

Student: _____

1. These are the smallest functional units of matter that form all chemical substances and that cannot be further broken down by ordinary chemical or physical means.
 - A. protons
 - B. neutrons
 - C. electrons
 - D. atoms
 - E. molecules
2. The atomic number of an atom is
 - A. the number of protons in the atom.
 - B. the number of neutrons in the atom.
 - C. the number of protons and electrons in the atom.
 - D. the number of protons and neutrons in the atom.
 - E. None of these choices are correct.
3. Which of the following represents the smallest functional unit of living organisms?
 - A. atoms
 - B. molecules
 - C. proteins
 - D. water
 - E. salt
4. Oxygen has an atomic mass of 16 and an atomic number of 8.
 - A. Oxygen has 16 neutrons.
 - B. Oxygen has 8 electrons.
 - C. Oxygen can form two bonds with other atoms.
 - D. Oxygen has 16 neutrons and 8 electrons.
 - E. Oxygen has 8 electrons and can form two bonds with other atoms.
5. The nucleus of an atom is composed of
 - A. protons.
 - B. neutrons.
 - C. electrons.
 - D. protons and neutrons.
 - E. protons and electrons.
6. Ernest Rutherford's key experiment on alpha particle bombardment of gold foil was important to the development of
 - A. detection methods for protons.
 - B. alpha particle emitters.
 - C. gold as an element.
 - D. the modern model for atomic structure.
 - E. the concept that atoms have a homogenous distribution of protons throughout the atom.
7. If a scientist were to shoot protons through an atom, for instance like Rutherford did with gold foil, he or she would likely find that
 - A. most of the protons passed straight through the atom.
 - B. few of the protons passed straight through the atom.
 - C. most of the protons deflected or bounced back from the atom.
 - D. most of the protons would be absorbed by the atom.
 - E. All of the choices are correct.

8. The first, inner-most energy shell of an atom
- A. can have a maximum of 8 electrons.
 - B. can have a maximum of 2 electrons.
 - C. is called the 2p orbital.
 - D. is called the 1s orbital and can have a maximum of 8 electrons.
 - E. is called the 2p orbital and can have a maximum of 2 electrons.
9. If carbon has an atomic mass of 12 and an atomic number of 6 then it has
- A. 6 electrons.
 - B. 12 electrons.
 - C. 18 electrons.
 - D. as many as 6 but no more than 12.
 - E. None of the choices are correct.
10. Tritiated hydrogen (^3H) differs from hydrogen (^1H) in that
- A. ^3H has 2 more protons than ^1H .
 - B. ^3H has 2 more electrons than ^1H .
 - C. ^3H has 2 more neutrons than ^1H .
 - D. ^3H has the same number of neutrons as ^1H .
 - E. ^3H has a different electron configuration than ^1H .
11. Isotopes are different forms of the same element that
- A. differ in their number of neutrons.
 - B. have the same numbers of protons.
 - C. are often used in medicine to track biological processes.
 - D. can be found in nature.
 - E. All the choices are correct.
12. Which of the following represents an abundant element found in living organisms?
- A. calcium.
 - B. iron.
 - C. iodine.
 - D. D.hydrogen.
 - E. sodium.
13. Nitrogen has 7 electrons and can form a maximum of _____ bonds with other elements.
- A. 1
 - B. 2
 - C. 3
 - D. 4
 - E. 5
14. Molecules
- A. are derived from the chemical bonding of two or more atoms.
 - B. differ in their physical properties from the atoms from which they were derived.
 - C. are important to biological processes.
 - D. can form from the covalent bonding of two or more atoms.
 - E. All the choices are correct.
15. Which of the following is NOT a molecule?
- A. H_2
 - B. H_2O
 - C. CH_4
 - D. O_2
 - E. H

