CHEMISTRY-11	Chapter#07-Second Half (7.4.1 – 7.5.1) Test-4		
	Name:	Class:	ID:
Date: / / Time Allowed: 50 Min.	Marks Total: **30**	Marks Obtained:	

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

NOTE: **Tick The Correct Option:**

1) For the reaction: $NaOH + HCl \longrightarrow NaCl + H_2O$ the change in enthalpy is called:
    (a) Heat of reaction   (b) Heat of formation
    (c) Heat of neutralization   (d) Heat of combustion

2) Enthalpy of neutralization of all the strong acids and strong bases has the same value because:
    (a) Neutralization leads to the formation of salt and water.
    (b) Strong acids and bases are ionic substances.
    (c) Acids always give rise to H^+ ions and bases always furnish OH^- ions.
    (d) The net chemical change involves the combination of H^+ and OH^- to form water.

3) For the reaction: $H^+ + OH^- \longrightarrow H_2O$, the change in enthalpy is called heat of:
    (a) Reaction   (b) Combustion   (c) Solution   (d) Neutralization

4) In a Bomb Calorimeter, the reactions are carried out at constant:
    (a) Pressure   (b) Temperature   (c) Volume   (d) Enthalpy

5) When one mole of H_2 reacts with half mole $O_{2(g)}$ to form one mole gaseous water $H_2O_{(g)}$, the enthalpy change is:
    (a) -242.2 kJ   (b) -285.8 kJ   (c) -484 kJ   (d) +285.8 kJ

6) One mole of an unknown salt was dissolved in water and 16.2 $kJmol^{-1}$ of heat was absorbed. What was the salt?
    (a) Na_2CO_3 (b) $NaCl$ (c) NH_4Cl (d) All

7) The specific heat of water is:
    (a) $4.2\ JK^{-1}mol^{-1}$ (b) $4.2\ J\ K^{-1}g^{-1}$ (c) $4.2\ J\ K^{-1}$ (d) $4.2\ kJK^{-1}g^{-1}$

8) Which one cannot be measured directly?
    (a) Enthalpy of formation of NaCl.   (b) Lattice energy of NaCl.
    (c) Enthalpy of atomization of sodium.   (d) Enthalpy of atomization of chlorine.

9) Which one is the enthalpy of atomization of bromine?
    (a) $108\ kJ\ mol^{-1}$ (b) $112\ kJ\ mol^{-1}$ (c) $121\ kJ\ mol^{-1}$ (d) $218\ kJ\ mol^{-1}$

10) The parameter(s) which determine(s) the spontaneity of the reactions:
    (a) Entropy change   (b) Enthalpy change
    (c) Internal energy change   (d) Both 'a' & 'b'

Maximum Marks: 20   **(SUBJECTIVE TYPE)**   Time Allowed: 40 Min.

SECTION-I

Q.2: Give brief answers to the following questions: **(12)**

  i. What is a thermochemical equation? Give three examples. What information does it convey?

ii. Why is it necessary to mention the physical states of reactants and products in a thermochemical reaction?

iii. What do you mean by enthalpy of atomization?

iv. How do we determine ΔH in the laboratory for food and fuel etc.

v. Why can the enthalpy of formation of CCl_4 not be measured directly?

vi. Define Born-Haber cycle and lattice energy.

SECTION-II

NOTE: Attempt All Questions: (08)

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

Q.4: State and explain Hess's law of constant heat summation with an examples.