## Unit 9 Review Quiz: Accel Chem

1.	Which of the following is NOT a solution?			
	a. air	c.	orange juice with pulp	
	b. brass	d.	lemonade	
2.	A solution is made by dissolving salt in a beaker of water.	lissolving salt in a beaker of water. The salt is referred to as the		
	a. solution	C.	solvent	
	b. solute	d.	dissolver	
3.	When KCl is dissolved in water, the following will be produ	ıced:		
	a. K + Cl	C.	$K^+ + Cl_2^-$	
	b. $K + Cl_2$	d.	K⁺ + Cl⁻	
4.	What is the mass percent of an aqueous solution containing 15 g of KCl in 500 mL of water?			
	a. 0.7%	C.	0.04%	
	b. 3%	d.	40.5%	
5.	What is the molarity of solution that contains 1.5 moles in 2.5 L of solution?			
	a. 3.75 M	C.	1.67 M	
	b. 0.6 m	d.	0.6 M	
6.	A solution containing the maximum amount of dissolved so	olute is		
	a. unsaturated	C.	super saturated	
	b. saturated	d.	none of the above	
7.	A student adds one crystal to a solution and observes addi	tional crystal	s forming. This solution is	
	a. unsaturated	c.	supersaturated	
	b. saturated	d.	a chemical reaction	
8.	Which of the following will increase the solubility of a gas i	in water?		
	<ul> <li>a. increasing the temperature</li> </ul>	C.	increasing the volume	
	b. increasing the pressure	d.	decreasing the pressure	
9.	How many moles of NaCl will be needed to make 500 mL of	of a 2.0 M aqu	ueous solution?	
	a. 4 mol	c.	0.017 mol	
	b. 1.0 mol	d.	0.25 mol	
10.	What is the molality of a solution containing 0.5 moles of s	solute in 500	g of water?	
	a. 1 M	C.	0.001 M	
	b. 1 m	d.	0.001 m	
11.	A 40% alcohol solution contains			
	a. 40 mL of alcohol in 100 mL of water	C.	60 mL of alcohol in 100 mL of water	
	b. 100 mL of alcohol in 40 mL of water	d.	40 mL of alcohol in 60 mL of water	
12.	How much 12 M HCl is needed to prepare 500 mL of 0.5 M	1 solution of F	ICI?	
	a. 20.8 mL	C.	250 mL	
	b. 229.2 mL	d.	270.8 mL	
13.	Which of the following is a colligative property?			
	a. heating of a solvent			
	b. allowing a carbonated beverage to warm to room			
	c. adding to salt into the water that pasta is being co			
	d. pouring a concentrated solution into a dilute solut	ion		
14.	Water is known as			
	a. the oddity of molecules		the great dissolver	
	b. the universal solvent	d.	the molecule of living things	
15.	Which of the following molecules are polar?			
	a. CF <sub>4</sub>		PCl <sub>3</sub>	
	b. CO <sub>2</sub>		PH₃	
16.	Which of the following compounds is most likely to dissolv			
	a. CH₄		l <sub>2</sub>	
	b. CaCl₂	d.	C <sub>12</sub> H <sub>22</sub> O <sub>11</sub>	

- 17. Which of the following would lower the freezing point of water the most?
  - a. NaC<sub>2</sub>H<sub>3</sub>O<sub>2</sub>

c.  $C_6H_{12}O_6$ 

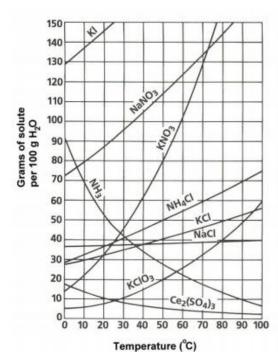
b. Sr(OH)<sub>2</sub>

- d. NaCl
- 18. What volume of solution is needed to make a 1.0 M solution from 116 grams of NaCl?
  - a. 0.116 L

c. 0.0086 L

b. 2.0 L

d. 116 mL



- Use the solubility graph to the left to answer questions 19-20
- 19. What is the solubility of NaNO<sub>3</sub> at 10°C?
- a. 80 M
- 80g/100g of H<sub>2</sub>O b.
- c. 10g/100g of H<sub>2</sub>O
- 75g/100g H<sub>2</sub>O d.
- What is the solubility of NH<sub>4</sub>Cl in 200 g of water at 70°C? 20.

1.5 P (atm)

1.0

0.5

- 60 g a.
- 60g/100g H<sub>2</sub>O b.
- 120 g c.
- 120g/100g H<sub>2</sub>O d.

Use the phase diagram on the right to answer questions 21-22.

- 21. What is the normal boiling point for the substance represented in the phase diagram?
  - a. 30°C
  - b. 1.0 °C
  - c. 100°C
  - d. 80°C
- 22. What is point A called on the graph?
  - a. freezing point
  - b. melting point
  - c. sublimation
  - d. triple point
- 23. What is the freezing point of an aqueous solution containing .05 moles of Na₂SO₄ in 100 grams of solution? (Kf = 1.86°C/m)
  - a. 2.79°C
  - b. 1.86°C

c. -2.79°C

70

T (°C)

90

110 130

d. -1.86°C

- 24. Which of the following is an electrolyte?
  - a. sodium chloride
  - b. pure water

- c. sugar
- d. glass