16. Which of the following represents an ion?
- A. Ca^{2+}
 - B. He
 - C. H_2
 - D. CO_2
 - E. KCl
17. Carbon has 4 electrons and hydrogen has 1 electron in their outer most electron shells. How many bonds can form between a carbon atom and hydrogen atoms?
- A. 0
 - B. 1
 - C. 2
 - D. 3
 - E. 4
18. This is formed when an atom loses an electron to another atom.
- A. polar covalent bond
 - B. cations and anions that can form ionic bonds
 - C. covalent bond
 - D. hydrogen bond
 - E. nonpolar covalent bond
19. Which of the following chemical bonds is the strongest?
- A. hydrogen
 - B. Van der Waal forces
 - C. hydrophobic interactions
 - D. ionic
 - E. covalent
20. What type of bonding is likely to occur between two water molecules or strands of DNA?
- A. covalent
 - B. ionic
 - C. hydrogen
 - D. both hydrogen and covalent
 - E. both hydrogen and ionic
21. Carbon and hydrogen have similar electronegativities and combine together to form hydrocarbon molecules. What type of bonds form between these atoms?
- A. hydrogen
 - B. ionic
 - C. polar covalent
 - D. nonpolar covalent
 - E. electrostatic
22. What type of bonds form from the unequal sharing of electrons?
- A. hydrogen
 - B. ionic
 - C. polar covalent
 - D. nonpolar covalent
 - E. electrostatic
23. In water, MgCl_2 dissociates into Mg^{2+} and Cl^- . Based on this information what type of bond is involved in the formation of MgCl_2 ?
- A. hydrogen
 - B. ionic
 - C. polar covalent
 - D. nonpolar covalent
 - E. electrostatic

24. Which of the following is TRUE of a chemical reaction?
- A. It requires no energy.
 - B. It rarely occurs with a catalyst present.
 - C. It changes a substance from one form to another.
 - D. It is limited to only a few types of organisms.
 - E. They are usually irreversible.
25. When one oxygen atom shares two pairs of electrons with another oxygen atom, O₂ is formed via a(n)
- A. single covalent bond.
 - B. double covalent bond.
 - C. triple covalent bond.
 - D. ionic bond.
 - E. hydrogen bond.
26. Which of the following is LEAST hydrophilic?
- A. Na⁺
 - B. HCO₃⁻
 - C. oil
 - D. amphipathic molecules
 - E. CO₂**Error! Hyperlink reference not valid.**
27. Amphipathic molecules
- A. possess only hydrophilic properties.
 - B. possess only hydrophobic properties.
 - C. possess both hydrophilic and hydrophobic properties.
 - D. possess neither hydrophilic nor hydrophobic properties.
 - E. Tend not to interact with other molecules.
28. For water to vaporize
- A. energy must be supplied.
 - B. energy must be released.
 - C. hydrogen bonds are broken.
 - D. both energy must be supplied and hydrogen bonds broken.
 - E. both energy must be released and hydrogen bonds broken.
29. The molarity of a solution is
- A. a measure of solute concentration.
 - B. the weight of a solid substance.
 - C. often expressed as grams per unit volume.
 - D. reflects a measure of the amount of oil dissolved in a water.
 - E. a scientific term for determining the solubility of a substance in water.
30. Based on the colligative properties of water, what would happen if one were to add a solute to water?
- A. The freezing point of water would decrease.
 - B. The freezing point of water would increase.
 - C. The boiling point of water would increase.
 - D. Both the freezing point of water would decrease and the boiling point of water would increase.
 - E. Nothing would change with respect to the freezing point or boiling point of water.
31. Which of the following is *not* true of water?
- A. It is polar.
 - B. It has a high heat of vaporization.
 - C. It has cohesive properties.
 - D. Its evaporation helps regulate body temperature.
 - E. It is a relatively poor solvent.

