Chemical Energetics

Sr	Questions	Answers Choice
1	The enthalpy change when one mole of ionic compund is dissolved in water is	A. Het of hydration B. Heat of solution C. Heat of combustion D. Heat of atomization
2	When a bond is formed	A. Energy is absorbed B. Energy is released C. Delta H is always zero D. No energy change
3	Enthalpy change of a process is measured under	A. Constant volume B. Constant pressure C. Constant temperature D. Constant Energy
4	Enthalpy of neutralization of strong acid an strong base is approximately	A. +57.3 kj/mol B. -57.3 kj /mol C. 0 D. +5.73 kj/mol
5	An increase in entropy favors	A. Non spontaneity B. Disorder C. Order D. Equilibrium
6	Standard enthalpy chagne refers to	A. STP B. 25 oC and 1 atm C. 100 oC D. 0 oC and 1 atm
7	Which of the followng quantitites is NOT typically determined using Hess's Law.	A. Enthalpy change of formation B. Activation energy C. Enthalpy chage f combustion D. Enthalpy chage of reaction
8	The SI unit of enthalpy	A. Calorie B. eV C. kj mol-1 D. J mol-1
9	The enthalpy of sublimation involves.	A. Solid to gas B. Solid to liquid C. Liquid gas D. Gas to liquid
10	The sign of Delta H during melting is.	A. Negative B. Positive C. Zero D. Can't be predicted
11	Enthalpy of fusion is the heat required to.	A. Melt a solid B. Boil a liquid C. Freez a liquid D. Vaporize a solid
12	The standard enthalpy of atomization of an element is alwyas.	A. Negative B. Positive C. Zero D. Depend on element
13	A process with increase in entropy and enthalpy is spontaneous at.	A. High temperature B. Low temperature C. All temperature D. never spontaneous
14	The term "lattice energy" is applicable to	A. Ionic compunds B. Covalent compunds C. Gases D. Metals
15	Standard condition include all except	A. 298 K B. 0 oC C. 1 atm D. 1 M concentration

16	The energy required to break a chemical bond is called.	A. Ionization energy B. Bond energy C. Enthalpy D. Activation energy
17	Which of the followng factors would lead to a greater enthalpy chage of hydration .	A. A larger ionic reduis 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 alarger charge
18	The enthalpy of solution is	A. Heat evolved /absorbed when 1 mole of solute dissolves B. Solute dissolves C. Always exothermic D. always endothermic
19	Which stepin the Born-Haber cycle is always endothermic	A. Sublimation B. Electron gain enthalpy C. Hydration D. Lattice formation
20	If the pH of solution is 11, what is the [OH-]concentratio in the solution.	A. 1 x 10⁻³ M B. 1 x 10⁻¹¹ M C. 1 x 10⁻² M D. 1 x 10^{-14 M}