

# Semana 05 - Química

## 88 Principio de Exclusión de Pauli

	n	l	m	s
Electrón 1	4	1	0	+1/2
Electrón 2	4	1	0	-1/2

1↓ Antiparalelos

1↓ 1↓ 1↓ 7↓ 1↓  
-2 -1 0 +1 +2

89 <sup>43</sup>Tc  
Z = 43

[Kr]: 5s<sup>2</sup> 4d<sup>5</sup> { P=5  
G=VIIIB

90 VIA  
(F) Calcógenos : 3s<sup>2</sup> 3p<sup>2</sup>  
[ Anfígenos ]  
[ Chalcógenos ]  
[ Formadores de yeso ]

(F) Metal Alcalino : 1s<sup>2</sup> H

(F) Alcalino Terreo : 1s<sup>2</sup>

91 CO<sub>2</sub> → PM = 44  
Condiciones Normales

P = 1 atm T = 273 K

$$P \cdot V = R \cdot T \cdot n$$

$$P \cdot V = R \cdot T \cdot \frac{m}{PM}$$

$$P \cdot PM = R \cdot T \cdot \frac{m}{V}$$

$$\frac{P \cdot PM}{R \cdot T} = \frac{m}{V}$$

$$\frac{1 \cdot 44}{0.082 \cdot 273}$$

$$196 \text{ g} = \frac{m}{V}$$

$$PM = 12x + 6L$$

$$2C_xH_6 + 2xO_2 \rightarrow 2xCO_2 + 6H_2O$$

$$D.P. 0.7g \rightarrow 1.12L$$

$$D.E. 24 \times 1.12 \rightarrow 2x(22.4)L$$

$$X = 3$$

$$Rpta: C_3H_6$$

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$$Rpta: C_3H_6$$

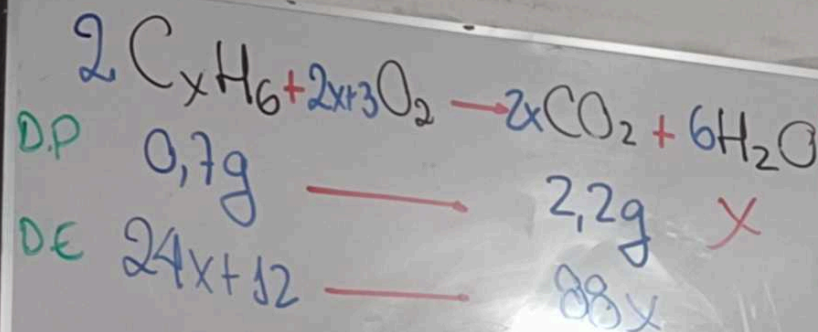
$$Rpta: C_3H_6$$

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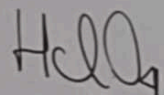
$$Rpta: C_3H_6$$

$$Rpta: C_3H_6$$



$$x = 3$$

92



$$V = 500 \text{ mL} \approx 0,5 \text{ L}$$

$$N = 0,2 = 0,2 \text{ M}$$

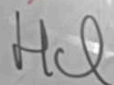
$$\Theta = 1$$

$$N = n \cdot \Theta$$

$$M = \frac{n_{\text{sto}}}{V_{\text{sol}}}$$

$$n_A = 0,2 \times 0,5$$

$$n_A = 0,1$$



$$V = 500 \text{ mL} \approx 0,5 \text{ L}$$

$$N = 0,3 = 0,3 \text{ M}$$

$$\Theta = 1$$

$$n_B = 0,3 \times 0,5$$

$$n_B = 0,15$$

$\therefore$  Calcular el # moles totales

$$n_T = n_A + n_B = 0,25$$

$\therefore$  Hallar la Molaridad de la mezcla

$$M = \frac{n_T}{V_T} \Rightarrow M = \frac{0,25}{2,5} = 0,1 \approx 1 \times 10^{-1}$$

$$pH = -\log[1 \times 10^{-1}]$$

$$pH = +1 - \cancel{1} \log 1 = 1$$

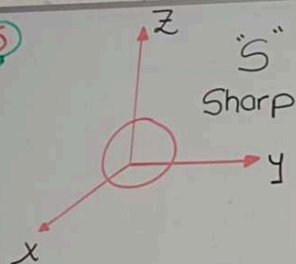
$$C_1 V_1 + C_2 V_2 = C_M V_M$$

$$(0,2)(0,5) + (0,3)(0,5) = C_M \times 2,5$$

$$10^{-1} = C_M$$



5



I. (F)

$n = 0, 1, 2, 3, 4, \dots$

II. (F)

15

III. (V)

Subsidiario

$l \rightarrow$  Subnivel

s(0)

p(1)

d(2)

f(3)

N(F)

6

$$1p^+ = 2\text{up} + 1\text{dow}$$

$$10 = 20\text{up} + 10\text{dow}$$

$$1n^0 = 1\text{up} + 2\text{dow}$$

$$12 \rightarrow 12\text{up} + 24\text{dow}$$

$$n^0 = 12$$

$$(A - Z) = 12$$

$$A^2 - Z^2 = 384$$

$$(A + Z)(A - Z) = 384$$

$$(A + Z)(12) = 384$$

$$A + Z = 32$$

$$A - Z = 12$$

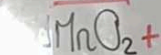
$$A = 22$$

$$Z = p^+ = 10$$

31

Re

$$PM = 87$$



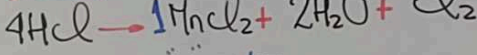
$$O.P. 100g$$

$$D.E. 87g$$

$$1,14$$

Re

$$PM = 36,5$$



$$146g \rightarrow 1 \text{ mol}$$

$$1,02$$

$$146x = 150$$

$$x = 1,03 \text{ moles}$$

C ✓  
O ✓  
N ✓  
S ✓  
T ✓  
A ✓  
N ✓  
C ✓  
F ✓  
A ✓