

PRÉTEST
SCP 4012-2

PHÉNOMÈNES IONIQUES : HISTOIRE D'EAU

CORRIGÉ

FORME D
Seuil de réussite de 75%

Dimension 1

QUESTION 1 (3 pts) #1

A,C et E

QUESTION 2 (3 pts) #2

B,C,D et E

QUESTION 3 (2 pts) #3

1 avec D

2 avec B

3 avec A

4 avec C

Dimension 2

QUESTION 4 (2 pts) #1

Nom	Représentation électronique	Famille	Période
	$2e^-, 8e^-, 3e^-$	III A	3 ^e
Calcium	$2e^-, 8e^-, 8e^-, 2e^-$		
Soufre		VI A	3 ^e

QUESTION 5 (4 pts) #2

- a) Sulfite de magnésium $MgSO_3$
Phosphate de sodium Na_3PO_4
Nitrate d'aluminium $Al(NO_3)_3$

- b) Dichlorure de magnésium $MgCl_2$
Difluorure de zinc ZnF_2
Monoxyde d'azote NO

QUESTION 6 (2 pts) #3

- a) Na_2CO_3
- b) $\text{Ca}(\text{OH})_2$
- c) BeSO_3
- d) $\text{Mg}_3(\text{PO}_4)_2$

QUESTION 7 (4 pts) #4

Acides Libère des H^+

HCl et H_2SO_4

Bases Libère des OH^-

NaOH et KOH

QUESTION 8 (5 pts) #5

- a) Solution
- b) Solution solide
- c) Composé
- d) Solution
- e) Élément
- f) Mélange mécanique
- g) Élément
- h) Composé

Dimension 3

QUESTION 9 (6 pts) #1

- a) C,D et F
- b) Aucun
- c) B,D et E D et E même isotope
 A,C et F
- d) A,B et E

QUESTION 10 (3 pts) #2

$$\text{a) } C = \frac{m}{V} = \frac{10\text{g}}{0,5\text{L}} = 20\text{g/L}$$

$$\text{b) } C = \frac{m}{V} = \frac{51,5\text{g}}{2\text{L}} = 25,75\text{g/L}$$

$$\text{c) } C = \frac{m}{V} = \frac{800\text{g}}{30\text{L}} = 26,6\text{g/L}$$

$$\text{d) } C = \frac{m}{V} = \frac{25,75\text{g}}{0,5\text{L}} = 51,5\text{g/L}$$

Rép. D, C, B et A

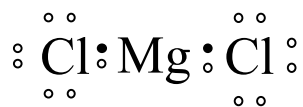
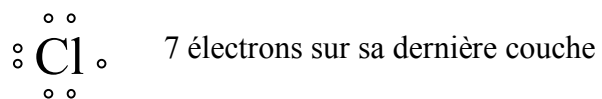
QUESTION 11 (4 pts) #3

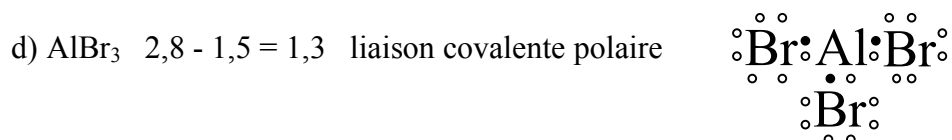
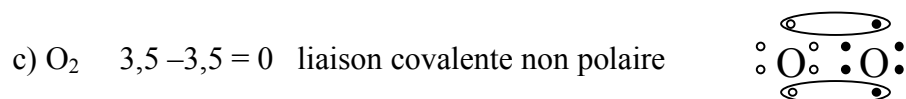
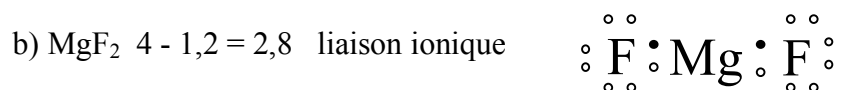
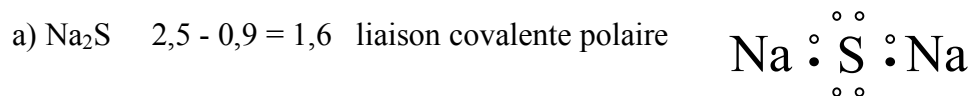
- a) pH = 3
- b) pH = 5,9
- c) pH = 8,3
- d) pH = 7

