

PÉRIODES
LIGNES

$\square = s$
 $\square = p$
 $\square = d$
 $\square = f$

alcalins
 alcalino terreux
 transition
 métalliques

ORONE
NO ATOM
↑
(n-1) d

1	2											18		
3	4											18		
11	12											18		
19	20	3d	21	22	23	24	25	26	27	28	29	30	3d	18
37	38	4d	39	40	41	42	43	44	45	46	47	48	4d	18
55	56	5d	71	72	73	74	75	76	77	78	79	80	5d	18
87	88	6d	103	104	105	106	107	?					6d	18

5	6	7	8	9	10
13	14	15	16	17	18
31	32	33	34	35	36
49	50	51	52	53	54
81	82	83	84	85	86

COLONNES
 1 n
 2 n
 3 n
 4 n
 5 n
 6 n

IUPAC

57	71	73	60	61	62	63	64	65	66	67	68	69	70
89	89	91	92	93	94	95	96	97	98	99	100	101	102

lanthanides

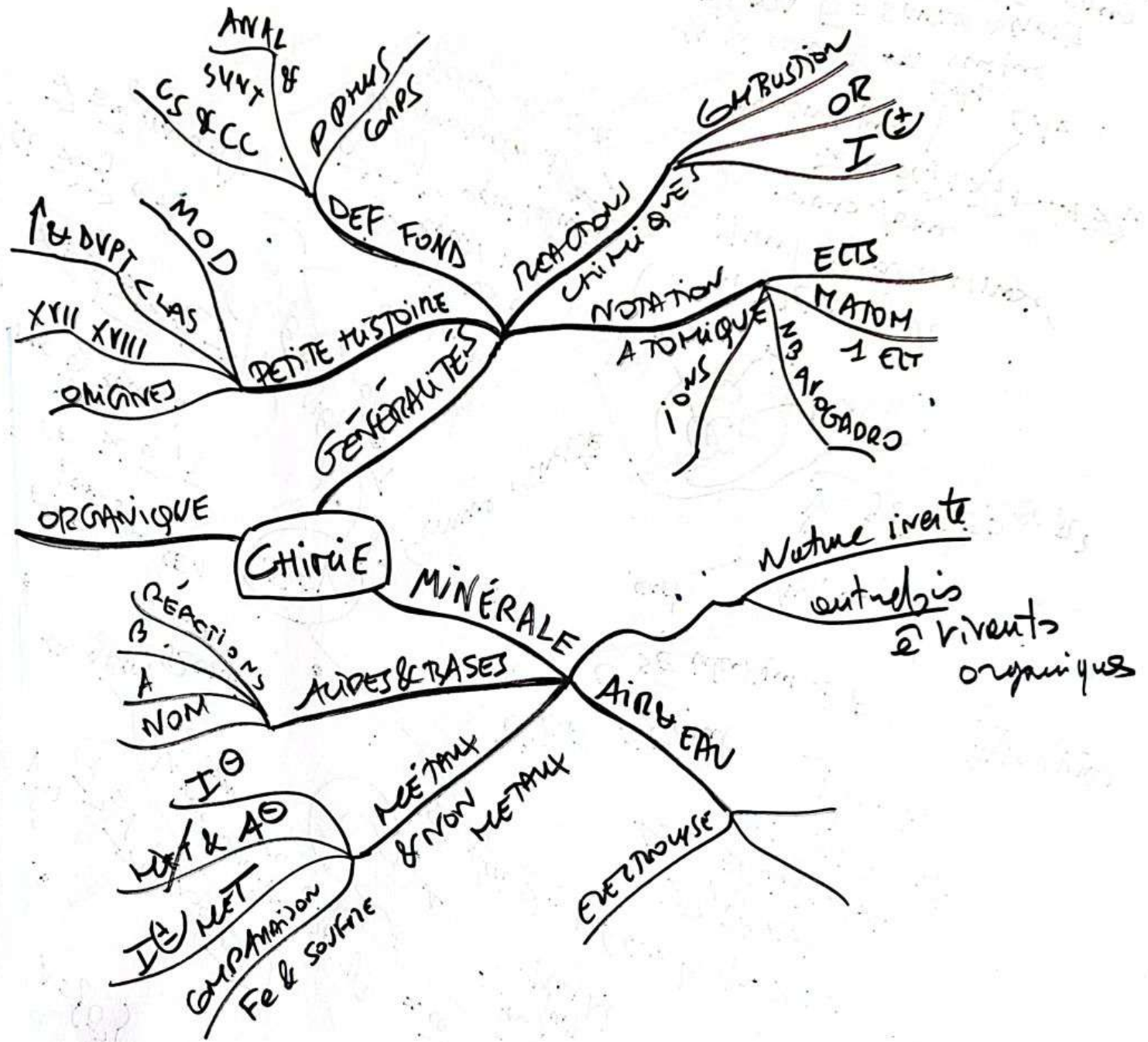
actinides

metalloïdes

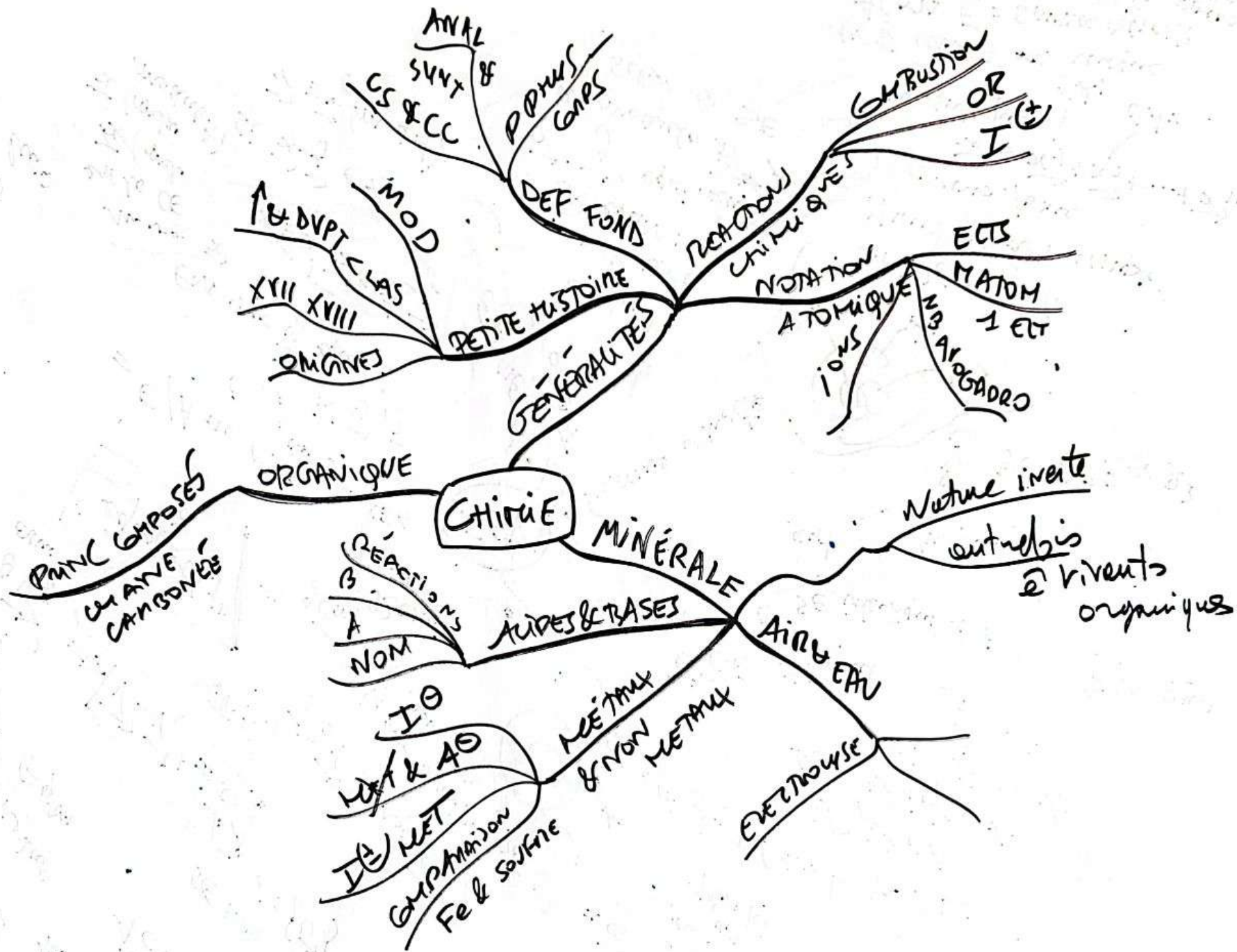
HALOGENES
 HYDRAIDES
 HF HCl HBr HI

