

CHEMISTRY-11	Chapter#07(Complete) Test-6		
	Name:	Class:	ID:
Date: / /	Marks Total: 40	Marks Obtained:	
Time Allowed: 75 Min.			

Maximum Marks: 08 **(OBJECTIVE TYPE)** Time Allowed: 10 Min.

NOTE: Tick The Correct Option:

- For the reaction: $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$ the change in enthalpy is called:
 - Heat of reaction
 - Heat of formation
 - Heat of neutralization
 - Heat of combustion
- If H_1 is the enthalpy of reactants and H_2 is the enthalpy of products, then for exothermic reactions:
 - $H_1 > H_2$
 - $H_1 < H_2$
 - $H_1 = H_2$
 - None
- When 24 g of C burns completely in 64 g of O_2 , the heat evolved is:
 - 393.7 kJ
 - 787.4 kJ
 - 285.58 kJ
 - 180.51 kJ
- Electrical energy is, actually, a form of:
 - K.E.
 - P.E.
 - Solar energy
 - All
- Pressure-volume work is:
 - PV
 - $P\Delta V$
 - $-P\Delta V$
 - $\Delta P\Delta V$
- Which one cannot be measured directly?
 - Enthalpy of formation of NaCl.
 - Lattice energy of NaCl.
 - Enthalpy of atomization of sodium.
 - Enthalpy of atomization of chlorine.
- The parameter(s) which determine(s) the spontaneity of the reactions:
 - Entropy change
 - Enthalpy change
 - Internal energy change
 - Both 'a' & 'b'
- Enthalpy of combustion of graphite is $-393.51 \text{ kJ mol}^{-1}$ while that of diamond is $-395.41 \text{ kJ mol}^{-1}$. Can you guess from the above data, the following reaction (Graphite \longrightarrow Diamond) will be endothermic or exothermic?
 - Endothermic
 - Exothermic
 - Both 'a' & 'b'
 - None

Maximum Marks: 32 **(SUBJECTIVE TYPE)** Time Allowed: 65 Min.

SECTION-I

Q.2: Give brief answers to the following questions: (20)

- Define thermochemistry. Why is its scope limited?
- A non-spontaneous process never happens in the universe. Justify.
- Define system and surroundings with suitable example.
- The total energy of a system is the sum of translational, rotational and vibrational motions. Justify.
- Prove that at constant volume, $\Delta E = q_v$.
- What is meant by standard enthalpy of neutralization?
- How do we determine ΔH in the laboratory for food and fuel etc.

- iii. Differentiate between specific heat and heat capacity.
- ix. Why can the enthalpy of formation of CO not be measured directly?
- x. State Hess's law of constant heat summation.

SECTION-II

NOTE: Attempt All Questions:

(12)

- Q.3: Differentiate between spontaneous and non-spontaneous reactions with examples.
- Q.4: Define enthalpy and prove that $q_p = \Delta H$
- Q.5: Define lattice energy and Born-Haber cycle. How lattice energy is measured by Born-Haber cycle? Write equations for different enthalpy changes in the formation of NaCl.