

## Chemical Energetics

Sr	Questions	Answers Choice
1	Enthalpy change of a process is measured under	A. Constant volume B. Constant pressure C. Constant temperature D. Constant Energy
2	Which of the following is always negative in an exothermic reaction.	A. Delta H B. Activation energy C. Entropy D. Delta S
3	A negative lattice energyg temperature	A. Bond breaking B. Energy relsed C. Formation of covalent bond D. Spontaneity
4	Delta H is negative and Delta S is position then reaction is.	A. Equilibrium B. Always spontaneous C. Temperature depends D. Non spontaneous
5	An increase in entropy favors	A. Non spontaneity B. Disorder C. Order D. Equilibrium
6	A process with increase in entropy and enthalpy is spontaneous at.	A. High temperature B. Low temperature C. All temperature D. never spontaneous
7	The enthalpy change for a reaction depends on.	A. Pathway taken from reactants to products B. Presence of a catalyst C. Intital and final states of the reactants and products D. Rate of the reaction
8	If a chemical reaction has Delta H = -100 kJ/mol, it is.	A. Endothermic B. Exothermic C. Isothermal D. Isobaric
9	If the pH of solution is 11, what is the [OH <sup>-</sup> ]concentratio in the solution.	A. $1 \times 10^{-3}$ M B. $1 \times 10^{-11}$ M C. $1 \times 10^{-2}$ M D. $1 \times 10^{-14}$ M
10	Which of the following is used to measure heat changes.	A. Calorimeter B. Voltmeter C. Thermometer D. Barometer
11	Which stepin the Born-Haber cycle is always endothermic	A. Sublimation B. Electron gain enthalpy C. Hydration D. Lattice formation
12	Which factor affects lattice energy	A. Ion size B. Ion charge C. Crystal structure D. None of these
13	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
14	AG = 0 indicates	A. Equilibrium B. Spontaneity C. Non Spontaneity D. None of these

		D. Irreversibility
15	What type of reaction has a negative Delta H and Delta S?	A. Always spontaneous B. Never spontaneous C. Spontaneous at low temp D. Spontaneous at high temp
16	The energy required to break a chemical bond is called.	A. Ionization energy B. Bond energy C. Enthalpy D. Activation energy
17	Standard enthalpy change refers to	A. STP B. 25 °C and 1 atm C. 100 °C D. 0 °C and 1 atm
18	The system that exchanges heat but not mass	A. Closed B. Rigid C. Open D. Isolated
19	Enthalpy of fusion is the heat required to.	A. Melt a solid B. Boil a liquid C. Freeze a liquid D. Vaporize a solid
20	Which gas has highest molar enthalpy of combustion	A. C <sub>2</sub> H <sub>2</sub> B. CH <sub>4</sub> C. H <sub>2</sub> D. CO