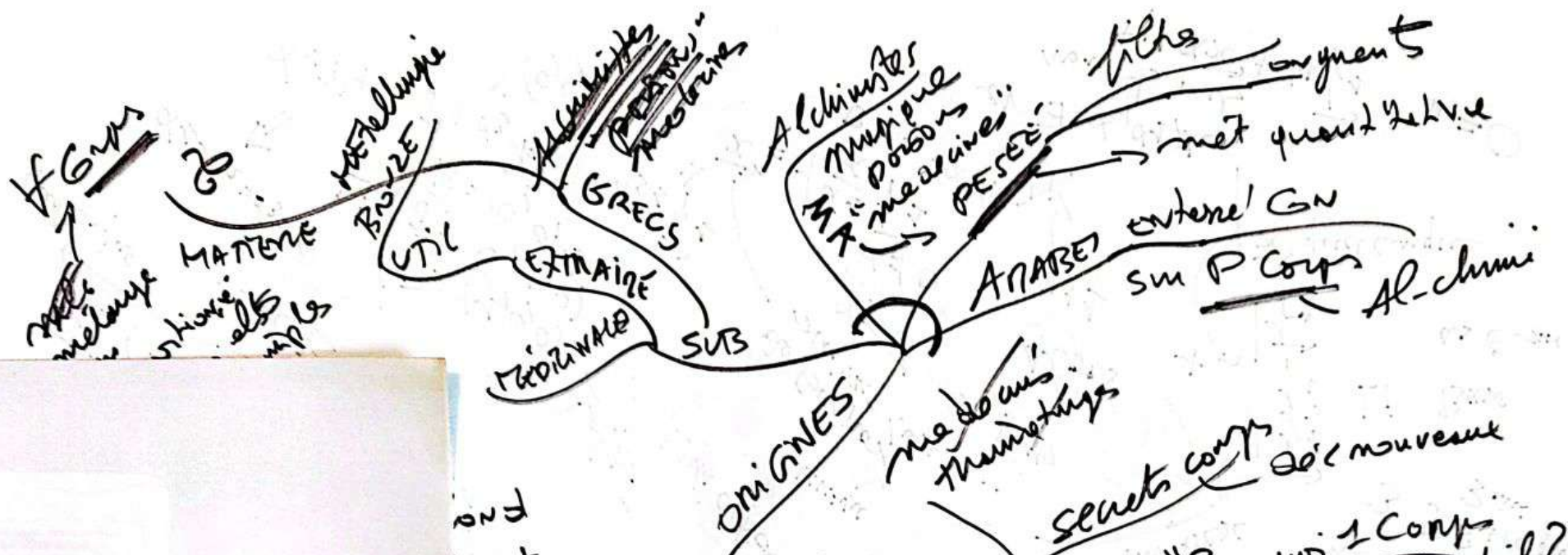
GAZ NOBLES
 Mono atomiques
 stables

MET ALCAINS
 OXYDES $Li_2O, Na_2O, K_2O \dots$
 BASES $LiOH, NaOH, KOH \dots$

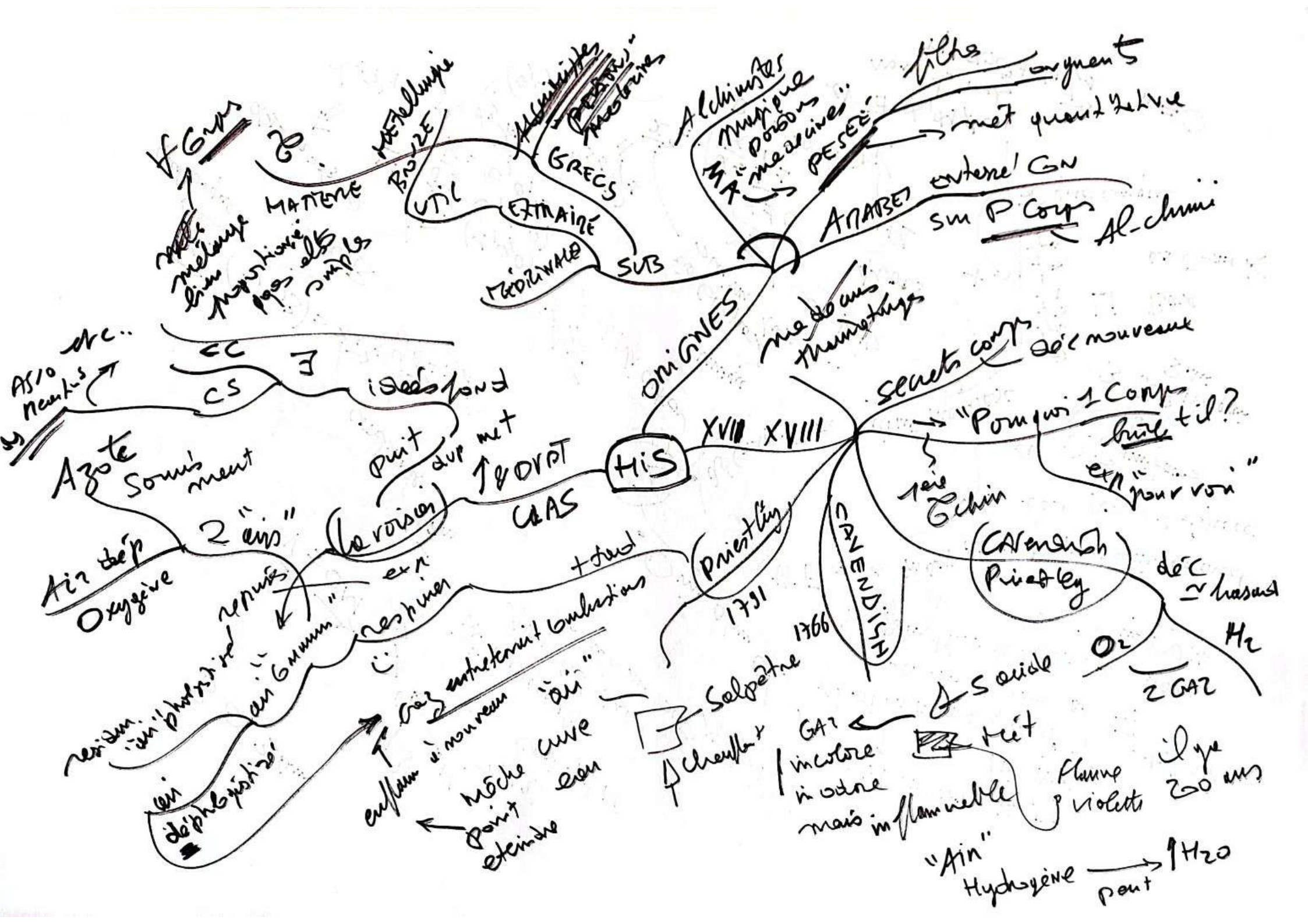


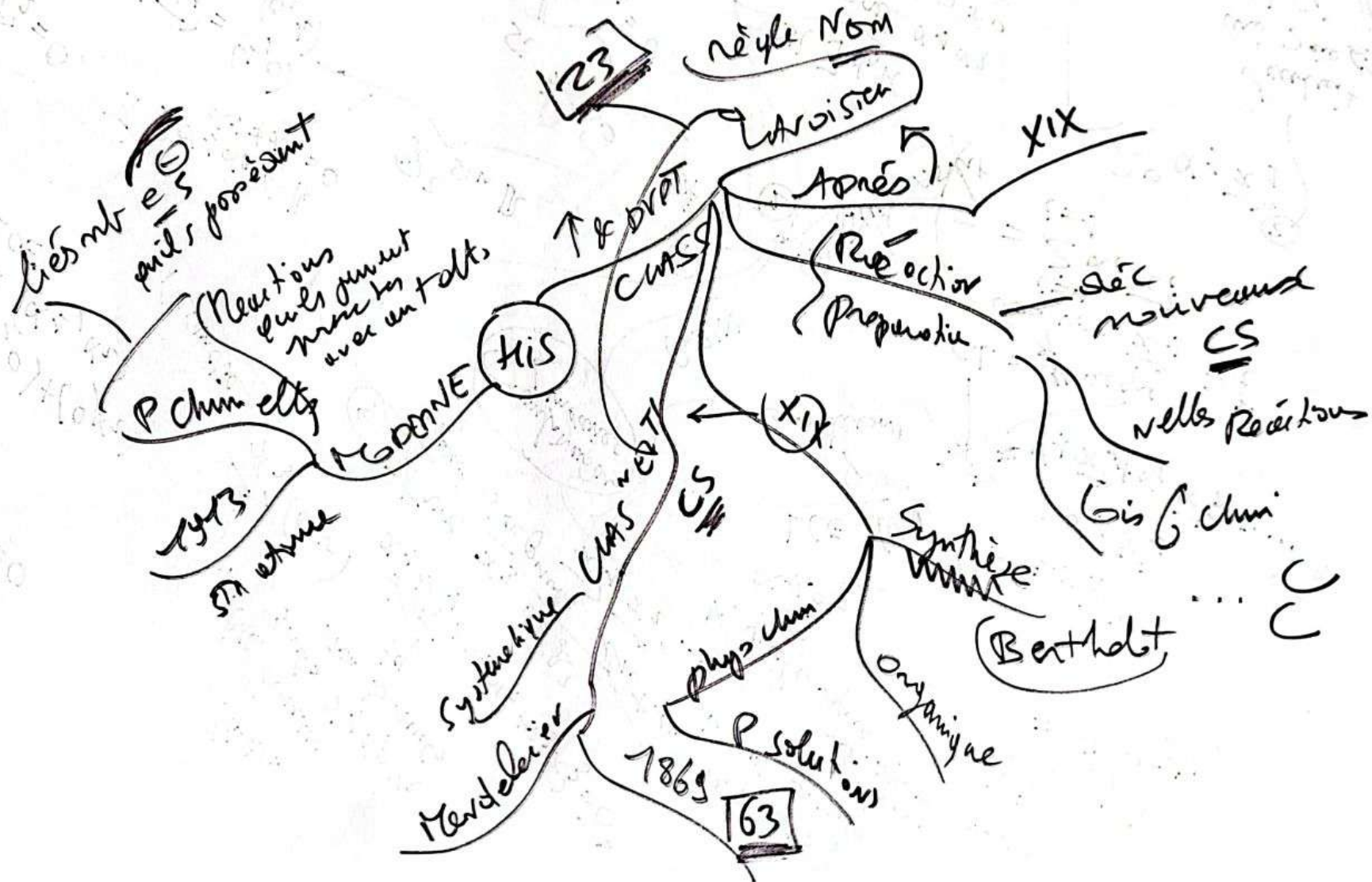
CARACTÈRE TOUT EN 1
CHIMIE



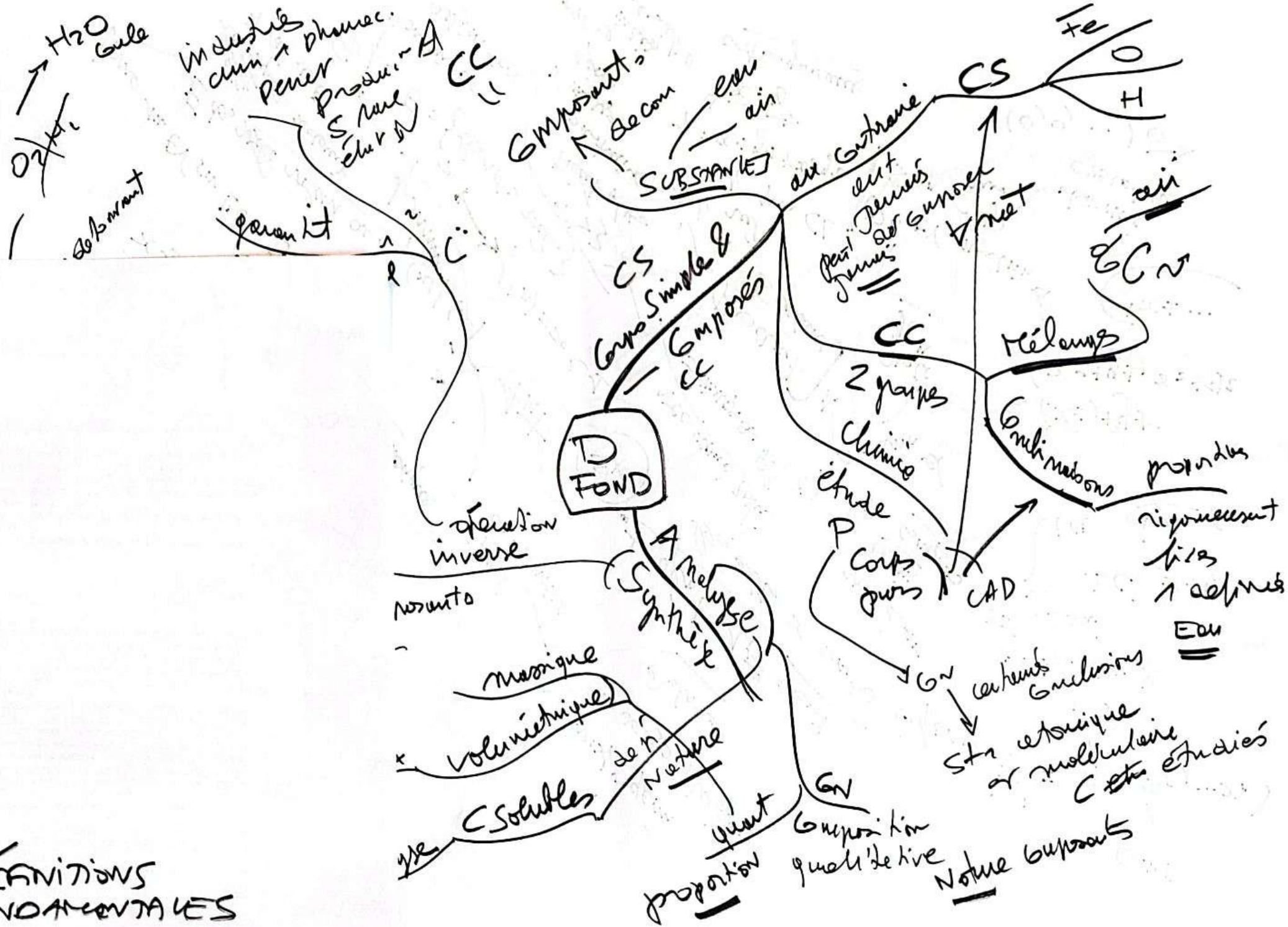


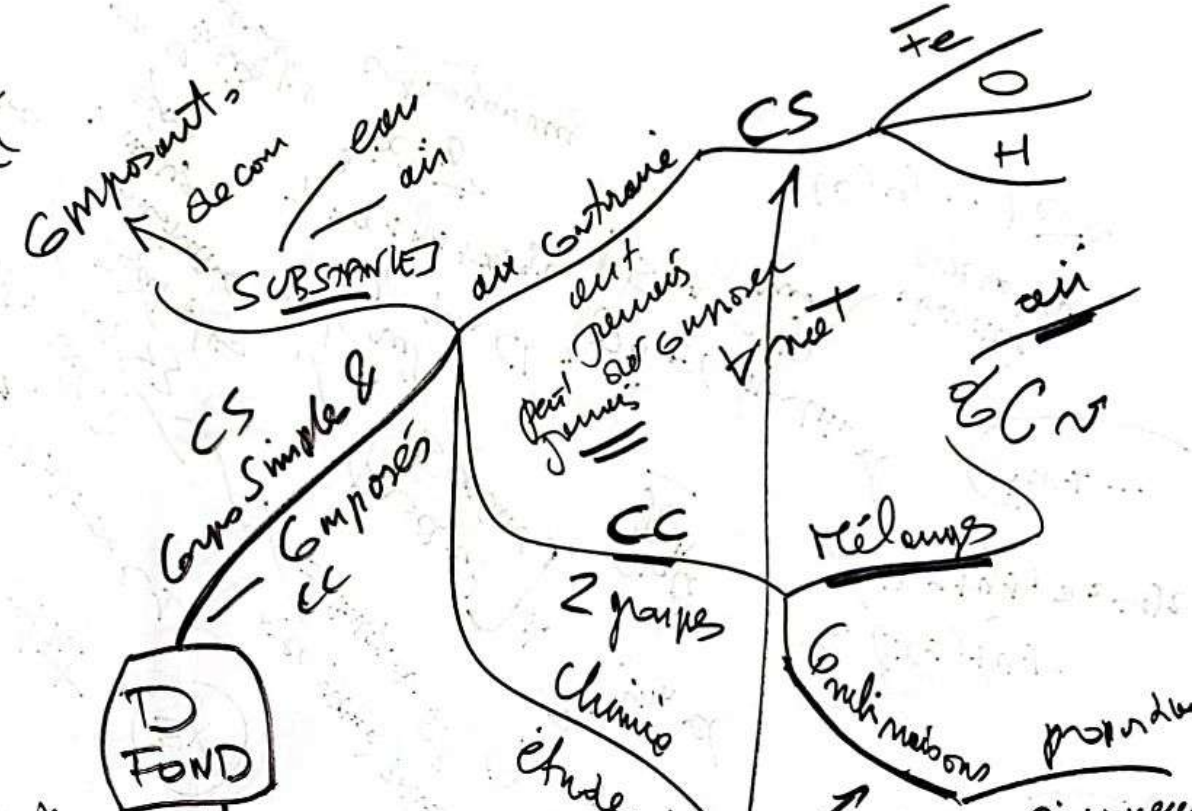
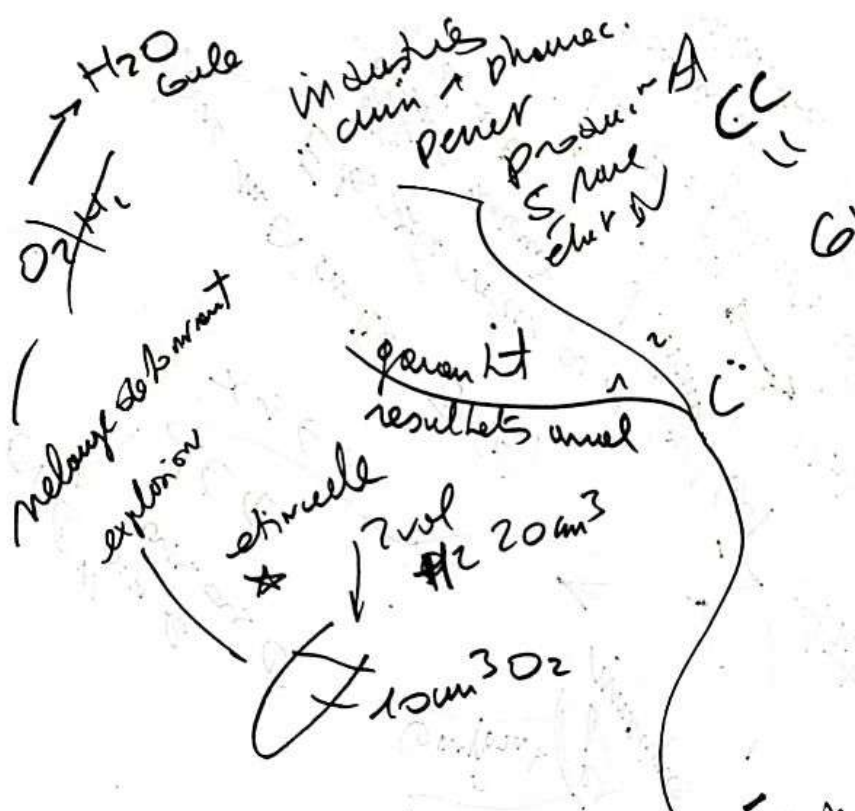
HISTOIRE



