

_____ 1) A mixture consists of sand and an aqueous salt solution. Which procedure can be used to separate the sand, salt, and water from each other?

- 1) Evaporate the water, then filter out the salt.
- 2) Evaporate the water, then filter out the sand.
- 3) Filter out the salt, then evaporate the water.
- 4) Filter out the sand, then evaporate the water.

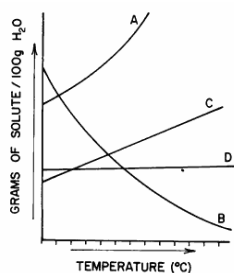
_____ 2) The solubility of $\text{KCl}(s)$ in water depends on the

- 1) pressure on the solution
- 2) rate of stirring
- 3) size of the KCl sample
- 4) temperature of the water

_____ 3) At which temperature can water contain the most dissolved oxygen at a pressure of 1 atmosphere?

- 1) $10.^{\circ}\text{C}$
- 2) $20.^{\circ}\text{C}$
- 3) $30.^{\circ}\text{C}$
- 4) $40.^{\circ}\text{C}$

_____ 4) Base your answer to the following question on The graph below represents four solubility curves. Which curve best represents the solubility of a gas in water?



- 1) *A*
- 2) *B*
- 3) *C*
- 4) *D*

_____ 5) Which compound is *least* soluble in water at $60.^{\circ}\text{C}$?

- 1) KClO_3
- 2) KNO_3
- 3) NaCl
- 4) NH_4Cl

_____ 6) At STP, which of these substances is most soluble in H_2O ?

- 1) CCl_4
- 2) CO_2
- 3) HCl
- 4) N_2

_____ 7) An unsaturated aqueous solution of NH_3 is at $90.^{\circ}\text{C}$ in 100. grams of water. According to Reference Table *G*, how many grams of NH_3 could this unsaturated solution contain?

- 1) 5 g
- 2) 10. g
- 3) 15 g
- 4) 20. g

_____ 8) When an equilibrium exists between the dissolved and the undissolved solute in a solution, the solution must be

- 1) diluted
- 2) saturated
- 3) supersaturated
- 4) unsaturated

_____ 9) A solution contains 35 grams of KNO_3 dissolved in 100 grams of water at $40.^{\circ}\text{C}$. How much *more* KNO_3 would have to be added to make it a saturated solution?

- 1) 29 g
- 2) 24 g
- 3) 12 g
- 4) 4g

_____ 10) One hundred grams of water is saturated with NH_4Cl at $50.^{\circ}\text{C}$. According to Table *G*, if the temperature is lowered to $10.^{\circ}\text{C}$, what is the total amount of NH_4Cl that will precipitate?

- 1) 5.0 g
- 2) 17 g
- 3) 30. g
- 4) 50. g