

PART 1 - CHEMISTRY

Topic : Thermodynamics

SECTION-A : (Maximum Marks : 4)

This section contains **ONE** question.

Each question has **TWO** lists: **List-I** and **List-II**.

Four options are given representing matching of elements from List-I and List-II. **ONLY ONE** of these four options corresponds to a correct matching.

For each question, choose the option corresponding to the correct answer.

Answer to each question will be evaluated according to the following marking scheme :

Full Marks : +4 If **ONLY** the correct option is chosen;

Zero Marks : 0 If none of the options is chosen (i.e. the question is unanswered);

Negative Marks : -1 In all other cases.

1. **List-I** contains various physical/chemical processes, and **List-II** contains combinations of changes in enthalpy (ΔH) and entropy (ΔS). Match each entry in **List-I** to the appropriate entry in **List-II**, and choose the correct option.

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List-I		List-II	
P.	Physisorption	1.	$\Delta H > 0$ and $\Delta S > 0$
Q.	Diamond $\rightarrow$ Graphite	2.	$\Delta H < 0$ and $\Delta S < 0$
R.	Denaturation of protein	3.	$\Delta H < 0$ and $\Delta S = 0$
S.	Propene $\rightarrow$ Cyclopropane	4.	$\Delta H > 0$ and $\Delta S < 0$
		5.	$\Delta H < 0$ and $\Delta S > 0$

(A) $P \rightarrow 2$; $Q \rightarrow 3$; $R \rightarrow 5$; $S \rightarrow 4$ (B) $P \rightarrow 4$; $Q \rightarrow 3$; $R \rightarrow 5$; $S \rightarrow 1$ (C) $P \rightarrow 2$; $Q \rightarrow 5$; $R \rightarrow 1$; $S \rightarrow 4$ (D) $P \rightarrow 2$; $Q \rightarrow 5$; $R \rightarrow 1$; $S \rightarrow 3$

Scan or tap for the
full solution



Space for Rough Work

JEE ADVANCED THERMODYNAMICS — SIGNS OF ΔH AND ΔS — PYQS

Test Pattern : **JEE (Advanced)**

ANSWER KEY

SECTION-A

[illegible]