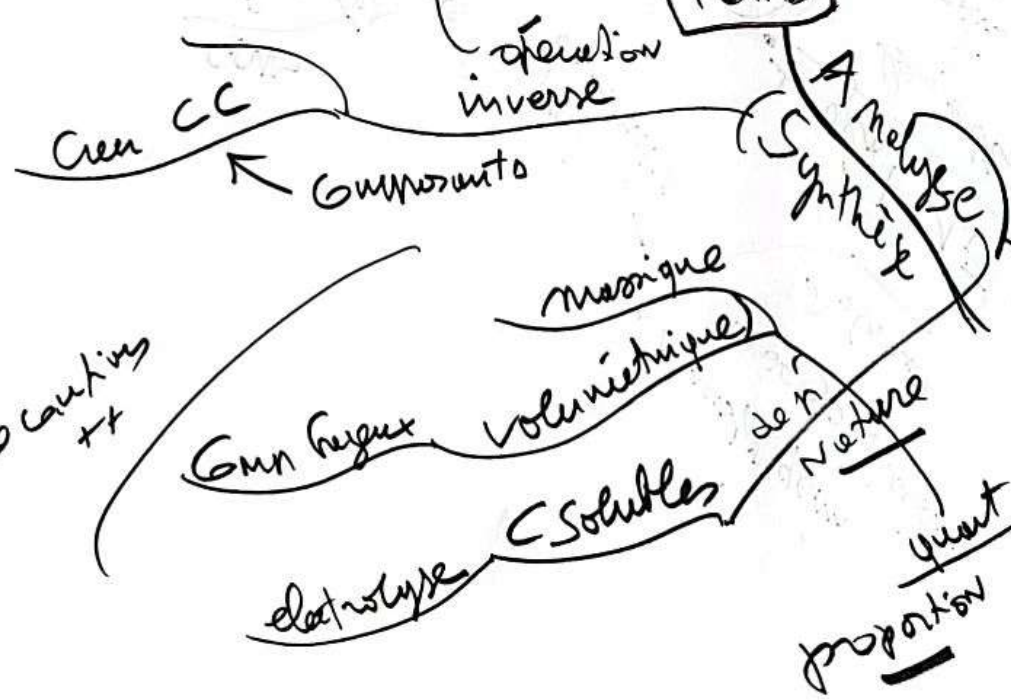


DEFINITIONS FONDAMENTALES





D FOND



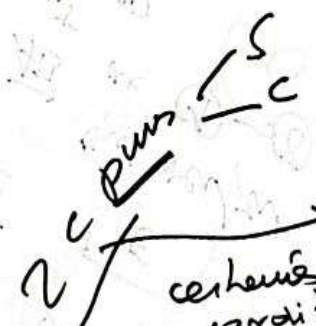
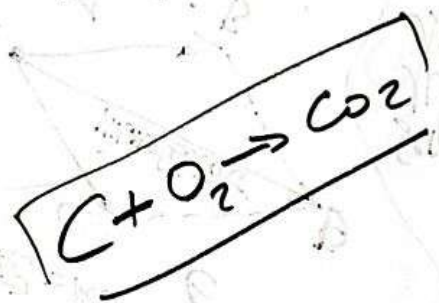
no cartons

produits
 rigoureusement
 liés
 1 adhésif
 Eau



REACTIONS CHIMIQUES

REACTIONS CHIMIQUES



Nouveaux C
+
S₁ S₂ ... S_n obtenus

COMBUSTION = transformation chimique en présence O₂

lente *
vive *
J'en connais beaucoup
Contenu de l'air
typologie de flamme
allumette

Alcool
gaz
pétrole
dérivés
Charbon
Sulfure
Sulfure

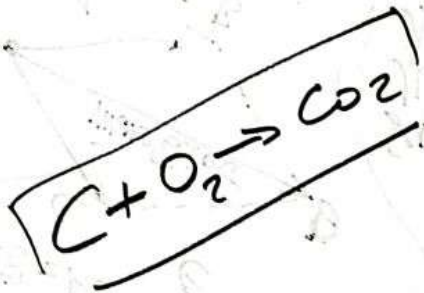
Combustion
O₂ initiation

Carburant
J'en connais beaucoup
entièrement

O₂ Comburent
ouvert

TO





O₂ Comburent ouvert

2C purs $\begin{matrix} \swarrow S \\ \searrow C \end{matrix}$

Nouveaux C
 $S_1 + S_2 \rightarrow S_3$
 +
 obtenues

REACTIONS CHIMIQUES

COMBUSTION = transformation chim. en présence O₂



gaz incol CO₂

eau douce trouble

eau + terre incandescente



Essence

Tous ces gaz capables de former des combustions

Comburent

O₂ incolor

S susceptible "brûle"

lente *

vire *

J'arrive à bruler l'air
 tous les bruleurs
 typ. flamme allumette

(H₂)

(Carburant)

Alcool

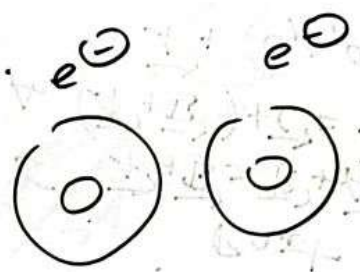
gaz pétrole dérivés

Charbon

Soufre

Combustibles

Combustion



CP

Reduction
Oxidation
Reduction
Oxidation

part e^-
gain e^-

entru ces 2
abone

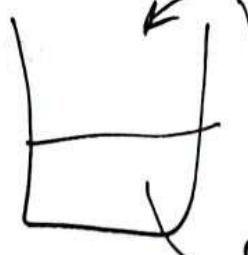
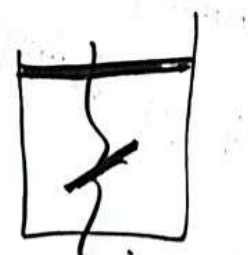
nerdu
 e^-

- 1) $C \rightarrow e^-$
- 2) $O \leftarrow e^-$
- 3) CO_2

prosu
or wh
 $C=O$

Fenu
chene
hipide

trudo
blanc



React
Chim

Ions

$A \rightarrow e^-$
electropin

$A \leftarrow$
negot

- 1 C^+
- 2 O^-
- 3 S^2-

CP Grup C in like

3 ent acceptors
 e^-

ent
que or

NOTATION ATOMIQUE

de $C = 12g$
 masse $C = 12$
 et C $6,022 \times 10^{23}$
 Atoms C

de grammes d'une mole
 soit = masse molaire
 et $6,022 \times 10^{23}$

Atome d'un CS
 5yB cm

U Z O B L E Z B N S

NOTATION ATOMIQUE

MASSE ATOMIQUE
 D'un ELT

Ss
 A = NA
 B
 A

radioactif

12,01115

~~C = 12~~

12,01115
 12
 0,01115

Unité MA

Atome
 S = 32

de pour me
 32 unités de me de pour une
 = 32,064 une une
 = 1,00794

H = 1

12 parties
 de la masse

Def

+ 6 unités

un autre C stable

$\text{mole de C} = 12\text{g}$
 puisque $C = 12$
 et $\text{C} = 6,022 \times 10^{23}$

