

## MDCAT Chemistry Chapter 7 Chemical Equilibrium Online Test

Sr	Questions	Answers Choice
1	If internal energy of the system is increased	A. Change in state of the system may occur B. Temperature of the system may rise C. Chemical reaction may take place D. All of these
2	Enthalpy of neutralization ( $\Delta H^\circ_n$ ) per mole of $H_2SO_4$ / $Ba(OH)_2$ is	A. +57.4 kJmol <sup>-1</sup> B. -114.8 kJmol <sup>-1</sup> C. -57.4 kJmol <sup>-1</sup> D. -57.4 kJmol <sup>-1</sup>
3	Change in enthalpy ( $\Delta H$ ) of a system can be calculated by	A. $\Delta H = \Delta E - PV$ B. $\Delta H = \Delta E + q$ C. $\Delta H = \Delta E - q$ D. $\Delta H = \Delta E + P\Delta V$
4	The heat of reaction depends upon	A. Temperature of the reactants B. Physical states of the reactants and the products C. Both A) and B) D. Path of the reaction and the temperature
5	How much heat is absorbed by 100 g of water when its temperature decreases from 25°C to 5°C? (heat capacity is 4.2 J/gK)	A. 84,000J B. 2000/4.2J C. -2000/4.2j D. -8400J
6	Decomposition of $H_2O$ is	A. Endothermic reaction B. Nuclear reaction C. Exothermic reaction D. Zero nuclear reaction
7	Hess's law is analogous to	A. Law of heat summation B. law of increasing entropy C. Law of heat exchange D. 1st law of thermodynamics
8	If an endothermic reaction is allowed to take place very rapidly in air, the temperature of the surrounding air will	A. Remains constant B. Increase C. Decrease D. Either increase or decrease E. One Joule is equivalent to
9	Most of the reactions which give stable products are	A. Endothermic B. Exothermic C. Isothermal D. Non of these
10	According to Hess's law, the enthalpy change for a reaction	A. Depends on path B. Independent of the path C. The sum of $\Delta E$ and $\Delta H$ D. None of these
11	Enthalpy of a system can be calculated by which of following relationship	A. $q = \Delta E$ B. $q = m \times S \times \Delta T$ C. $q = pv$ D. $q = m \times v \times \Delta T$
12	Which of the following has positive value of enthalpy	A. Neutralisation B. Atomization C. combustion D. All of the above
13	Choose from the followings the correct statement about Born Haber cycle	A. Born Haber cycle is different from Hess's law B. The energy changes in a cyclic process is not zero C. The lattice energy of crystalline substances can be calculated easily D. None

A. It is always negative

14	What is not correct about $\Delta H_f$	B. Its value gives an idea about the relative stability of reactants and the products. C. Its value can be greater or less than zero D. Value depends upon nature of bonds
15	The net heat change in a chemical reaction is the same whether it is brought about in two or more different ways in one or several steps.it is known as	A. Henry's law B. Hess's law C. joule's law D. Law of conservation of energy
16	Born-Haber cycle is an application of	A. Hess's law B. 1 <sup>st</sup> law of thermodynamics C. Avogadro's law D. 1 <sup>st</sup> law of thermochemistry
17	Calorie is equivalent to	A. 0.4184J B. 4.184J C. 418.4J D. 40.18J
18	One of the best applications of Hess's law to calculate the lattice energy of ionic compound is	A. Measurement of enthalpy change in a calorimeter B. Studying of first law of thermodynamics C. Measurement of a heat of formation of a compound D. Born-Haber cycle
19	During an exothermic or endothermic reaction which one of the following formula is used to calculate the amount of heat evolved or absorbed	A. $\Delta H = \Delta E + PV$ B. $\Delta E = q + w$ C. $\Delta p = \Delta H$ D. $q = m \times s \times \Delta T$
20	Which of the following processes has always. $\Delta H = -ve$	A. Formation of compound B. Dilution of a solution C. Dissolution of ionic compound D. Combustion