual Understanding

- 61) DNA differs from RNA because DNA
- A) contains thymine in place of uracil.
  - B) consists of a single rather than a double polynucleotide strand.
  - C) contains the sugar ribose rather than the sugar deoxyribose.
  - D) contains phosphate groups not found in RNA.
  - E) is always double-stranded, while RNA is never double-stranded.

Answer: A

Topic: 3.16

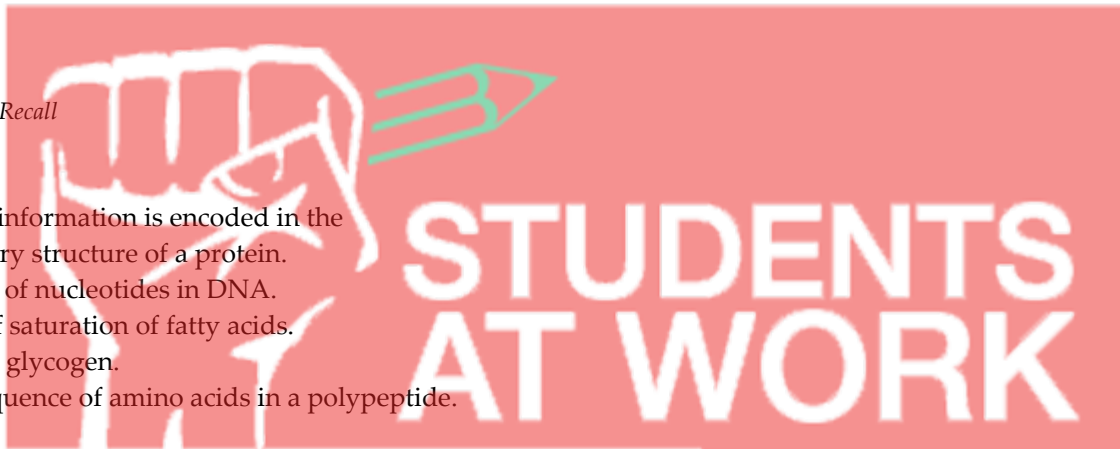
Skill: Factual Recall

- 62) Genetic information is encoded in the
- A) quaternary structure of a protein.
  - B) sequence of nucleotides in DNA.
  - C) degree of saturation of fatty acids.
  - D) length of glycogen.
  - E) linear sequence of amino acids in a polypeptide.

Answer: B

Topic: 3.16

Skill: Conceptual Understanding



- 63) You work for a company that manufactures food products. A new "wonder food" is being distributed by a rival company. The researchers in your company determine that the "wonder food" contains only carbon, oxygen, and hydrogen. At this point, your researchers can say with certainty that the food
- A) includes proteins.
  - B) includes nucleic acids.
  - C) could only be made of triglycerides.
  - D) could only be made of carbohydrates.
  - E) does not include proteins or nucleic acids.

Answer: E

Topic: 3.2, 3.12, 3.16

Skill: Application



- 64) In what part of the world did the mutation for lactose tolerance first appear?
- A) Eastern Asia
  - B) South America
  - C) Northern Europe
  - D) North America
  - E) Western Australia

Answer: C

Topic: 3.17-Evolution Connection

Skill: Factual Recall



- 65) Why did the lactose tolerance mutation in the East African herders spread so rapidly within the population?
- A) Milk provided calcium for strong bones.
  - B) It was a selective advantage for survival during droughts.

- C) Lactose was a better source of energy than glucose.
- D) Milk was a good source of protein during the winter.
- E) Milk from cows could be used to feed infants instead of breast milk.

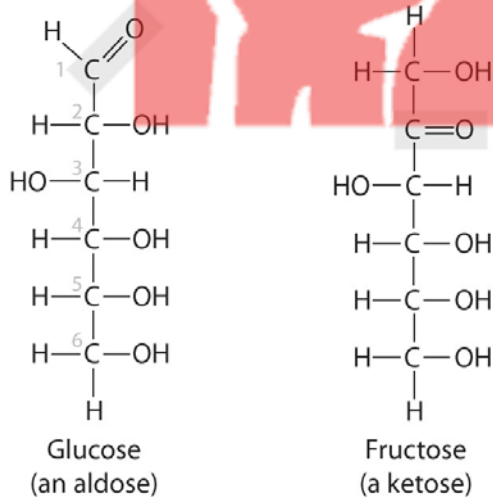
Answer: B

Topic: 3.17-Evolution Connection

Skill: Conceptual Understanding

### Art Questions

1)



# STUDENTS AT WORK

...Together At Work

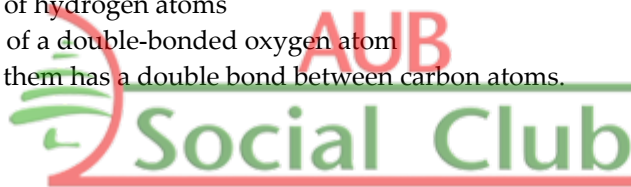
These two molecules are structural isomers. What is the difference between them?

- A) the number of carbon atoms
- B) the number of oxygen atoms
- C) the number of hydrogen atoms
- D) the location of a double-bonded oxygen atom
- E) Only one of them has a double bond between carbon atoms.

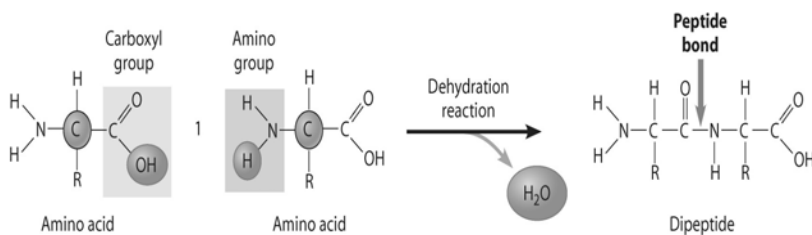
Answer: D

Topic: 3.1, 3.4

Skill: Application "Providing AUB Students with a Better Campus Life"



2)



How are these two amino acids attached together?

- A) amino group to amino group



- B) amino group to carboxylic acid group
- C) carboxylic acid group to carboxylic acid group
- D) carbon atom to carbon atom
- E) through a hydrolysis reaction

Answer: B

Topic: 3.12

Skill: Application

## Scenario Questions

After reading the following paragraph, answer the question(s) below.

You're the manager of a factory that produces enzyme-washed blue jeans (the enzymes lighten the color of the denim, giving a "faded" appearance). When the most recent batch of fabric came out of the enzyme wash, however, the color wasn't light enough to meet your standards. Your quality control laboratory wants to do some tests to determine why the wash enzymes didn't perform as expected.

...Together At Work

- 1) Which hypothesis is most likely to be productive for their initial investigation?
  - A) The nucleotide chain of the enzymes may be incorrectly formed.
  - B) The dye in the fabric may have hydrolyzed the fatty acids in the enzymes.
  - C) The polysaccharides in the enzymes may have separated in the wash water.
  - D) The three-dimensional structure of the proteins may have been altered.
  - E) There may not have been enough phospholipids for the volume of fabric.

Answer: D

Topic: 3.13

Skill: Factual Recall

2) Based on your understanding of enzyme structure, which of the following would you recommend that they also investigate?

- A) the temperature of the liquid in the washing vat
- B) the pH of the liquid in the washing vat
- C) the manufacturer of the fabric
- D) how long the fabric has been in storage
- E) the primary structure of the enzyme

Answer: A

Topic: 3.13

Skill: Conceptual Understanding