Schémas de tels sont le nr de gramme d'une mole
 soit = masse molaire
 et $6,022 \times 10^{23}$

Atoms d'un CS
 5 x 10²³ atom

U Z O B E T Z B N N S

masse d'une mole = $6,022 \times 10^{23}$
 NA = $6,022 \times 10^{23}$
 NA = $6,022 \times 10^{23}$

NOTATION ATOMIQUE

MASSE ATOMIQUE

DU ET

Stable + Radioactif

$12,01115$

$C = 12$

nr d'une mole

Unité MA

Atome S = 32

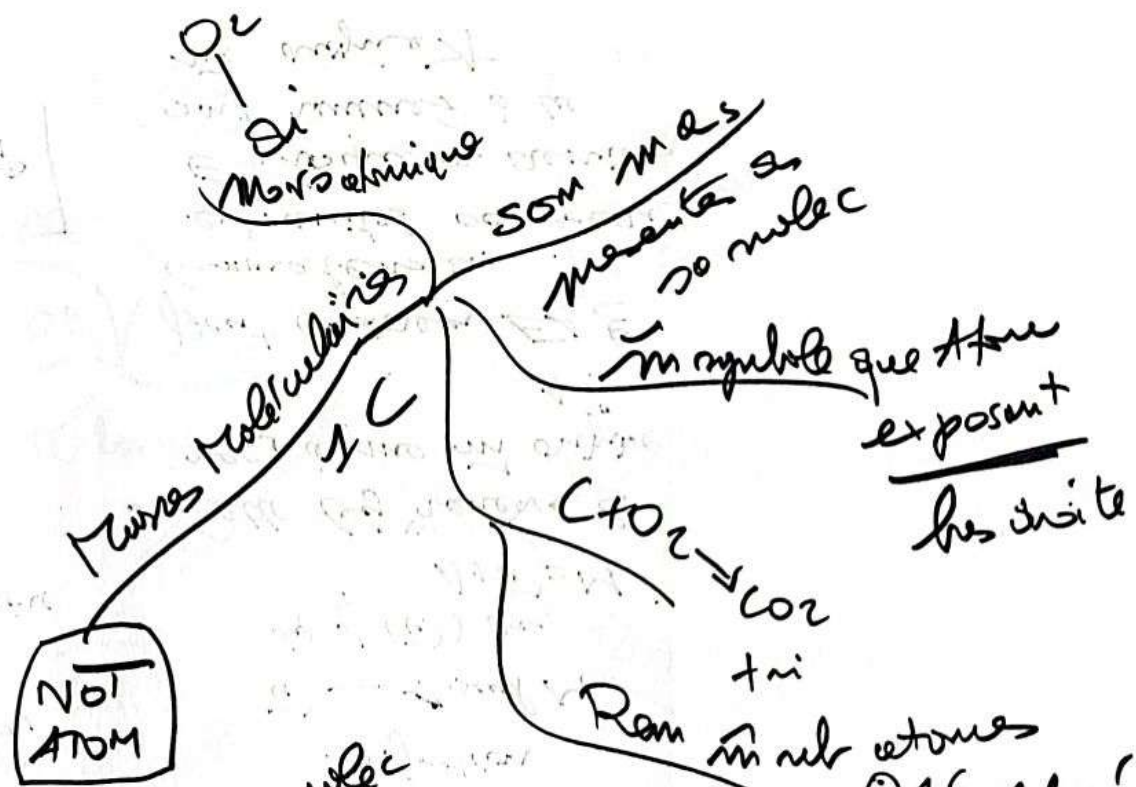
pour ma
 32 unités de ma et pour une
 = $32,065$ une mole
 = $(1,00794 + 6)$

H = 1

Def

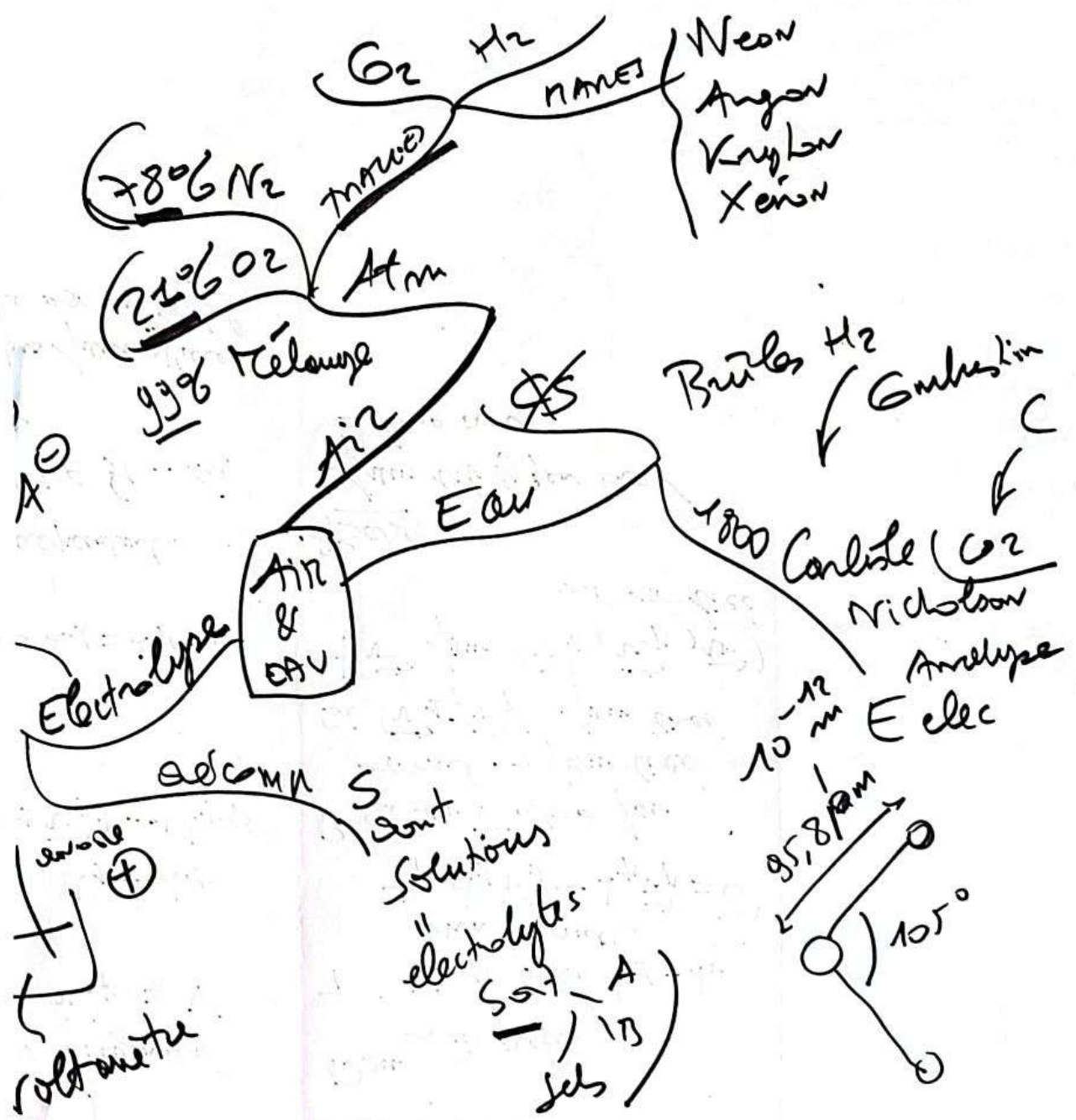
souziens
 de la masse

un autre C stable

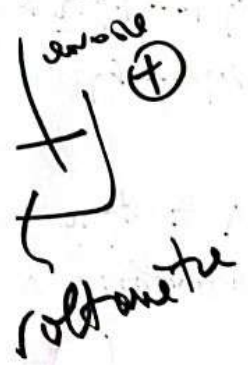


Notation molec
 4 gas CS
 Formule mole
 er man
 molec.