32. If orange juice has a pH of 4 then
- A. the H^+ concentration is 4.
 - B. it is an acidic solution.
 - C. it is an alkaline solution.
 - D. it is an acidic solution with a H^+ concentration of 4.
 - E. None of these choices are correct.
33. pH buffers
- A. minimize fluctuations in the pH of solutions.
 - B. are usually weak acids and bases.
 - C. are common in biological fluids.
 - D. limit major shifts in the amount of H^+ and OH^- in solution.
 - E. All of the choices are correct.
34. If one were to add a strong acid like HCl to an aqueous solution, which would result?
- A. H^+ would be released into solution.
 - B. The pH would increase.
 - C. The pH would decrease.
 - D. Both H^+ would be released into solution and the pH would increase.
 - E. Both H^+ would be released into solution and the pH would decrease.
35. Which is true about a pH buffer?
- A. It increases the amount of H^+ in an acidic solution.
 - B. It reduces the amount of H^+ in an acidic solution.
 - C. It reduces the amount of H^+ in an alkaline solution.
 - D. It increases the amount of OH^- ions in an alkaline solution.
 - E. It reduces the amount of OH^- in an acidic solution.
36. Considering solutions with the following pH, which is alkaline?
- A. 8
 - B. 7
 - C. 6
 - D. 5
 - E. All are alkaline.
37. Which of the following is true when comparing solutions with a pH of 6 and a pH of 8?
- A. The solution with a pH of 8 has a 100 times higher concentration of hydrogen ions than a solution with a pH of 6.
 - B. The solution with a pH of 8 has a 2 times higher concentration of hydrogen ions than a solution with a pH of 6.
 - C. The solution with a pH of 8 has a 100 times lower concentration of hydrogen ions than a solution with a pH of 6.
 - D. The solution with a pH of 8 has a 2 times lower concentration of hydrogen ions than a solution with a pH of 6.
 - E. The hydrogen ion concentration does not appreciably differ between a solution with a pH of 8 versus that with a pH of 6.
38. One gram of hydrogen, which has an atomic mass of 1, would have fewer atoms than 1 gram of carbon that has an atomic mass of 12.
True False
39. Isotopes are different forms of the same element.
True False
40. Sulfur 35 (^{35}S) is an isotope of ^{32}S . These elements differ in their number of neutrons.
True False

41. Helium is an inert gas that rarely reacts with other elements because it has the maximum number of valence electrons in its outer shell.
True False
42. If lithium has an atomic number of 3 then it will have 1 valence electron.
True False
43. The electronegativity of an atom is a measure of its ability to attract electrons to its outer shell from another atom.
True False
44. Table salt forms from sodium and chloride via hydrogen bonding.
True False
45. Molecules are generally rigid structures and rarely change shape.
True False
46. The presence of salt helps prevent oceans from freezing.
True False
47. A dehydration reaction that builds larger molecules from smaller units requires the addition of a water molecule.
True False
48. The hydroxyl (OH^-) concentration of a solution with a pH of 8 would be 10^{-6} molar.
True False
49. Most enzymes or bioactive molecules work effectively within a broad range of pH.
True False
50. Buffers minimize fluctuations in the pH of a solution.
True False

ch02 Key

1. These are the smallest functional units of matter that form all chemical substances and that cannot be further broken down by ordinary chemical or physical means.
- A. protons
 - B. neutrons
 - C. electrons
 - D. atoms**
 - E. molecules

*Blooms Level: Remember
Brooker - Chapter 02 #1
Section: 2.01
Topic: Chemistry*

2. The atomic number of an atom is
- A. the number of protons in the atom.**
 - B. the number of neutrons in the atom.
 - C. the number of protons and electrons in the atom.
 - D. the number of protons and neutrons in the atom.
 - E. None of these choices are correct.

