Question1

Number of moles of MnO4- required to oxidize one mole of ferrous oxalate completely in acidic medium will be:

Answer (option 4) 0.6

No. of moles of MnO_4^- required to oxidize one mole of FeC_2O_4 completely in acidic medium.

 $3MnO_4^- + 24H^+ + 5FeC_2O_4 \rightarrow 3Mn^{2+} + 12H_2O + 10CO_2 + 5Fe^{3+}$

5 moles of FeC_2O_4 reacts with 3 moles of MnO_4

5 moles of FeC₂O₄ \rightarrow 3 moles of MnO₄⁻

1mole of FeC₂O₄ \rightarrow 5/3 moles of MnO₄⁻

 \therefore The number of moles of MnO₄⁻ required to oxidize one mole of ferrous oxalate completely in the acidic medium will be 0.6 moles.