

PART 1 - CHEMISTRY

Topic : Electrochemistry

SECTION-B : (Maximum Marks : 4)

This section contains **ONE** question.

The answer to each question is a **NUMERICAL VALUE**.

For each question, enter the correct numerical value of the answer (in decimal notation, truncated / rounded-off to the **SECOND DECIMAL PLACE**; e.g. 6.25, 7.00, -0.33, -.30, 30.27, -127.30) in the place designated to enter the answer.

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

Full Marks : +4 If **ONLY** the correct answer is entered;

Zero Marks : 0 In all other cases.

1. An electrochemical cell is fueled by the combustion of butane at 1 bar and 298 K. Its cell potential is $\frac{X}{F} \times 10^3$ volts, where F is the Faraday constant. The value of X is _____.

Use: Standard Gibbs energies of formation at 298 K are: $\Delta_f G_{\text{CO}_2}^\circ = -394 \text{ kJ mol}^{-1}$; $\Delta_f G_{\text{water}}^\circ = -237 \text{ kJ mol}^{-1}$; $\Delta_f G_{\text{butane}}^\circ = -18 \text{ kJ mol}^{-1}$

[JEE Advanced 2025 Paper 2]

Scan or tap for the full solution 

Space for Rough Work

**JEE ADVANCED ELECTROCHEMISTRY — GIBBS
ENERGY AND CELL POTENTIAL (FUEL CELL) — PYQS**

Test Pattern : JEE (Advanced)

ANSWER KEY**SECTION-B**

Ques.	1								
Ans.	105.4 to 105.6								