*Blooms Level: Remember
Brooker - Chapter 02 #2
Section: 2.01
Topic: Chemistry*

3. Which of the following represents the smallest functional unit of living organisms?
- A. atoms**
 - B. molecules
 - C. proteins
 - D. water
 - E. salt

*Blooms Level: Remember
Brooker - Chapter 02 #3
Section: 2.01
Topic: Chemistry*

4. Oxygen has an atomic mass of 16 and an atomic number of 8.
- A. Oxygen has 16 neutrons.
 - B. Oxygen has 8 electrons.
 - C. Oxygen can form two bonds with other atoms.
 - D. Oxygen has 16 neutrons and 8 electrons.
 - E. Oxygen has 8 electrons and can form two bonds with other atoms.**

*Blooms Level: Apply
Brooker - Chapter 02 #4
Section: 2.01
Topic: Chemistry*

5. The nucleus of an atom is composed of
- A. protons.
 - B. neutrons.
 - C. electrons.
 - D. protons and neutrons.**
 - E. protons and electrons.

*Blooms Level: Remember
Brooker - Chapter 02 #5
Section: 2.01
Topic: Chemistry*

6. Ernest Rutherford's key experiment on alpha particle bombardment of gold foil was important to the development of
- A. detection methods for protons.
 - B. alpha particle emitters.
 - C. gold as an element.
 - D.** the modern model for atomic structure.
 - E. the concept that atoms have a homogenous distribution of protons throughout the atom.

Blooms Level: Apply
Brooker - Chapter 02 #6
Section: 2.01
Topic: Chemistry

7. If a scientist were to shoot protons through an atom, for instance like Rutherford did with gold foil, he or she would likely find that
- A. most of the protons passed straight through the atom.
 - B. few of the protons passed straight through the atom.
 - C. most of the protons deflected or bounced back from the atom.
 - D.** most of the protons would be absorbed by the atom.
 - E. All of the choices are correct.

Blooms Level: Understand
Brooker - Chapter 02 #7
Section: 2.01
Topic: Chemistry

8. The first, inner-most energy shell of an atom
- A. can have a maximum of 8 electrons.
 - B.** can have a maximum of 2 electrons.
 - C. is called the 2p orbital.
 - D. is called the 1s orbital and can have a maximum of 8 electrons.
 - E. is called the 2p orbital and can have a maximum of 2 electrons.

Blooms Level: Understand
Brooker - Chapter 02 #8
Figure: 2.03
Section: 2.01
Topic: Chemistry

9. If carbon has an atomic mass of 12 and an atomic number of 6 then it has
- A.** 6 electrons.
 - B. 12 electrons.
 - C. 18 electrons.
 - D. as many as 6 but no more than 12.
 - E. None of the choices are correct.

Blooms Level: Understand
Brooker - Chapter 02 #9
Section: 2.01
Topic: Chemistry

10. Tritiated hydrogen (^3H) differs from hydrogen (^1H) in that
- A. ^3H has 2 more protons than ^1H .
 - B. ^3H has 2 more electrons than ^1H .
 - C.** ^3H has 2 more neutrons than ^1H .
 - D. ^3H has the same number of neutrons as ^1H .
 - E. ^3H has a different electron configuration than ^1H .

Blooms Level: Apply
Brooker - Chapter 02 #10
Section: 2.01
Topic: Chemistry

11. Isotopes are different forms of the same element that
- A. differ in their number of neutrons.
 - B. have the same numbers of protons.
 - C. are often used in medicine to track biological processes.
 - D. can be found in nature.
 - E.** All the choices are correct.

Blooms Level: Remember
Brooker - Chapter 02 #11
Section: 2.01
Topic: Chemistry

12. Which of the following represents an abundant element found in living organisms?
- A. calcium.
 - B. iron.
 - C. iodine.
 - D.** D.hydrogen.
 - E. sodium.

Blooms Level: Remember
Brooker - Chapter 02 #12
Section: 2.01
Topic: Chemistry

13. Nitrogen has 7 electrons and can form a maximum of _____ bonds with other elements.
- A. 1
 - B. 2
 - C.** 3
 - D. 4
 - E. 5

Blooms Level: Apply
Brooker - Chapter 02 #13
Section: 2.01
Topic: Chemistry

14. Molecules
- A. are derived from the chemical bonding of two or more atoms.
 - B. differ in their physical properties from the atoms from which they were derived.
 - C. are important to biological processes.
 - D. can form from the covalent bonding of two or more atoms.
 - E.** All the choices are correct.

