

Chemical Energetics

Sr	Questions	Answers Choice
1	When a bond is formed	A. Energy is absorbed B. Energy is released C. Delta H is always zero D. No energy change
2	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
3	Enthalpy of fusion is the heat required to.	A. Melt a solid B. Boil a liquid C. Freez a liquid D. Vaporize a solid
4	Which factor affects lattice energy	A. Ion size B. Ion charge C. Crystal structure D. None of these
5	Enthalpy change in hydration depends on.	A. Charge B. Ion size C. Solvent nature D. All of these
6	Suppose there are 100 molecules of a gas initially in jar A, which is connected to an evacuated jar B, When the stopcock is opened, the positive ways of arrangement of molecules will be	A. 100 B. 1/100 C. 2/100 D. 1/2
7	A process with increase in entropy and enthalpy is spontaneous at.	A. High temperature B. Low temperature C. All temperature D. never spontaneous
8	$\Delta G = 0$ indicates	A. Equilibrium B. Spontaneity C. Non Spontaneity D. Irreversibility
9	The change in internal energy is zero is.	A. Isothermal process B. Adiabatic process C. Exothermic process D. Endothermic process
10	The system that exchanges heat but not mass	A. Closed B. Rigid C. Open D. Isolated
11	The SI unit of enthalpy	A. Calorie B. eV C. kJ mol ⁻¹ D. J mol ⁻¹
12	Heat of combustion of H ₂ is used to determine	A. Calorific value B. Enthalpy C. Ionization energy D. Lattice energy
13	Delta H is negative and Delta S is position then reaction is.	A. Equilibrium B. Always spontaneous C. Temperature depends D. Non sppontaneous
14	The standard enthalpy of atomization of an element is alwyas.	A. Negative B. Positive C. Zero D. Depend on element
15	The enthalpy change for a reaction depends on.	A. Pathway taken from reactants to products B. Presence of a catalyst C. Initial and final states of the

		reactants and products D. Rate of the reaction
16	In an exothermic reaction, the energy of products is	A. Greater than reactants B. Less than reactants C. Equal to reactants D. Zero
17	Standard conditions include all except	A. 298 K B. 0 °C C. 1 atm D. 1 M concentration
18	Which step in the Born-Haber cycle is always endothermic	A. Sublimation B. Electron gain enthalpy C. Hydration D. Lattice formation
19	If a chemical reaction has $\Delta H = -100 \text{ kJ/mol}$, it is	A. Exothermic B. Endothermic C. Isothermal D. Isobaric
20	Which of the following is always negative in an exothermic reaction.	A. ΔH B. Activation energy C. Entropy D. ΔS