

JEE MAIN ELECTROCHEMISTRY — ELECTROCHEMICAL CELLS, CONSTRUCTION OF GALVANIC CELL AND CALCULATION OF STANDARD EMF — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ) — 3 questions

- Q.1** An electrochemical cell is constructed using half cells in the direction of spontaneous change:
 $\text{Fe}(\text{OH})_2(\text{s}) + 2\text{e}^- \longrightarrow \text{Fe}(\text{s}) + 2\text{OH}^-(\text{aq})$
 $E^\theta = -0.88 \text{ V}$
 and $\text{AgBr}(\text{s}) + \text{e}^- \longrightarrow \text{Ag}(\text{s}) + \text{Br}^-(\text{aq})$
 $E^\theta = +0.07 \text{ V}$
 Which of the following options is correct?

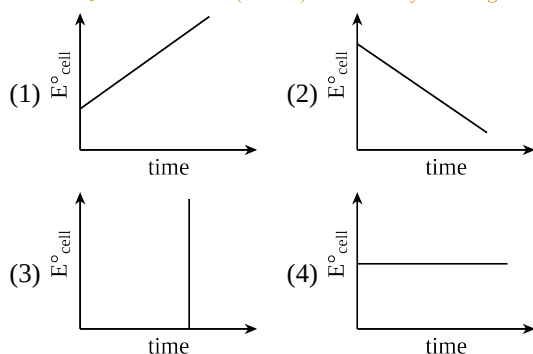
[JEE Main 2026 (Online) 2nd April Morning Shift]

- (1) Overall reaction
 $\text{Fe}(\text{s}) + 2\text{OH}^-(\text{aq}) + 2\text{AgBr}(\text{s}) \rightleftharpoons \text{Fe}(\text{OH})_2(\text{s}) + 2\text{Ag}(\text{s}) + 2\text{Br}^-(\text{aq})$
 (2) $E^\theta_{\text{cell}} = -0.95 \text{ V}$
 (3) Fe is reduced in the electrochemical cell
 (4) E^θ_{cell} is an extensive property

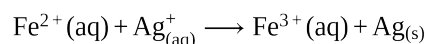
Scan or tap for the
full solution

- Q.2** For a closed circuit Daniell cell, which of the following plots is the accurate one at a given temperature?

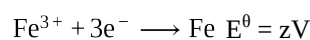
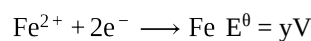
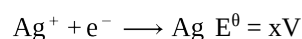
[JEE Main 2026 (Online) 21st January Evening Shift]

Scan or tap for the
full solution

- Q.3** For the given cell



The standard cell potential of the above reaction is
 Given:



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

- (1) $x + 2y - 3z$ (2) $x + 2y$
 (3) $y - 2x$ (4) $x + y - z$

Scan or tap for the
full solution

ANSWER KEY

Ques.	1	2	3									
Ans.	1	4	1									