Blooms Level: Understand
Brooker - Chapter 02 #14
Section: 2.02
Topic: Chemistry

15. Which of the following is NOT a molecule?
- A. H₂
 - B. H₂O
 - C. CH₄
 - D. O₂
 - E.** H

Blooms Level: Remember
Brooker - Chapter 02 #15
Section: 2.02
Topic: Chemistry

16. Which of the following represents an ion?
- A.** Ca²⁺
 - B. He
 - C. H₂
 - D. CO₂
 - E. KCl

Blooms Level: Remember
Brooker - Chapter 02 #16
Section: 2.02
Topic: Chemistry

17. Carbon has 4 electrons and hydrogen has 1 electron in their outer most electron shells. How many bonds can form between a carbon atom and hydrogen atoms?
- A. 0
 - B. 1
 - C. 2
 - D. 3
 - E. 4**

Blooms Level: Apply
Brooker - Chapter 02 #17
Section: 2.02
Topic: Chemistry

18. This is formed when an atom loses an electron to another atom.
- A. polar covalent bond
 - B. cations and anions that can form ionic bonds**
 - C. covalent bond
 - D. hydrogen bond
 - E. nonpolar covalent bond

Blooms Level: Remember
Brooker - Chapter 02 #18
Section: 2.02
Topic: Chemistry

19. Which of the following chemical bonds is the strongest?
- A. hydrogen
 - B. Van der Waal forces
 - C. hydrophobic interactions
 - D. ionic
 - E. covalent**

Blooms Level: Remember
Brooker - Chapter 02 #19
Section: 2.02
Topic: Chemistry

20. What type of bonding is likely to occur between two water molecules or strands of DNA?
- A. covalent
 - B. ionic
 - C. hydrogen**
 - D. both hydrogen and covalent
 - E. both hydrogen and ionic

Blooms Level: Remember
Brooker - Chapter 02 #20
Section: 2.02
Topic: Chemistry

21. Carbon and hydrogen have similar electronegativities and combine together to form hydrocarbon molecules. What type of bonds form between these atoms?
- A. hydrogen
 - B. ionic
 - C. polar covalent
 - D. nonpolar covalent**
 - E. electrostatic

Blooms Level: Understand
Brooker - Chapter 02 #21
Section: 2.02
Topic: Chemistry

22. What type of bonds form from the unequal sharing of electrons?
- A. hydrogen
 - B. ionic
 - C. polar covalent**
 - D. nonpolar covalent
 - E. electrostatic

Blooms Level: Remember
Brooker - Chapter 02 #22
Section: 2.02
Topic: Chemistry

23. In water, MgCl_2 dissociates into Mg^{2+} and Cl^- . Based on this information what type of bond is involved in the formation of MgCl_2 ?
- A. hydrogen
 - B. ionic**
 - C. polar covalent
 - D. nonpolar covalent
 - E. electrostatic

Blooms Level: Apply
Brooker - Chapter 02 #23
Section: 2.02
Topic: Chemistry

24. Which of the following is TRUE of a chemical reaction?
- A. It requires no energy.
 - B. It rarely occurs with a catalyst present.
 - C. It changes a substance from one form to another.**
 - D. It is limited to only a few types of organisms.
 - E. They are usually irreversible.

Blooms Level: Remember
Brooker - Chapter 02 #24
Section: 2.02
Topic: Chemistry

25. When one oxygen atom shares two pairs of electrons with another oxygen atom, O_2 is formed via a(n)
- A. single covalent bond.
 - B. double covalent bond.**
 - C. triple covalent bond.
 - D. ionic bond.
 - E. hydrogen bond.

