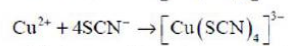
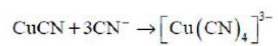


12. The equilibrium
 $2\text{Cu}^{\text{I}} \rightleftharpoons \text{Cu}^{\text{0}} + \text{Cu}^{\text{II}}$
 in aqueous medium at 25°C shifts towards the left in the presence of
 (A) NO_3^- (B) Cl^-
 (C) SCN^- (D) CN^-

Sol. (B, C, D)
 Cu^{2+} ions will react with CN^- and SCN^- forming $[\text{Cu}(\text{CN})_4]^{3-}$ and $[\text{Cu}(\text{SCN})_4]^{3-}$ leading the reaction in the backward direction.
 $\text{Cu}^{2+} + 2\text{CN}^- \rightarrow \text{Cu}(\text{CN})_2$
 $2\text{Cu}(\text{CN})_2 \rightarrow 2\text{CuCN} + (\text{CN})_2$



Cu^{2+} also combines with CuCl_2 which reacts with Cu to produce CuCl pushing the reaction in the backward direction.

