

## Solution Formation – Sample Questions

**\*\*Another term for heat in Chemistry (as long as Pressure is constant) is ENTHALPY:**

Could also read "heat of solution"

- \_\_\_\_\_ **12.** In a solution at equilibrium,
- no dissolution occurs.
  - the rate of dissolution is less than the rate of crystallization.
  - the rate of dissolution is greater than the rate of crystallization.
  - the rate of dissolution and the rate of crystallization are equal.
- \_\_\_\_\_ **22.** A solid is dissolved in some water at 25°C in a beaker. The outside of the beaker feels cold to the touch. What does this tell you about this solution?
- The enthalpy of solution for the solid is negative.
  - The solution has not come to equilibrium.
  - The solution must be heated to continue the dissolving process.
  - The enthalpy of solution for the solid is positive.

**5.** The process of formation of a liquid solution can be better understood by breaking the process into three steps:

- Breaking the solute into its individual components
- Making room for the solute in the solvent by overcoming intermolecular forces in the solvent
- Allowing solute–solvent interactions to occur to form the solution

Which of the following correctly lists the enthalpy changes for these three steps, respectively?

- A. Endothermic, exothermic, endothermic
- B. Exothermic, endothermic, endothermic
- C. Exothermic, exothermic, endothermic
- D. Endothermic, endothermic, exothermic

### ANSWERS:

**12. D**

**22. D (positive heat means exothermic!)**

**5. D**