Blooms Level: Remember
Brooker - Chapter 02 #25
Section: 2.02
Topic: Chemistry

26. Which of the following is LEAST hydrophilic?
- A. Na^+
 - B. HCO_3^-
 - C. oil**
 - D. amphipathic molecules
 - E. CO_2
- Error! Hyperlink reference not valid.Error! Hyperlink reference not valid.**

Blooms Level: Apply
Brooker - Chapter 02 #26
Section: 2.03
Topic: Chemistry

27. Amphipathic molecules
- A. possess only hydrophilic properties.
 - B. possess only hydrophobic properties.
 - C.** possess both hydrophilic and hydrophobic properties.
 - D. possess neither hydrophilic nor hydrophobic properties.
 - E. Tend not to interact with other molecules.

Blooms Level: Remember
Brooker - Chapter 02 #27
Section: 2.03
Topic: Chemistry

28. For water to vaporize
- A. energy must be supplied.
 - B. energy must be released.
 - C. hydrogen bonds are broken.
 - D.** both energy must be supplied and hydrogen bonds broken.
 - E. both energy must be released and hydrogen bonds broken.

Blooms Level: Understand
Brooker - Chapter 02 #28
Section: 2.03
Topic: Chemistry

29. The molarity of a solution is
- A.** a measure of solute concentration.
 - B. the weight of a solid substance.
 - C. often expressed as grams per unit volume.
 - D. reflects a measure of the amount of oil dissolved in a water.
 - E. a scientific term for determining the solubility of a substance in water.

Blooms Level: Remember
Brooker - Chapter 02 #29
Section: 2.03
Topic: Chemistry

30. Based on the colligative properties of water, what would happen if one were to add a solute to water?
- A. The freezing point of water would decrease.
 - B. The freezing point of water would increase.
 - C. The boiling point of water would increase.
 - D.** Both the freezing point of water would decrease and the boiling point of water would increase.
 - E. Nothing would change with respect to the freezing point or boiling point of water.

Blooms Level: Understand
Brooker - Chapter 02 #30
Section: 2.03
Topic: Chemistry

31. Which of the following is *not* true of water?
- A. It is polar.
 - B. It has a high heat of vaporization.
 - C. It has cohesive properties.
 - D. Its evaporation helps regulate body temperature.
 - E.** It is a relatively poor solvent.

Blooms Level: Understand
Brooker - Chapter 02 #31
Section: 2.03
Topic: Chemistry

32. If orange juice has a pH of 4 then
- A. the H^+ concentration is 4.
 - B.** it is an acidic solution.
 - C. it is an alkaline solution.
 - D. it is an acidic solution with a H^+ concentration of 4.
 - E. None of these choices are correct.

Blooms Level: Understand
Brooker - Chapter 02 #32
Section: 2.03
Topic: Chemistry

33. pH buffers
A. minimize fluctuations in the pH of solutions.
B. are usually weak acids and bases.
C. are common in biological fluids.
D. limit major shifts in the amount of H^+ and OH^- in solution.
E. All of the choices are correct.

Blooms Level: Remember
Brooker - Chapter 02 #33
Section: 2.03
Topic: Chemistry

34. If one were to add a strong acid like HCl to an aqueous solution, which would result?
A. H^+ would be released into solution.
B. The pH would increase.
C. The pH would decrease.
D. Both H^+ would be released into solution and the pH would increase.
E. Both H^+ would be released into solution and the pH would decrease.

Blooms Level: Apply
Brooker - Chapter 02 #34
Section: 2.03
Topic: Chemistry

35. Which is true about a pH buffer?
A. It increases the amount of H^+ in an acidic solution.
B. It reduces the amount of H^+ in an acidic solution.
C. It reduces the amount of H^+ in an alkaline solution.
D. It increases the amount of OH^- ions in an alkaline solution.
E. It reduces the amount of OH^- in an acidic solution.

