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# JEE MAIN REDOX REACTIONS — EQUIVALENT CONCEPT IN REDOX TITRATIONS — PYQS

**Max. Marks:** 16 **Questions:** 4

## Section A (MCQ) — 1 question

**Q.1** In order to oxidise a mixture of 1 mole each of $FeC_2O_4$, $Fe_2(C_2O_4)_3$, $FeSO_4$ and $Fe_2(SO_4)_3$ in acidic medium, the number of moles of $KMnO_4$ required is

[JEE Main 2026 (Online) 4th April Morning Shift]

(1) 3 (2) 2 (3) 5 (4) 7

Scan or tap for the full solution

## Section B (Numerical) — 3 questions

**Q.2** 500 mL of 0.2 M $MnO_4^-$ solution in basic medium when mixed with 500 mL of 1.5 M KI solution, oxidises iodide ions to liberate molecular iodine. This liberated iodine is then titrated with a standard x M thiosulphate solution in presence of starch till the end point. If 300 mL of thiosulphate was consumed, then the value of x is _____.

[JEE Main 2026 (Online) 6th April Evening Shift]

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**Q.3** 500 mL of 1.2 M KI solution is mixed with 500 mL of 0.2 M $KMnO_4$ solution in basic medium. The liberated iodine was titrated with standard 0.1 M $Na_2S_2O_3$ solution in the presence of starch indicator till the blue color disappeared. The volume (in L) of $Na_2S_2O_3$ consumed is _____. (Nearest integer)

[JEE Main 2026 (Online) 28th January Morning Shift]

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**Q.4** 200 cc of $x \times 10^{-3}$ M potassium dichromate is required to oxidise 750 cc of 0.6 M Mohr's salt solution in acidic medium.
Here x = _____.

[JEE Main 2026 (Online) 23rd January Evening Shift]

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## ANSWER KEY

### Section A (MCQ) — 1 question

| Ques. | 1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ans. | **2** | | | | | | | | | |

### Section B (Numerical) — 3 questions

| Ques. | 2 | 3 | 4 | | | | |
|---|---|---|---|---|---|---|---|
| Ans. | **1** | **3** | **375** | | | | |