

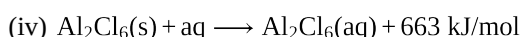
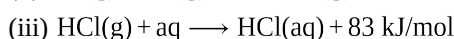
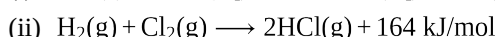
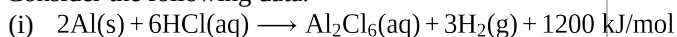
JEE MAIN THERMODYNAMICS — HESS'S LAW OF CONSTANT HEAT SUMMATION — PYQS

Max. Marks: 16

Questions: 4

Section A (MCQ) — 3 questions

Q.1 Consider the following data.



The enthalpy of formation of anhydrous solid Al_2Cl_6 is :

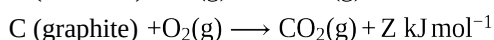
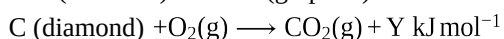
[JEE Main 2026 (Online) 2nd April Morning Shift]

(1) -648 kJ mol^{-1} (2) $-1350 \text{ kJ mol}^{-1}$

(3) $-2002 \text{ kJ mol}^{-1}$ (4) $-1527 \text{ kJ mol}^{-1}$

Scan or tap for the full solution 

Q.2 If $\text{C (diamond)} \longrightarrow \text{C (graphite)} + X \text{ kJ mol}^{-1}$



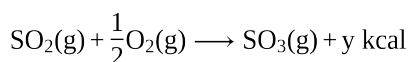
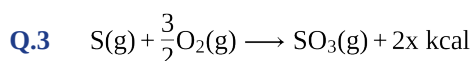
at constant temperature. Then

[JEE Main 2025 (Online) 29th January Evening Shift]

(1) $-X = Y + Z$ (2) $X = Y - Z$

(3) $X = -Y + Z$ (4) $X = Y + Z$

Scan or tap for the full solution 



The heat of formation of $\text{SO}_2\text{(g)}$ is given by :

[JEE Main 2025 (Online) 24th January Evening Shift]

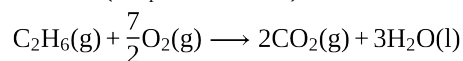
(1) $2x + y \text{ kcal}$ (2) $\frac{2x}{y} \text{ kcal}$

(3) $y - 2x \text{ kcal}$ (4) $x + y \text{ kcal}$

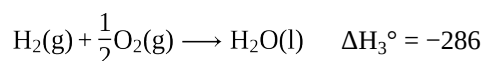
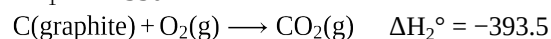
Scan or tap for the full solution 

Section B (Numerical) — 1 question

Q.4 Consider the following cases of standard enthalpy of reaction (ΔH_r° in kJ mol^{-1})



$\Delta H_1^\circ = -1550$



The magnitude of $\Delta H_{\text{fC}_2\text{H}_6\text{(g)}}^\circ$ is _____ kJ mol^{-1} (Nearest integer).

[JEE Main 2025 (Online) 22nd January Evening Shift]

Scan or tap for the full solution 

ANSWER KEY

Section A (MCQ) — 3 questions

Ques.	1	2	3										
Ans.	4	2	3										

Section B (Numerical) — 1 question

Ques.	4												
Ans.	95												