

1. Bir asosli kislota eritmasida kislota dissotsilanishidan hosil bo'lgan barcha zarrachalar konsentratsiyasi dastlabki kislota konsentratsiyasidan 1,8 marta ko'p bo'lsa, kislotaning dissotsilanish darajasini (%) aniqlang.

- A) 80 B) 85 C) 75 D) 90

3. $pH = 11$ bo'lgan $2,5 \cdot 10^4$ ml ishqor eritmasini tayyorlash uchun necha gramm natriy gidroksid talab etiladi? ($\alpha = 100\%$)

- A) 4 B) 8 C) 1 D) 2

4. H^+ ionlari OH^- ionlaridan 10^6 marta ko'p bo'lgan $25^\circ C$ dagi suvli eritma uchun quyidagilardan qaysi(lar) to'g'ri?

- 1) $pH = 10$; 2) $[H^+] = 1 \cdot 10^{-4}$;
3) $pH < pOH$.

- A) 1, 2 B) 2, 3 C) faqat 2 D) faqat 1

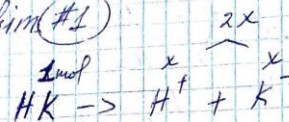
5. Konsentratsiyasi $0,5$ mol/l bo'lgan ammiak eritmasining dissotsilanish darajasini (%) hisoblang. ($K_{diss} = 2 \cdot 10^{-6}$)

- A) 2 B) 0,1 C) 1 D) 0,2

6. Konsentratsiyasi $0,5$ mol/l bo'lgan metilamin eritmasining dissotsilanish darajasi $0,2\%$ bo'lsa, dissotsilanish konstantasini hisoblang.

- A) $5 \cdot 10^{-4}$ B) $5 \cdot 10^{-5}$ C) $2 \cdot 10^{-6}$ D) $2 \cdot 10^{-5}$

Yechim #1



$$\frac{2x}{x} = 1,8 \quad 2x = 1,8x \quad x = 0,9 \quad 90\%$$

(D)

Yechim #3

$$pH = 11 \quad pOH = 3 \quad C_m(OH^-) = 0,001 M$$

$$V = 2,5 \cdot 10^4 \text{ ml} = 2,5 \cdot 10^1 \text{ l} = 25 \text{ l}$$

$$n_{NaOH} = 25 \cdot 0,001 = 0,025 \text{ mol}$$

$$m_{NaOH} = 0,025 \cdot 40 = 1 \text{ gr}$$

(C)

Yechim #4

$$H^+ \rightarrow 10^{-4} \quad OH^- \rightarrow 10^{-10} \quad 10^{-14}$$

$$pH = 4$$

$$pOH = 10$$

(B)

Yechim #5

$$\alpha = \sqrt{\frac{K}{C}}$$

$$\alpha = \sqrt{\frac{2 \cdot 10^{-6}}{0,5}} = \sqrt{4 \cdot 10^{-6}} = 2 \cdot 10^{-3}$$

$$\alpha(\%) = 2 \cdot 10^{-3} \cdot 100\% = 2 \cdot 10^{-1} = 0,2\%$$

(D)

Yechim #6

$$K = \alpha^2 \cdot C$$

$$K = (2 \cdot 10^{-3})^2 \cdot 0,5 = 2 \cdot 10^{-6}$$

$$\alpha(\%) = 0,2$$

$$\alpha = 0,002 = 2 \cdot 10^{-3}$$

(D)

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