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Solution Properties Review

Choose the correct answer for each question.

[Show questions one by one](#)

- Breaking a solid into smaller pieces increases the rate of dissolving because
 - it increases the energy of the solution
 - it increases the temperature of the solution
 - it increases the pressure above the solution
 - it increases the surface area of the solute

- The dissolving medium in a solution is the:
 - mixture
 - solute
 - solvent
 - solution

- When a solid or gas dissolves easily in a liquid to form a solution, the solid or gas is said to be _____ in the liquid.
 - heterogeneous
 - endothermic
 - soluble
 - compatible

- Which of the following is an example of a nonelectrolyte in water solution?
 - salt

B. acid

C. sugar

D. base

5. A substance that dissolves in a water to form a solution that conducts an electric current is said to be an:

A. catalyst

B. electrolyte

C. heterogeneous solvent

D. nonelectrolyte

6. Of the following, which will increase the solubility of a gas in water?

A. decreasing the temperature and decreasing the pressure

B. increasing the temperature and the increasing the pressure

C. increasing the temperature and decreasing the pressure

D. decreasing the temperature and increasing the pressure

7. Which of the following will conduct an electric current?

A. alcohol in water

B. pure water

C. salt in water

D. sugar in water

8. Which of the following should most greatly increase the rate of dissolving of a salt in water?

A. Decreasing the temperature and stirring

B. Stirring and increasing the pressure

C. Increasing the pressure

D. Increasing the temperature and stirring

9. In a solution of ammonia gas in water:

A. both the ammonia and the water are solvents

B. both the ammonia and the water are solutes

C. the ammonia is the solute and water is the solvent

D. the water is the solute and ammonia is the solvent

10. The speed of solvent molecules can be slowed by:

A. Increasing the pressure

B. Increasing the surface area of the solute

C. Increasing the temperature

D. Decreasing the temperature

11. Naphthalene, a non-polar solid can be dissolved in benzene, a non-polar liquid. From this information, one can conclude that

A. naphthalene and benzene are both solutes

B. benzene is the solute, and naphthalene is the solvent

C. naphthalene is the solute, and benzene is the solvent

D. naphthalene and benzene are both solvents

12. In a solution of sugar and water:

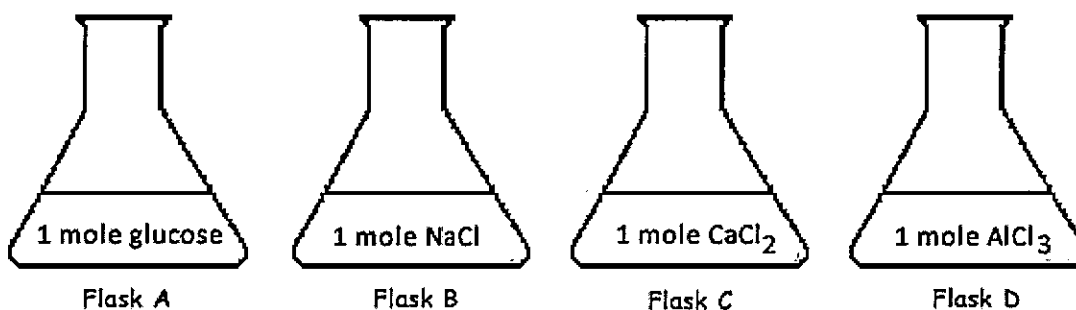
A. the water is the solute, and sugar is the solvent

B. both the sugar and the water are solvents

C. both the sugar and the water are solutes

D. the sugar is the solute, and the water is the solvent

- C. nonpolar solutes
- D. soluble in one another



17. Assume that the image above represents the given quantity of each substance dissolved in one liter of water. Which of the following statements is true?
- A. All of the solutions will freeze at 0°C
- B. All of the solutions will freeze at a temperature below 0°C
- C. Some solutions will freeze at a temperature below 0°C , and some of the solutions will freeze at a temperature above 0°C
- D. All of the solutions will freeze at a temperature above 0°C
-
18. Which of the following is least likely to produce a solution?
- A. A nonpolar solute in a nonpolar solvent
- B. A polar solute in a polar solvent
- C. An ionic solute in a polar solvent
- D. A nonpolar solute in a polar solvent
-
19. Increasing the temperature of a solution:
- A. decreases both the frequency and the energy of solute - solvent collisions
- B. increases the frequency of solute - solvent collisions, but decreases the energy of solute - solvent collisions
- C. decreases the frequency of solute - solvent collisions, but increases the energy of solute - solvent collisions
- D. increases both the frequency and the energy of solute - solvent collisions