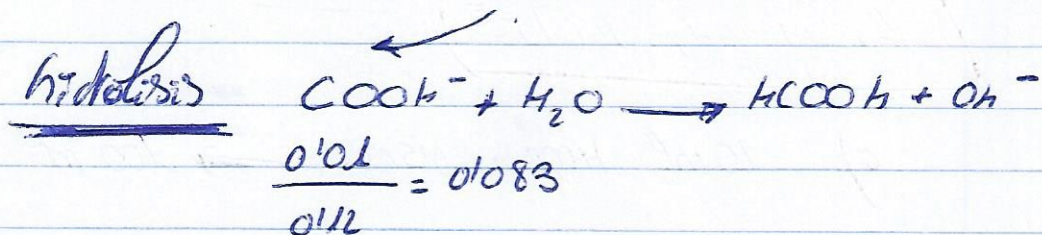


$$c) \boxed{\text{mols ácido} = \text{mols base}}$$

$$0'01 = V \cdot M = V_{\text{base}} \cdot 0'5$$

$$V_{\text{base}} = 0'02 \text{ l}$$

$$V_T = 0'1 + 0'02 = 0'12 \text{ l}$$



$$0'083 - x$$

$$x \quad x$$

$$K_h = \frac{10^{-14}}{K_a} = 6'55 \cdot 10^{-10} = \frac{x^2}{0'083 - x}$$

$$x = 6'791 \cdot 10^{-6} = [\text{OH}^-]$$

$$\boxed{\text{pOH} = -\log[\text{OH}^-] = 5'16}$$

$$\boxed{\text{pH} = 8'84}$$

$$d) \quad n(\text{H}^+) = 0'01$$

$$n(\text{OH}^-) = 0'03 - 0'5 = 0'015$$

$$\boxed{n(\text{OH}^-) = 0'005}$$

exceso

$$\text{pOH} = 2'301$$

$$\rightarrow \boxed{\text{pH} = 11'69}$$