

## Chemical Energetics

Sr	Questions	Answers Choice
1	Energy stored in chemical bonds is.	A. Potential energy B. Kinetic energy C. Heat energy D. Radiant energy
2	Which of the following is used to measure heat changes.	A. Calorimeter B. Voltmeter C. Thermometer D. Barometer
3	In an exothermic reaction, the energy of products is	A. Greater than reactants B. Less than reactants C. Equal to reactants D. Zero
4	An increase in entropy favors	A. Non spontaneity B. Disorder C. Order D. Equilibrium
5	Which of the following affects bond energy.	A. Bond length B. Bond length C. Atomic size D. All of these
6	Delta H for an endothermic reaction is	A. Positive B. Negative C. Zero D. Depends on temperature
7	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 possible ways of arrangement of molecules will be	A. 100 B. 1/100 C. 2/100 D. 1/2
8	Delta H is negative and Delta S is positive then reaction is.	A. Equilibrium B. Always spontaneous C. Temperature depends D. Non 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 law states that enthalpy change is independent of the path taken.	A. Hess's law B. Boyle's law C. Avogadro's law D. Dalton's law
11	Which is not a path function	A. Work B. Heat C. Entropy D. Temperature
12	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
13	Standard enthalpy change refers to	A. STP B. 25 °C and 1 atm C. 100 °C D. 0 °C and 1 atm
14	Which of the following causes entropy to increase	A. Condensation B. Freezing C. Evaporation D. Crystallization
15	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 formation

		D. Heat of atomization
16	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
17	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
18	The sign of Delta H during melting is.	A. Negative B. Positive C. Zero D. Can't be predicted
19	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
20	$\Delta G = 0$ indicates	A. Equilibrium B. Spontaneity C. Non Spontaneity D. Irreversibility