

Test 8: Thermochemistry**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. When a chemical reaction occurs in an aqueous solution in beaker, the system is:
- The thermometer, the beaker, the water and the compounds reacting in the water
 - The beaker, the water and the compounds reacting in the water
 - The water and the compounds reacting in the water
 - The compounds reacting in the water
- _____ 2. Which of the following is an exothermic process
- Water evaporating
 - Water freezing
 - Dry ice subliming
 - Cold packs
- _____ 3. The energy change in the system must be _____ the energy change in the surroundings
- Greater than
 - Less than
 - The same as
 - The opposite of

Matching

Match each item with the correct statement below.

- The system absorbs energy from the surroundings.
 - The system releases energy to the surroundings
 - The amount of energy 1 gram of a substance can absorb before changing temperature by 1°
 - Using the energy change of the surroundings to determine information about the system
 - The amount of energy needed to melt a substance
 - The amount of energy needed to boil a substance
 - Total enthalpy of formation of the products – total enthalpy of formation of the reactants.
 - Energy change when a compound is formed from its elemental states
 - The sum of the energy changes of all stepwise processes equals the energy change of the overall process.
- _____ 4. endothermic
- _____ 5. exothermic
- _____ 6. specific heat capacity
- _____ 7. calorimetry
- _____ 8. enthalpy of fusion
- _____ 9. enthalpy of vaporization
- _____ 10. enthalpy of reaction
- _____ 11. enthalpy of formation
- _____ 12. Hess's law