Esercizio, ②

$HA \rightleftarrows H^+ + A^-$ HA = acido debole

$2x \quad x \quad x$

$[H^+] = \sqrt{K_a \cdot C_a}$

$n^\circ eq_{ZnSO_4} = \frac{N \cdot ml}{1000} = \frac{0,1 \cdot 10\ ml}{1000} = 1 \times 10^{-3}\ eq$

$n^\circ eq_{EDTA} = \frac{N \cdot ml}{1000} = \frac{0,01 \cdot 36\ ml}{1000} = 3,6 \times 10^{-4}\ eq$

(Titolazione di Anioni)

$Zn^{2+} + 2A^- \rightarrow ZnA_2$
(in eccesso)

$Zn^{2+} + EDTA \rightarrow Zn-EDTA$
(residuo)

$eq\ A^- = eq\ ZnSO_4 - eq\ EDTA = 1 \times 10^{-3}\ eq - 3,6 \times 10^{-4}\ eq =$

$= 6,4 \times 10^{-4}\ eq = x$

$eq\ HA = 2 \cdot x = 2 \cdot 6,4 \times 10^{-4} = 1,28 \times 10^{-3}\ eq$

$[HA] = C_a = \frac{eq\ HA}{V} = \frac{1,28 \times 10^{-3}\ eq}{0,025\ L} = 0,0512\ N$

$[H^+] = \sqrt{K_a \cdot C_a} = \sqrt{4 \times 10^{-10} \cdot 0,0512} = 4,525 \times 10^{-6}$

$pH = \boxed{5,34}$