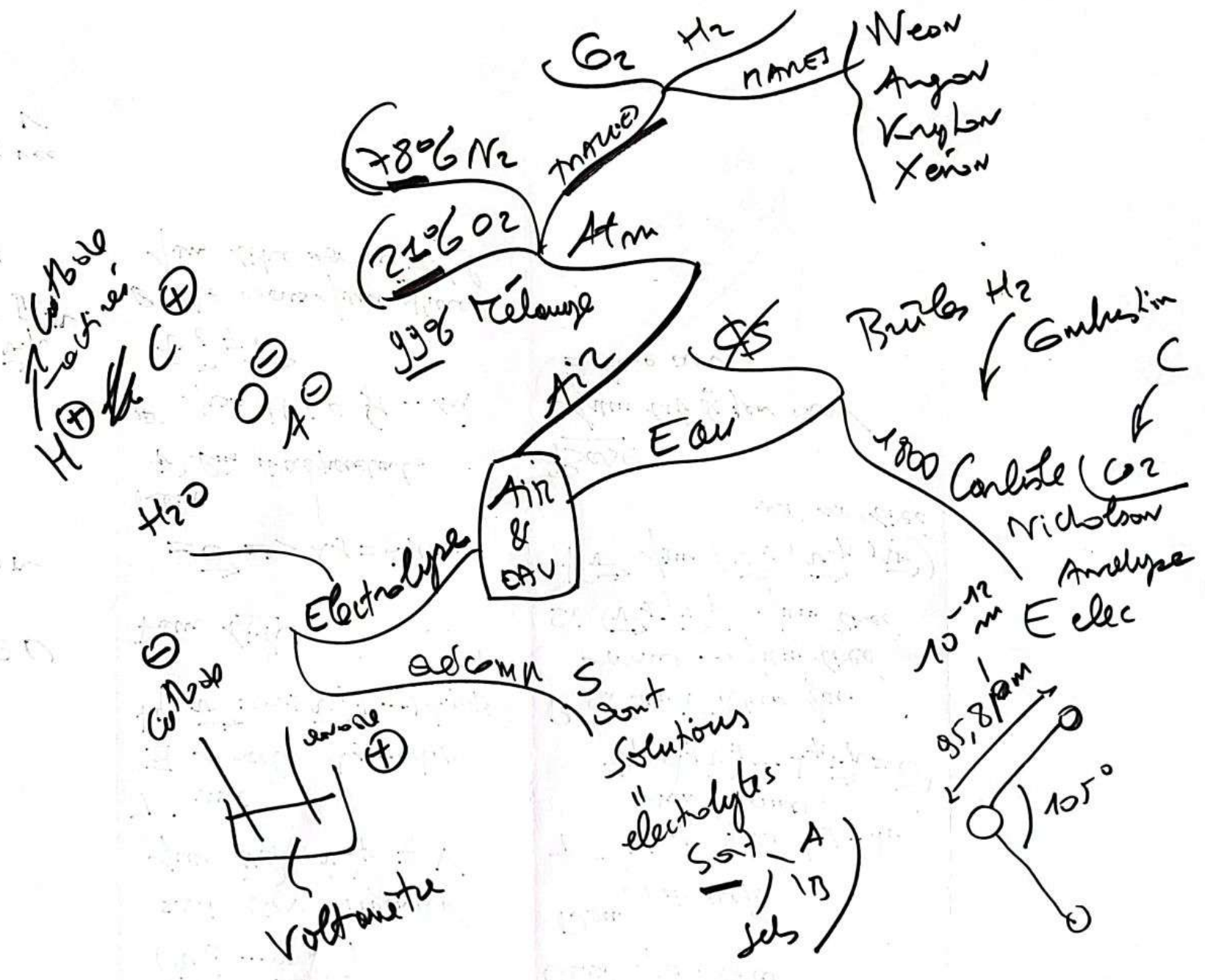
El	Sumit 1 mole mole	H ₂ = 2 N ₂ = 28
H	H = 1	} di
O N	N = 14 O = 16 Q = 35,5	
C S	= 12 = 32	} mono



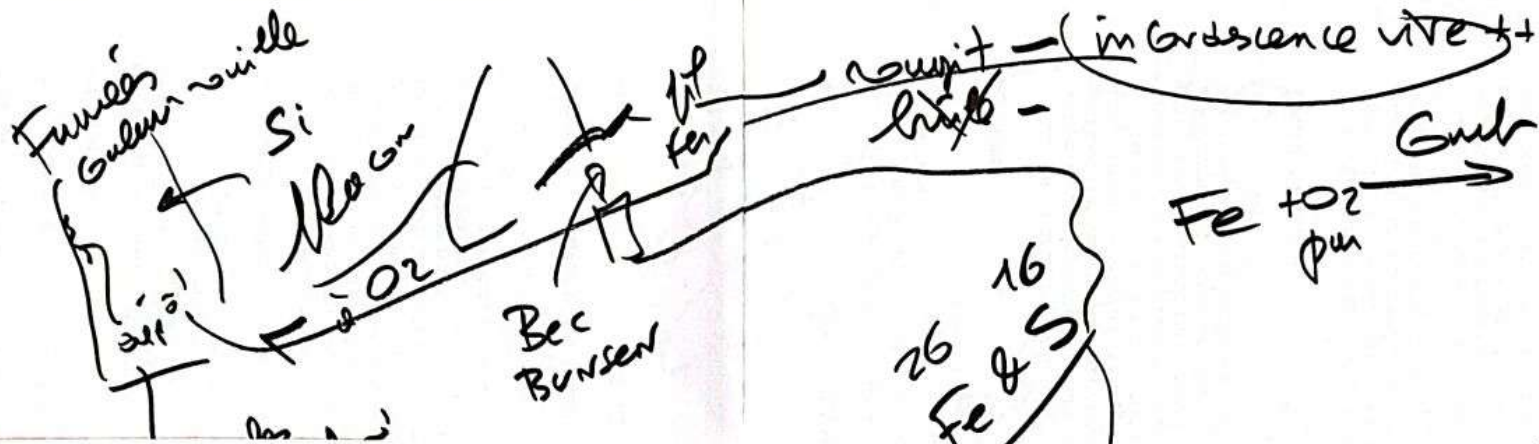
Solutions
 " electrolytes
 Sol - A
 - / B
 Jels



AIR & O₂



Faint handwritten notes on the left side of the page, including the word "Coulometer" and other illegible text.

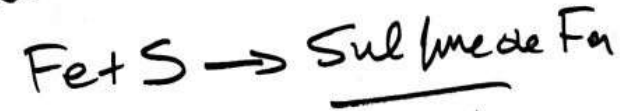


MET & NON MET

26 16
Gmparons Fe & S



Caluse
Chauffer
2 poudres

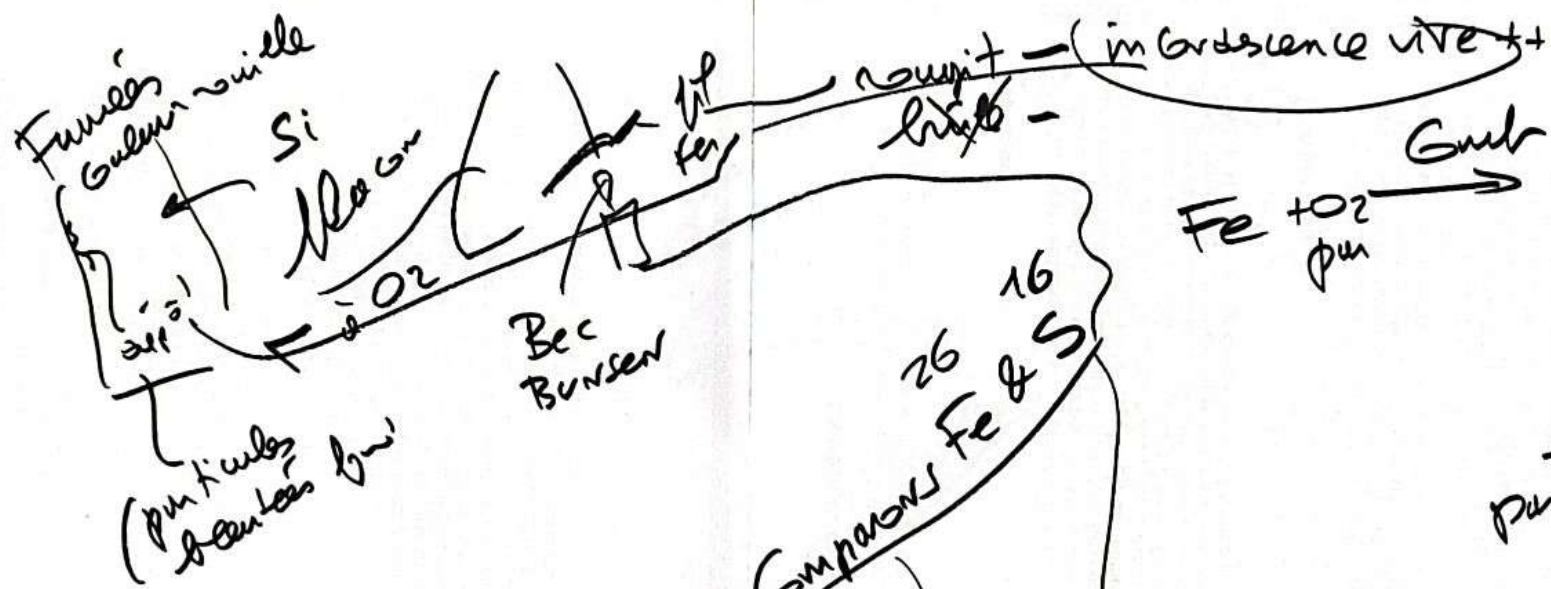


Non
estylé par amin ent

~~X~~ ~~X~~

Fe + ant corps
→ Chlore a fe
Iodine

MET & NON MET



$Fe + O_2 \xrightarrow{\text{par}}$ fumes sulfuriques
 " Oxide Ferrique
 + particules Bleues
 Oxide Magnétique

