

Solutions – Concept Review 1

In the space provided, write the letter of the description that best matches the term or phrase.

1. suspension	a. in a solution, the substance in which the solute is dissolved
2. colloid	b. describes a solution in which the solvent is water
3. solution	c. a mixture in which large particles are temporarily suspended throughout a liquid or gas
4. solvent	d. in a solution, the substance dissolved in the solvent
5. solute	e. a stable, homogeneous mixture
6. aqueous	f. a mixture of very small particles stably suspended in liquid, solid, or gas

Mark each mixture below *H* if it is homogeneous and *Ht* if it is heterogeneous

- _____ 7. milk
- _____ 8. gasoline
- _____ 9. muddy water
- _____ 10. steel
- _____ 11. coffee
- _____ 12. ink
- _____ 13. crude oil
- _____ 14. bronze
- _____ 15. brass
- _____ 16. sea water

Complete each statement with the correct term or phrase.

- 17. All parts of a _____ mixture have the same composition.
- 18. _____ mixtures are not uniform in composition.
- 19. Any mixture that is heterogeneous on a microscopic level is a _____.
- 20. A _____ is a mixture in which particles of the mixture are evenly dispersed throughout a liquid or gas.
- 23. _____ are intermediate between suspensions and solutions.

Naming and writing names for Ionic Compounds

24. All of the following are homogeneous mixtures except

- a. tomato soup.
- b. a sugar-water solution.
- c. gasoline.
- d. a salt-water solution.

25. Which of the following is a colloid?

- a. water
- b. milk
- c. soil
- d. concrete

26. A mixture that appears to be uniform while being stirred but separates into different phases when agitation ceases is a

- a. solvent.
- b. colloid.
- c. suspension.
- d. solute.

27. Which of the following is not a solute-solvent combination?

- a. gas-gas
- b. gas-liquid
- c. gas-solid
- d. liquid-solid

28. Carbon dioxide in air is an example of which solute-solvent combination?

- a. gas-liquid
- b. liquid-gas
- c. liquid-liquid
- d. gas-gas

29. Sugar in water is an example of which solute-solvent combination?

- a. gas-liquid
- b. liquid-liquid
- c. solid-liquid
- d. liquid-solid

30. Comparing the size of the particles in a solution and in a colloid, the particle size in the solution is

- a. smaller.
- b. larger.
- c. the same size as the particle size in the colloid.
- d. dependent on the colloid and the solution.

31. You have a mixture consisting of salt and iron filings. How might you separate them?

- a. Use a magnet to attract the iron filings.

b. Dissolve the salt in water, then filter and evaporate.

c. Decant the salt.

d. Both (a) and (b)

Naming Ionic Compounds

<u>Write the names for the following ionic compounds</u> <ol style="list-style-type: none">1. NaCl2. MgCl₂3. Al₂O₃4. CaSO₄5. NH₄SO₃6. K₂CO₃	<u>Write the formulas for the following ionic compounds</u> <ol style="list-style-type: none">8. Potassium chloride9. Sodium sulfide10. Aluminum phosphate11. Ammonium sulphate12. Sodium oxide13. Magnesium oxide
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Naming Molecular Compounds

Prefixes

1- Mono	2-Di	3-Tri	4-Tetra	5-Penta
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<u>Write the names for the following molecular compounds</u> <ol style="list-style-type: none">1. HCl2. ICl₂3. P₂O₅4. PCl₃5. N₂F₂6. CCl₄7. I₂8. Cl₂9. O₂	<u>Write the formulas for the following ionic compounds</u> <ol style="list-style-type: none">7. Carbon dioxide8. Dinitrogen Pentoxide9. Phosphorous Pentachloride10. Bromine11. Sodium oxide12. Magnesium oxide13. Sulfur dioxide14. Carbon tetrabromide
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