

<b>CHEMISTRY-11</b>	<b>Chapter#07(Complete) Test-3</b>		
	Name:	Class:	ID:
Date: / /	<b>Marks Total: 30</b>	<b>Marks Obtained:</b>	
Time Allowed: 60 Min.			

Maximum Marks: 06

**(OBJECTIVE TYPE)**

Time Allowed: 10 Min.

**NOTE:** Tick The Correct Option:

- For a given process, the heat changes at constant pressure ( $q_p$ ) and at constant volume ( $q_v$ ) are related to each other as:
  - $q_p = q_v$
  - $q_p < q_v$
  - $q_p > q_v$
  - $q_p = \frac{q_v}{2}$
- Select the reaction which is spontaneous as well as endothermic?
  - $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$
  - $\text{H}_2\text{O}_{(l)} \longrightarrow \text{H}_2\text{O}_{(g)}$
  - $\text{ZnSO}_4 + \text{Cu} \longrightarrow \text{CuSO}_4 + \text{Zn}$
  - $\text{N}_{2(g)} + \text{O}_{2(g)} \longrightarrow 2\text{NO}_{(g)}$
- A state function is a \_\_\_\_\_ property of the system.
  - Colligative
  - Additive
  - Microscopic
  - Macroscopic
- A di-atomic molecule shows \_\_\_\_\_ motion.
  - Only translational
  - Translational and vibrational
  - Translational, vibrational and rotational
  - None
- Which one is always exothermic?
  - $\Delta H^\circ_f$
  - $\Delta H^\circ_{at}$
  - $\Delta H^\circ_c$
  - $\Delta H^\circ_{sol}$
- The heat required to raise the temperature of one gram of a substance through  $1^\circ\text{C}$  or  $1\text{ K}$  is called:
  - Specific heat
  - Heat capacity
  - Molar specific heat
  - All

Maximum Marks: 24

**(SUBJECTIVE TYPE)**

Time Allowed: 50 Min.

**SECTION-I**

- Q.2: Give brief answers to the following questions: (16)**
- Differentiate between spontaneous and non-spontaneous processes.
  - Define boundary of the system.
  - Differentiate between heat and temperature.
  - Prove that at constant volume,  $\Delta E = q_v$ .
  - What is a thermochemical equation? Give three examples. What information does it convey?
  - What do you mean by enthalpy of atomization?
  - State Hess's law of constant heat summation.
  - Define Born-Haber cycle and lattice energy.

**SECTION-II**

**NOTE:** Attempt All Questions:

(08)

**Q.3: Define enthalpy and prove that  $q_p = \Delta H$**

**Q.3: Define enthalpy of reaction. How is it measured by glass calorimeter?**