

2018

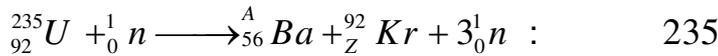
3:

1:

التمرين الأول (04 نقاط)

235

.  $E_n = 2,16.10^{14} j$  :->



(1)

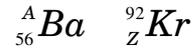
- ب

- ج

. Z A

(2)

⑤ ④ ③ ② ①



$|\Delta E|$

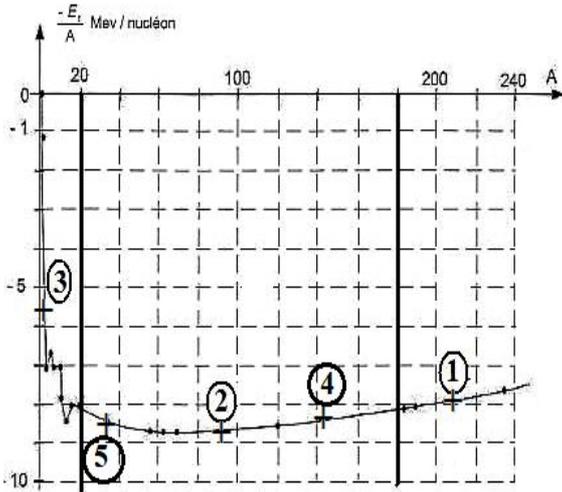
MeV

(3)



.  $E_n = 2,16.10^{14} j$  :

(4)



${}_0^1n$	${}_{92}^{92}Kr$	${}_{56}^A Ba$	${}_{92}^{235}U$	
1,0087	91,9064	140,8837	234,9935	(u)

$1MeV = 1,6.10^{-13} j$  ;  $N_A = 6,02.10^{23} mol^{-1}$  ;  $1u = 931,5MeV.c^{-2}$  ;  $M({}^{235}U) = 235g.mol^{-1}$

التمرين الثاني: (06 نقاط)

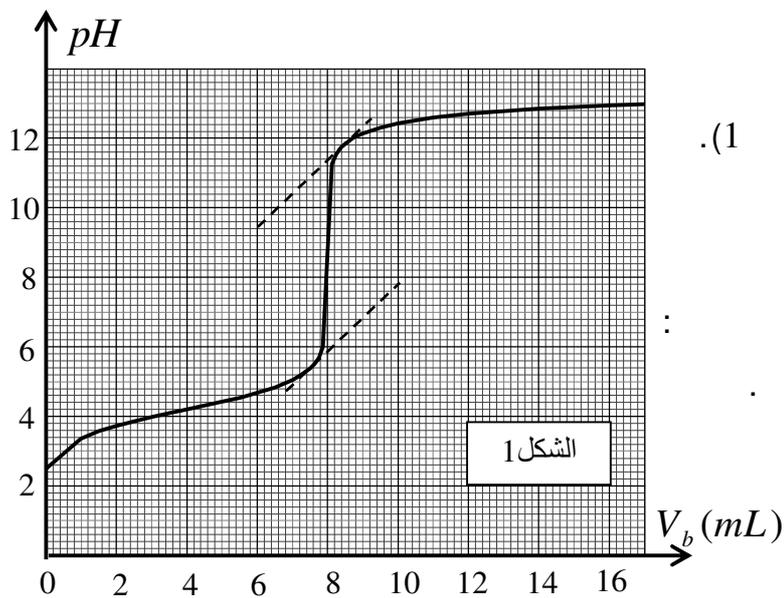


c V = 20mL

(S)

.  $c_b = 0,4mol.L^{-1}$

(1)



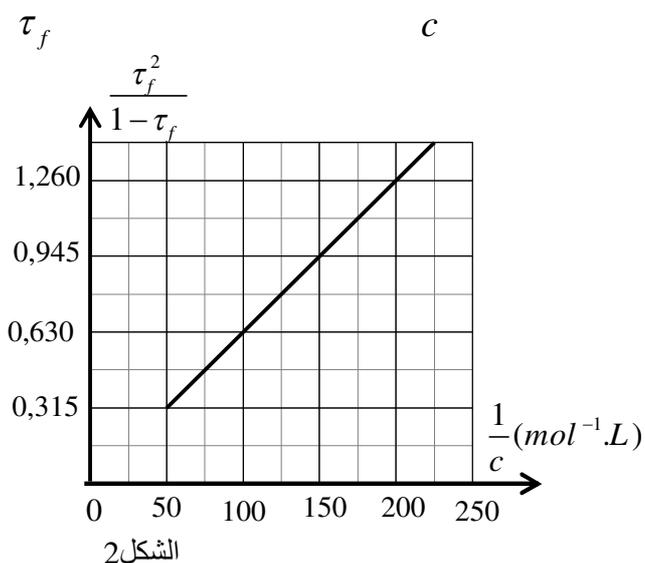
الشكل 1

(2)

$V_b$

(3)

	3,2 – 4,4
	8,2 – 10



الشكل 2

(4)

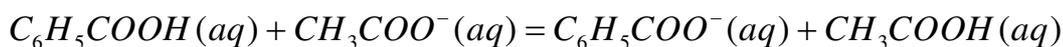
$$\frac{1}{c} \cdot \frac{\tau_f^2}{1 - \tau_f} = 2 \cdot pK_a$$

$$n_0 = 3 \text{ mmol}$$

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(5)

$$V = 100 \text{ mL}$$



$$\sigma = 255 \text{ mS} \cdot \text{m}^{-1}$$

$$x_f = \frac{\sigma \cdot V - n_0(\lambda_1 + \lambda_3)}{\lambda_2 - \lambda_3}$$

$$n_0 \cdot x_f$$

K

$$: \text{mS} \cdot \text{m}^2 \cdot \text{mol}^{-1}$$

25°C

$$\lambda_3 = \lambda_{\text{CH}_3\text{COO}^-} = 4,1 \quad \lambda_2 = \lambda_{\text{C}_6\text{H}_5\text{COO}^-} = 3,2 \quad \lambda_1 = \lambda_{\text{Na}^+} = 5$$