MET
&
NON MET

26 16
Fe & S

$Fe + O_2 \rightarrow$ oxide ferrique + oxide magnétique
 $S + O_2 \rightarrow$ di oxide de soufre + tri oxide de soufre

Balance
 Chauffage
 2 poudres

$Fe + S \rightarrow$ Sulfure de Fe

Non étiqueté pour aminant

~~S~~ ~~Fe~~

classe
 CS
 2 wet
~~AC~~ C⁺
 Métaux
 tendre ne fixer e⁻
 NON métaux
 Métalloïde

$S \rightarrow I^-$
 $Fe \rightarrow Fe^+$
 2 OR

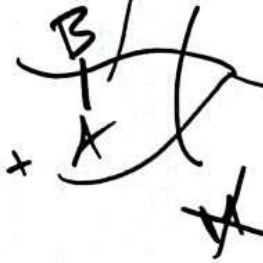
Fe + aut corps
 → Chlorure a Fe
 Iodure

CO₂ SO₂ SO₃

Bases

très acide e⁻
Or qui se comb.
avec les
que rest

M⁺
en



des
rest
M

Soit



entp
ent
les cations
peuvent
prohiber

MET
&
NONMET

3 main
1 seul M⁺

Certains M
ions métalliques

Na⁺
Ag⁺
art + 2 Cu⁽²⁺⁾
Zn⁽²⁺⁾

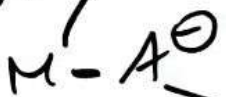
n^{ns}
Cu⁺ cuivreux
Cu⁽²⁺⁾ cuprique

Fe⁽²⁺⁾ fer
Fe⁽³⁺⁾ fer

Zn⁽²⁺⁾

M-M oxy

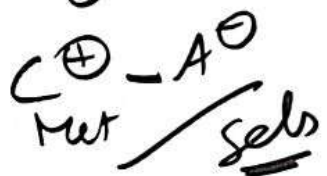
Aussi

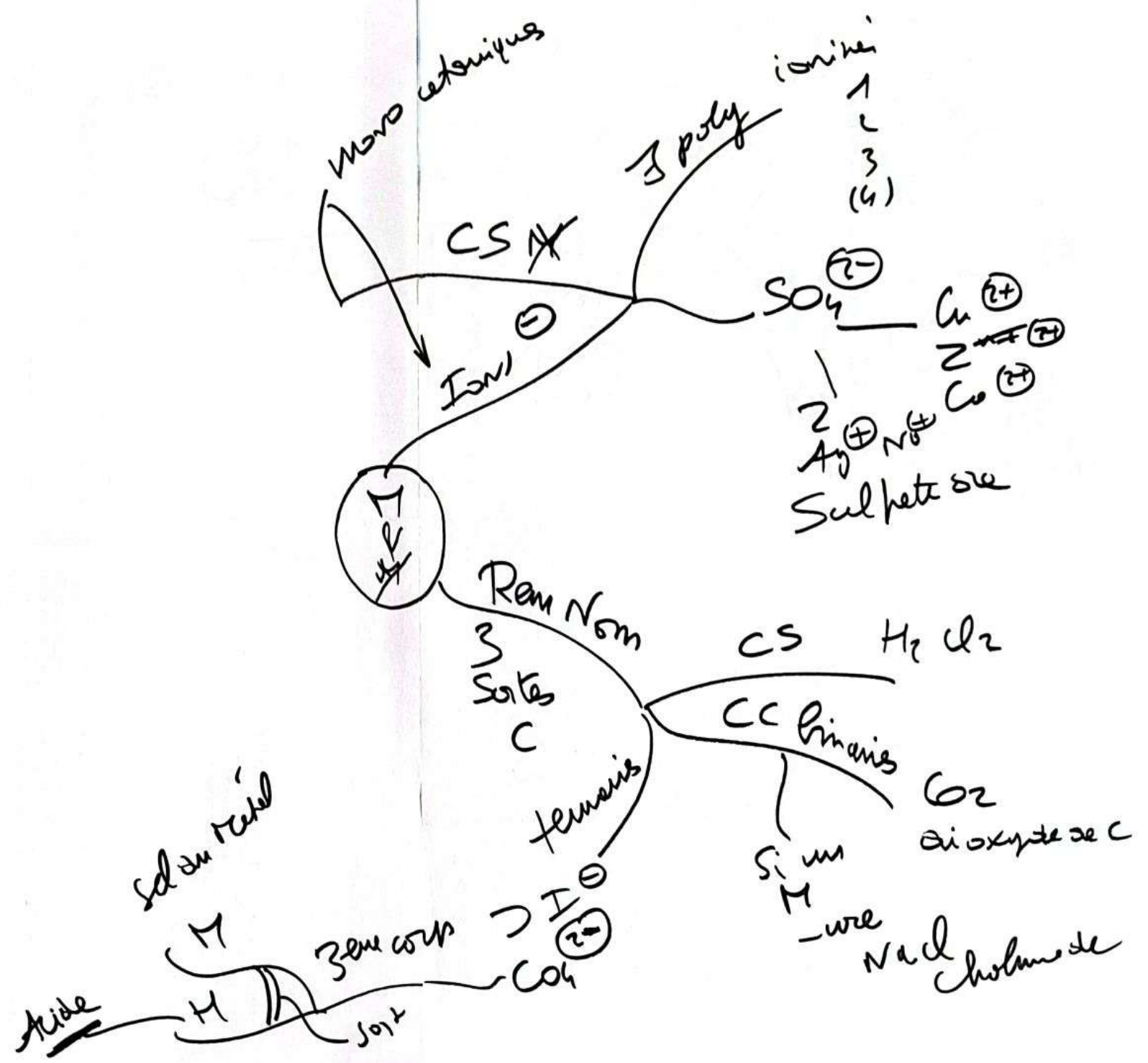


Mais
aussi
O.d(N)



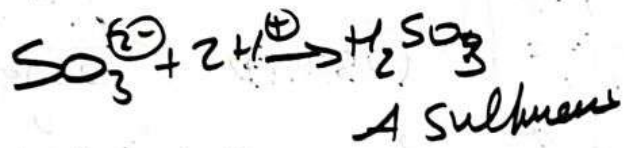
ou dire e⁻
= acide
1 A⁻





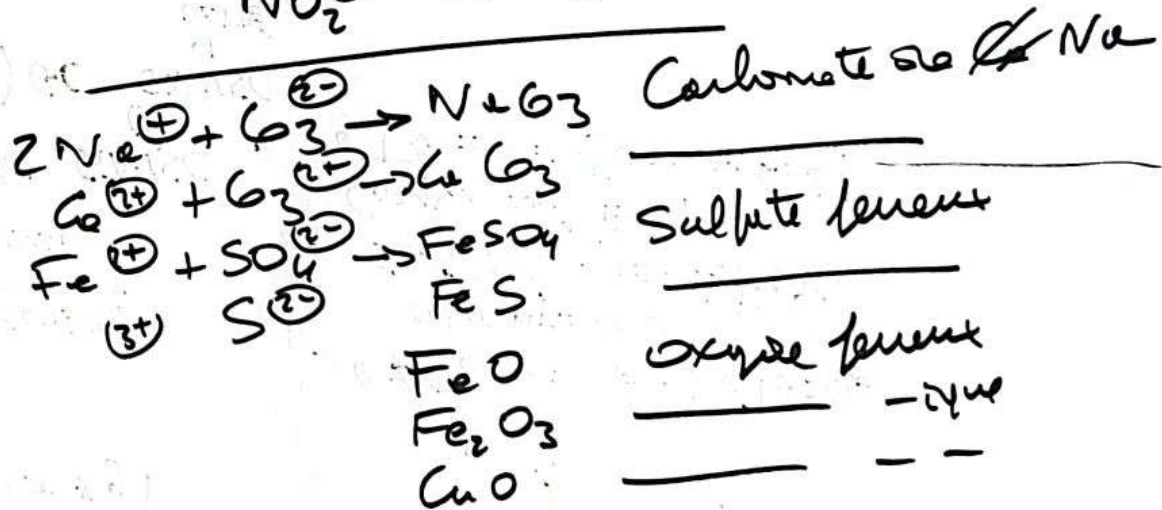
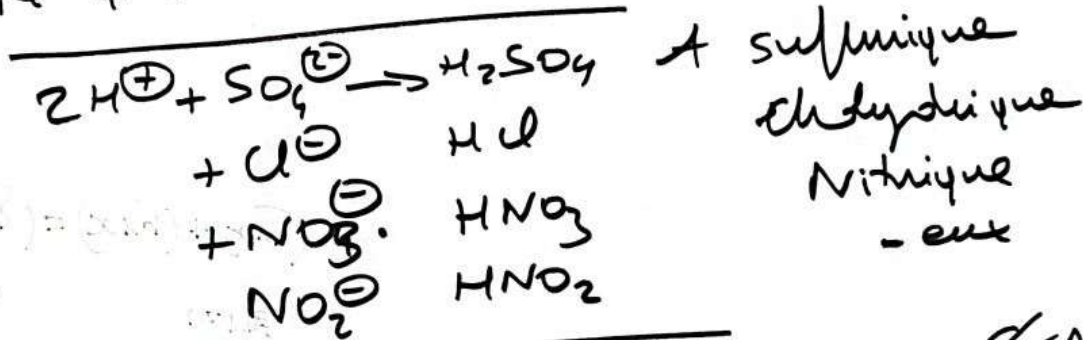
I^-
 Nitrate $N^{(3-)}$
 $O^{(2-)}$
 $C^{(2-)}$
 $S^{(2-)}$
 Carbonate $C^{(2-)}$
 Sulfite $SO_3^{(2-)}$
 etc $SO_4^{(2-)}$
 Nitrite $NO_2^{(2-)}$
 etc $NO_3^{(3-)}$
 phosphate $PO_4^{(3-)}$

