Close Window

Key

Solution Properties Review

Choose the correct answer for each question.

Show questions one by one

1. The substance dissolved in a solution is the:

   A. ? solvent

   B. ? solute

   C. ? solution

   D. ? mixture

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2. 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 decreasing the pressure

   C. ? decreasing the temperature and increasing the pressure ← of the gaseous solute

   D. ? increasing the temperature and the increasing the pressure

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3. When a solute dissolves in water, it is expected to

   A. ? raise the freezing point and the boiling point of the water

   B. ? raise the freezing point and lower the boiling point of the water

   C. ? lower the freezing point and the boiling point of the water

   D. ? lower the freezing point and raise the boiling point of the water

"B.Pt Elevation"
"F.Pt Depression"

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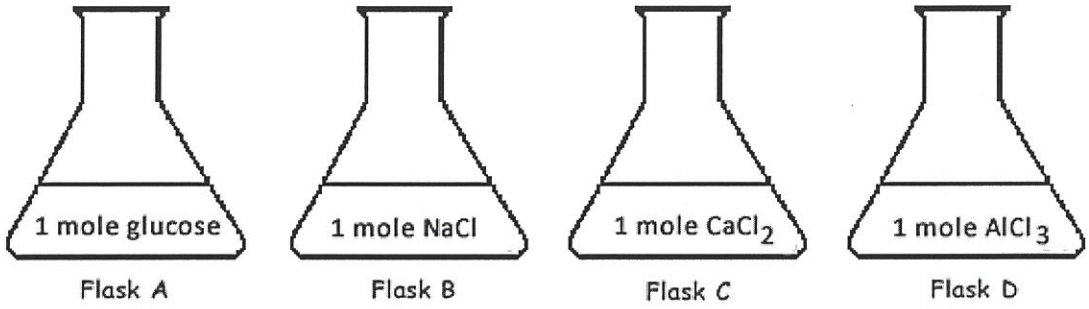
4. A homogeneous mixture of two or more substances is a:

   A. ? solvent

B. ? compound

C. ? solute

D. ? solution



5. 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. ? Some solutions will freeze at a temperature below 0°C, and some of the solutions will freeze at a temperature above 0°C

B. ? All of the solutions will freeze at a temperature above 0°C

C. ? All of the solutions will freeze at a temperature below 0°C

D. ? All of the solutions will freeze at 0°C

* Pure H_2O F.Pt = 0.0°C
* Solns. always freeze at a lower Temp.

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6. 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.

A. ? compatible

B. ? endothermic

C. ? soluble

D. ? heterogeneous

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

A. ? heterogeneous solvent

B. ? catalyst

C. ? electrolyte

Not Yet!

D. ? nonelectrolyte

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8. When two liquids blend together to form a solution, the liquids are said to be

A. ? miscible

B. ? soluble in one another

C. ? nonpolar solutes

D. ? co-soluble

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9. Increasing the temperature of a solution:

A. ? decreases both the frequency and the energy of solute - solvent collisions

B. ? increases both the frequency and the energy of solute - solvent collisions

C. ? decreases the frequency of solute - solvent collisions, but increases the energy of solute - solvent collisions

D. ? increases the frequency of solute - solvent collisions, but decreases the energy of solute - solvent collisions

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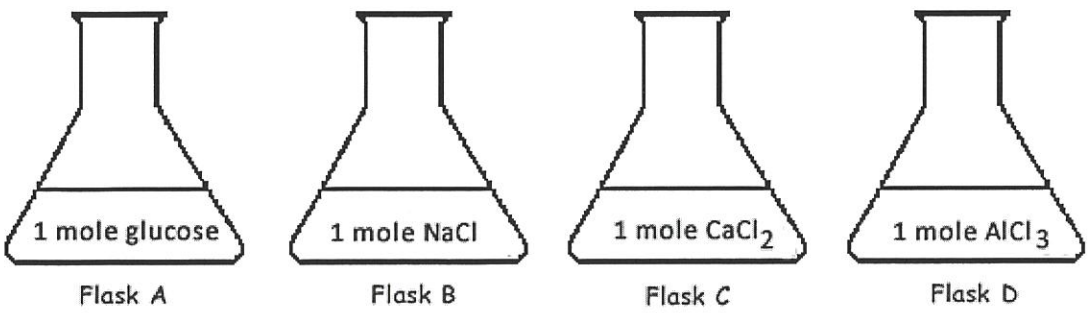
10. In a solution of sugar and water:

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

B. ? both the sugar and the water are solutes

C. ? the sugar is the solute, and the water is the solvent

D. ? both the sugar and the water are solvents



11. 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. ? Some solutions will boil at a temperature below 100°C, and some of the solutions will boil at a temperature above 100°C

B. ? All of the solutions will boil at 100°C

C. ? All of the solutions will boil at a temperature above 100°C

D. ? All of the solutions will boil at a temperature below 100°C

Boiling Pt. Elevation

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12. Breaking a solid into smaller pieces increases the rate of dissolving because

A. ? it increases the pressure above the solution

B. ? it increases the temperature of the solution

C. ? it increases the surface area of the solute

D. ? it increases the energy of the solution

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13. The dissolving medium in a solution is the:

A. ? solution

B. ? mixture

C. ? solvent

D. ? solute

"what does the dissolving"

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14. Which of the following is least likely to produce a solution?

A. ? An ionic solute in a polar solvent

B. ? A nonpolar solute in a nonpolar solvent

C. ? A nonpolar solute in a polar solvent

D. ? A polar solute in a polar solvent

ionic ~ "as polar as it gets!"

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15. Which of the following is an example of a nonelectrolyte in water solution?

A. ? sugar

B. ? acid

Not Yet!

C. ? salt

D. ? base

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

A. ? Increasing the pressure

B. ? Increasing the temperature

C. ? Decreasing the temperature

D. ? Increasing the surface area of the solute

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

A. ? Decreasing the temperature and stirring

B. ? Increasing the temperature and stirring

C. ? Stirring and increasing the pressure

D. ? Increasing the pressure

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18. 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 solvents

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 solutes

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

A. ? sugar in water

B. ? salt in water

C. ? pure water

D. ? alcohol in water

Not Yet!