Rép. A, B, D et C

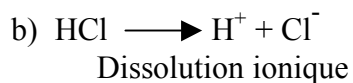
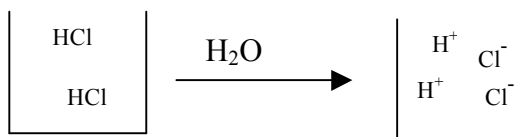
Dimension 4

QUESTION 12 (3 pts) #1

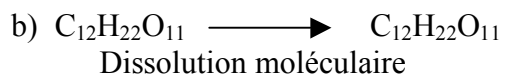
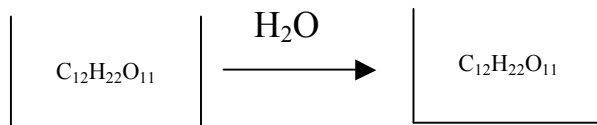


QUESTION 13 (4 pts) #2**QUESTION 14** (1 pt) #3

a)

**QUESTION 15** (2 pts) #4

a)



QUESTION 16 (3 pts) #5

- a) LiF
- b) Mg₂C
- c) F₂

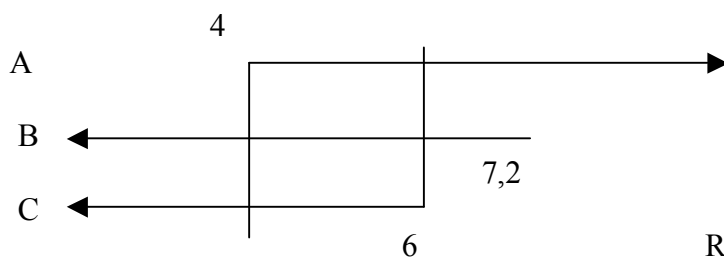
QUESTION 17 (5 pts) #6

- a) $2\text{C}_2\text{H}_2 + 5\text{O}_2 \longrightarrow 4\text{CO}_2 + 2\text{H}_2\text{O}$
- b) $\text{N}_2\text{H}_4 + \text{O}_2 \longrightarrow \text{N}_2 + 2\text{H}_2\text{O}$
- c) $2\text{Na} + 2\text{H}_2\text{O} \longrightarrow 2\text{NaOH} + \text{H}_2$
- d) $2\text{NaHCO}_3 + \text{H}_2\text{SO}_4 \longrightarrow \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O} + 2\text{CO}_2$
- e) $\text{Na}_2\text{CO}_3 + \text{CaCl}_2 \longrightarrow 2\text{NaCl} + \text{CaCO}_3$

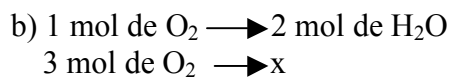
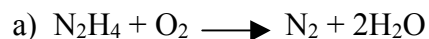
QUESTION 18 (6 pts) #1

- a) Les acides A et B
- b) Les bases E
- c) Les sels C
- d) Les électrolytes forts A et E
- e) Les non-électrolytes D

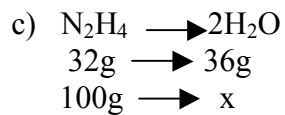
QUESTION 19 (4 pts) #2



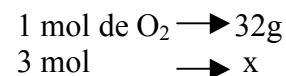
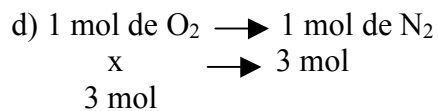
Rép. $4 < \text{pH} < 6$

QUESTION 20 (5 pts) #3

Rép. 6 moles



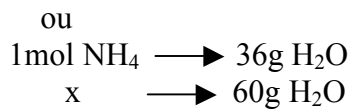
Rép. 112,5g



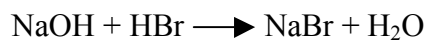
Rép. 96g



Rép. 1,65 mol



Rép. 1,67 mol

QUESTION 21 (4 pts) #4

base acide sel eau