Blooms Level: Understand
Brooker - Chapter 02 #35
Section: 2.03
Topic: Chemistry

36. Considering solutions with the following pH, which is alkaline?
A. 8
B. 7
C. 6
D. 5
E. All are alkaline.

Blooms Level: Remember
Brooker - Chapter 02 #36
Section: 2.03
Topic: Chemistry

37. Which of the following is true when comparing solutions with a pH of 6 and a pH of 8?
A. The solution with a pH of 8 has a 100 times higher concentration of hydrogen ions than a solution with a pH of 6.
B. The solution with a pH of 8 has a 2 times higher concentration of hydrogen ions than a solution with a pH of 6.
C. The solution with a pH of 8 has a 100 times lower concentration of hydrogen ions than a solution with a pH of 6.
D. The solution with a pH of 8 has a 2 times lower concentration of hydrogen ions than a solution with a pH of 6.
E. The hydrogen ion concentration does not appreciably differ between a solution with a pH of 8 versus that with a pH of 6.

Blooms Level: Understand
Brooker - Chapter 02 #37
Section: 2.03

38. One gram of hydrogen, which has an atomic mass of 1, would have fewer atoms than 1 gram of carbon that has an atomic mass of 12.
FALSE

Blooms Level: Understand
Brooker - Chapter 02 #38
Section: 2.01
Topic: Chemistry

39. Isotopes are different forms of the same element.

TRUE

*Blooms Level: Understand
Brooker - Chapter 02 #39
Section: 2.01
Topic: Chemistry*

40. Sulfur 35 (^{35}S) is an isotope of ^{32}S . These elements differ in their number of neutrons.

TRUE

*Blooms Level: Remember
Brooker - Chapter 02 #40
Section: 2.01
Topic: Chemistry*

41. Helium is an inert gas that rarely reacts with other elements because it has the maximum number of valence electrons in its outer shell.

TRUE

*Blooms Level: Understand
Brooker - Chapter 02 #41
Section: 2.02
Topic: Chemistry*

42. If lithium has an atomic number of 3 then it will have 1 valence electron.

TRUE

*Blooms Level: Understand
Brooker - Chapter 02 #42
Section: 2.02
Topic: Chemistry*

43. The electronegativity of an atom is a measure of its ability to attract electrons to its outer shell from another atom.

TRUE

*Blooms Level: Remember
Brooker - Chapter 02 #43
Section: 2.02
Topic: Chemistry*

44. Table salt forms from sodium and chloride via hydrogen bonding.

FALSE

*Blooms Level: Remember
Brooker - Chapter 02 #44
Section: 2.02
Topic: Chemistry*

45. Molecules are generally rigid structures and rarely change shape.

FALSE

*Blooms Level: Remember
Brooker - Chapter 02 #45
Section: 2.02
Topic: Chemistry*

46. The presence of salt helps prevent oceans from freezing.

TRUE

*Blooms Level: Apply
Brooker - Chapter 02 #46
Section: 2.03
Topic: Chemistry*

47. A dehydration reaction that builds larger molecules from smaller units requires the addition of a water molecule.

FALSE

*Blooms Level: Remember
Brooker - Chapter 02 #47
Section: 2.03
Topic: Chemistry*

48. The hydroxyl (OH^-) concentration of a solution with a pH of 8 would be 10^{-6} molar.

TRUE

*Blooms Level: Apply
Brooker - Chapter 02 #48
Section: 2.03
Topic: Chemistry*

49. Most enzymes or bioactive molecules work effectively within a broad range of pH.
FALSE

*Blooms Level: Understand
Brooker - Chapter 02 #49
Section: 2.03
Topic: Chemistry*

50. Buffers minimize fluctuations in the pH of a solution.
TRUE

*Blooms Level: Remember
Brooker - Chapter 02 #50
Section: 2.03
Topic: Chemistry*

ch02 Summary

<u>Category</u>	<u># of Questions</u>
Blooms Level: Apply	10
Blooms Level: Remember	24
Blooms Level: Understand	16
Brooker - Chapter 02	50
Figure: 2.03	1
Section: 2.01	16
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Topic: Chemistry	49