

Step Academy official

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STUDENT NAME	
PAPER CODE	59089
TIME ALLOWED	40
Paper Date	23-02-2026



CLASS	New 1st Year (FSC/ICS)
SUBJECT	Chemistry
TOTAL MARKS	25
Paper Type	

Q1. Choose the correct answer.

$$5 \times 1 = 5$$

1. The activity series of metals arranges metals in order of their:

Q2. Write short answers of the following questions.

$$5 \times 2 = 10$$

- 1 . Calculate oxidation number of chromium in (i) K_2CrO_4 (ii) $Cr_2O_7^{-2}$
- 2 . What roles do the anode and cathode play in an electrolytic cell?
- 3 . What does a positive value of E°_{cell} indicate?
- 4 . Differentiate between electrolytic cell and voltaic cell.
- 5 . Why electrode potential of Cu is called reduction potential?

Q3. Write detailed answers of the following questions.

$$2 \times 5 = 10$$

1 . How electrode potential varies with concentration of an aqueous solution? Use the NERST equation to explain this variation.

2 . Calculate the electrode potential for a zinc electrode immersed in a $0.010 \text{ mol dm}^{-3}$ solution of zinc sulfate (ZnSO_4) at 298 K. The standard electrode potential (E°) for $\text{Zn}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Zn}_{(\text{s})}$ is -0.76 V . (Gas constant, $R = 8.31 \text{ J K}^{-1} \text{ mol}^{-1}$, Faraday constant, $F = 96500 \text{ C mol}^{-1}$)