Q.How is copper extracted from low grade copper ores? Ans:

Copper is extracted by hydrometallurgy from low grade copper ores. It is leached out using acid or bacteria. The solution containing  $Cu^{2+}$  is treated with scrap iron, Zn or  $H_2$ .

 $\operatorname{Cu}^{2^{+}}(\operatorname{aq}) + \operatorname{H}_{2}(\operatorname{g}) \longrightarrow \operatorname{Cu}(\operatorname{s}) + 2\operatorname{H}^{+}(\operatorname{aq})$ 

 $Cu^{2+} + Fe(s) \longrightarrow Fe^{2+}(aq) + Cu(s)$