

Chemical Energetics

Sr	Questions	Answers Choice
1	Which factor affects lattice energy	A. Ion size B. Ion charge C. Crystal structure D. None of these
2	Enthalpy change in hydration depends on.	A. Charge B. Ion size C. Solvent nature D. All of these
3	Which of the following factors would lead to a greater enthalpy change of hydration .	A. A larger ionic radius and a smaller charge B. A smaller ionic radius and a smaller charge C. A larger ionic radius and a larger charge D. A smaller ionic radius and a larger charge
4	The enthalpy change when one mole of ionic compound is dissolved in water is	A. Heat of hydration B. Heat of solution C. Heat of combustion D. Heat of atomization
5	The sign of ΔH during melting is.	A. Negative B. Positive C. Zero D. Can't be predicted
6	Which of the following quantities is NOT typically determined using Hess's Law.	A. Enthalpy change of formation B. Activation energy C. Enthalpy change of combustion D. Enthalpy change of reaction
7	The standard enthalpy of formation of elements in their standard state is	A. 0 B. -1 C. 1 D. 25
8	A process with increase in entropy and enthalpy is spontaneous at.	A. High temperature B. Low temperature C. All temperature D. never spontaneous
9	The enthalpy of solution is	A. Heat evolved /absorbed when 1 mole of solute dissolves B. Solute dissolves C. Always exothermic D. always endothermic
10	Which is not a path function	A. Work B. Heat C. Entropy D. Temperature
11	When a bond is formed	A. Energy is absorbed B. Energy is released C. ΔH is always zero D. No energy change
12	Born Haber cycle is used to calculate	A. Bond energy B. Heat of hydration C. Lattice energy D. Ionization energy
13	Enthalpy of neutralization of strong acid and strong base is approximately	A. +57.3 kJ/mol B. -57.3 kJ/mol C. 0 D. +5.73 kJ/mol
14	The enthalpy of sublimation involves.	A. Solid to gas B. Solid to liquid C. Liquid gas D. Gas to liquid

15	The equation $q = mc \Delta T$ is used to find.	A. Enthalpy of formation B. Heat transferred C. Molar mass D. Volume
16	Which of the following causes entropy to increase	A. Condensation B. Freezing C. Evaporation D. Crystallization
17	ΔH for an endothermic reaction is	A. Positive B. Negative C. Zero D. Depends on temperature
18	Which of the following has maximum heat capacity	A. Water B. Mercury C. Ethanol D. Iron
19	ΔH is negative and ΔS is positive then reaction is.	A. Equilibrium B. Always spontaneous C. Temperature depends D. Non spontaneous
20	The calorie content of food, often expressed in Calories (kcal), is fundamentally related to which thermodynamic quantity during its metabolism or combustion.	A. Enthalpy change B. Entropy change C. Gibbs free energy change D. Specific heat capacity