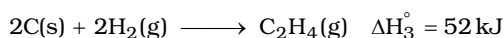
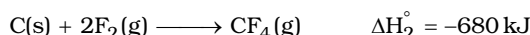


Date Planned : __ / __ / __	Daily Tutorial Sheet-9	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-2	Exact Duration : _____

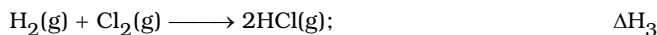
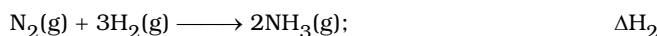
106. In which of the following changes, ΔH° is always negative :

- (A) enthalpy of solution (B) enthalpy of hydrogenation
(C) enthalpy of reaction (D) enthalpy of transition

107. Given the following equations and ΔH° values, determine the enthalpy of reaction at 298 K for reaction:



- (A) -1165 kJ (B) +1165 kJ (C) -2486 kJ (D) +2486 kJ



The heat of formation of $\text{NCl}_3(\text{g})$ in the terms of ΔH_1 , ΔH_2 and ΔH_3 is :

- (A) $\Delta H_f = -\Delta H_1 + \frac{\Delta H_2}{2} - \frac{3}{2}\Delta H_3$ (B) $\Delta H_f = \Delta H_1 + \frac{\Delta H_2}{2} - \frac{3}{2}\Delta H_3$
(C) $\Delta H_f = \Delta H_1 - \frac{\Delta H_2}{2} - \frac{3}{2}\Delta H_3$ (D) None of these

109. The combustion of 0.2 mol of liquid carbon disulphide CS_2 to give $\text{CO}_2(\text{g})$ and $\text{SO}_2(\text{g})$ releases 215 kJ of heat. What is ΔH_f° for $\text{CS}_{2(l)}$ in kJ mol^{-1} :

ΔH_f°	kJ mol^{-1}
$\text{CO}_{2(\text{g})}$	-393.5
$\text{SO}_{2(\text{g})}$	-296.8

- (A) 772.1 (B) 87.9 (C) -385 (D) -475

110. The standard heat of formation values of $\text{SF}_6(\text{g})$, $\text{S}(\text{g})$ and $\text{F}(\text{g})$ are -1100, 275 and 80 kJ/mol respectively. The average S - F bond energy in SF_6 is: Ⓢ

- (A) 301 kJ/mol (B) 320 kJ/mol (C) 309 kJ/mol (D) 280 kJ/mol

111. Heat of atomisation of NH_3 and N_2H_4 are x kcal mol^{-1} and y kcal mol^{-1} respectively. Calculate average bond energy of N - N bond. Ⓢ

- (A) $\frac{4y - 3x}{3}$ kcal mol^{-1} (B) $\frac{2y - 3x}{3}$ kcal mol^{-1}
(C) $\frac{4y - 3x}{4}$ kcal mol^{-1} (D) $\frac{3y - 4x}{3}$ kcal mol^{-1}