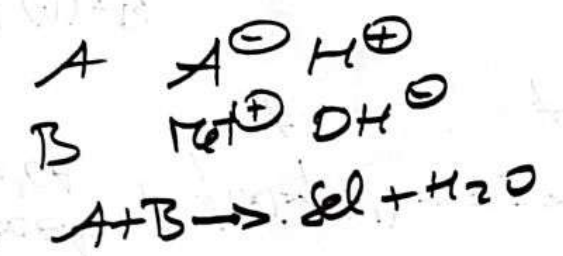
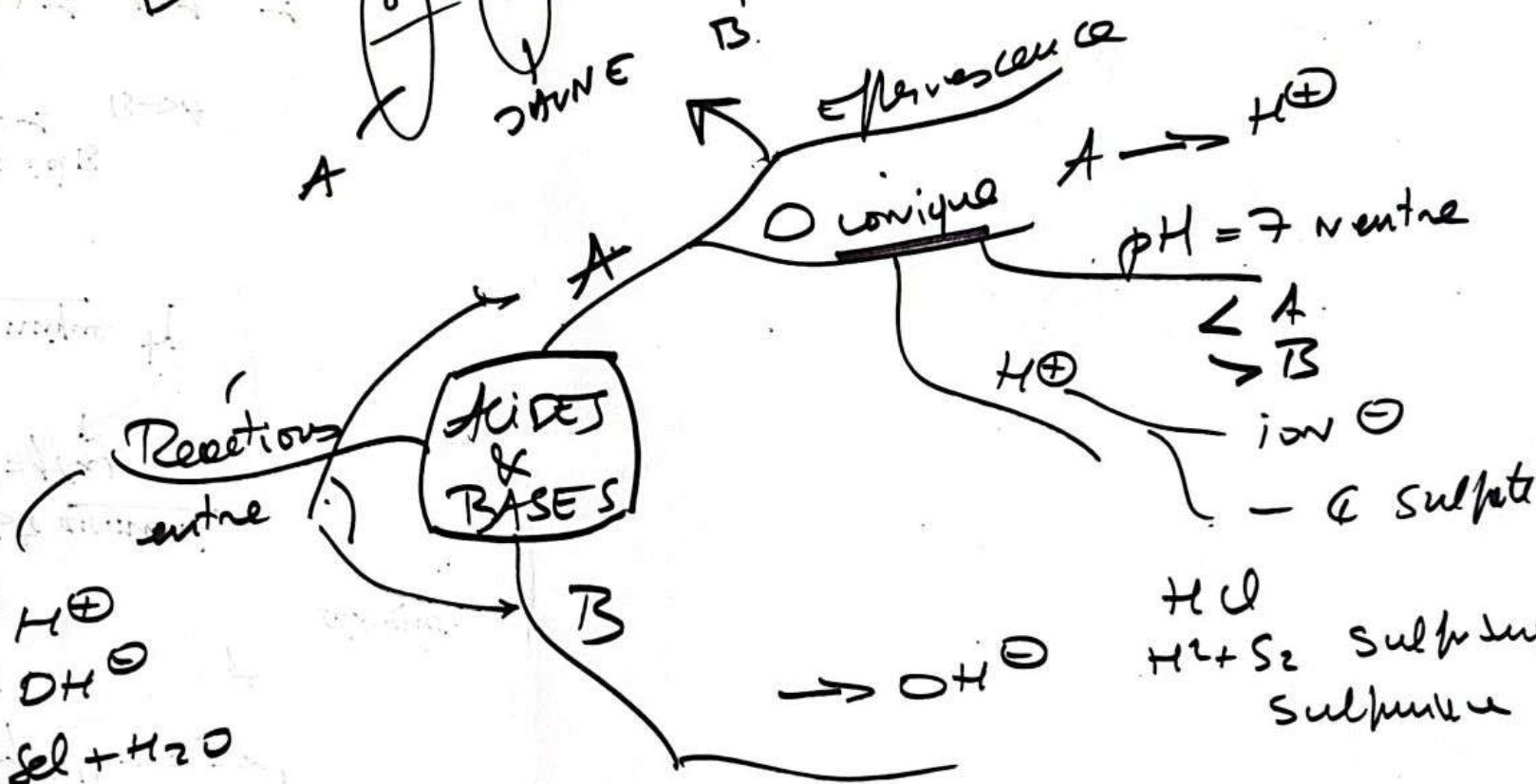
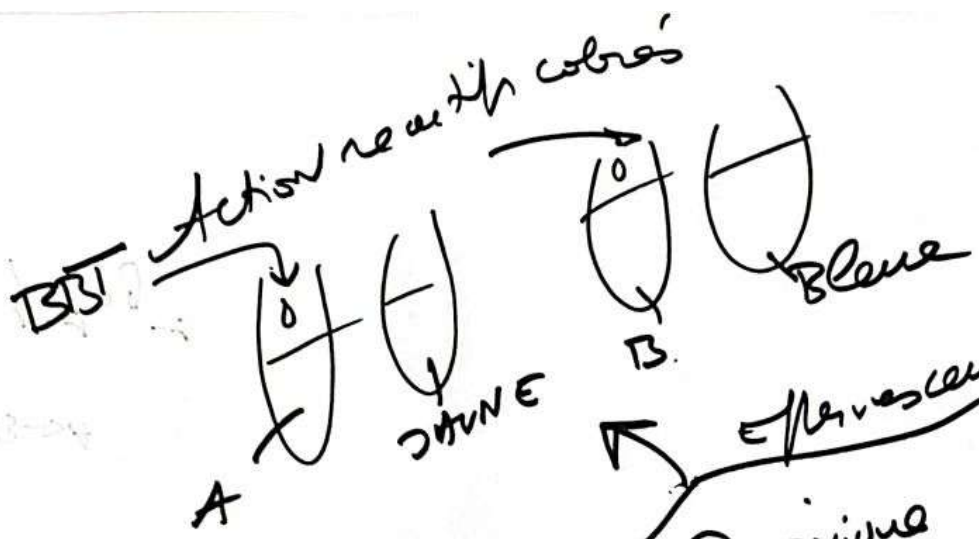
qu'on peut les
 im+
 H^+ v I met
 → Group ion



(2) (1)
 H^+

QU'EST REACTIONS $C^{(+)}$
 Met: $Na^+ Co^{(2+)} Fe^{(2+)} - e^{-} (3+) ique Co^{(2+)}$
 $H^+ + I^- \rightarrow$ acide) Groupes unique
 $Na^+ + I^- \rightarrow$ sel)





ORGANIQUE

→ BD
CHON

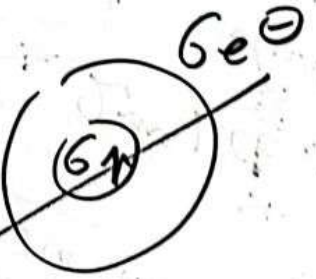
Jen Structure

6p55
C / P = micro
Seule molec énormes
notable certains

chaîne carbonée
C-C

+ 6 élect

C 2 = 6



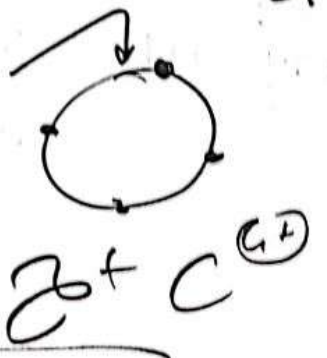
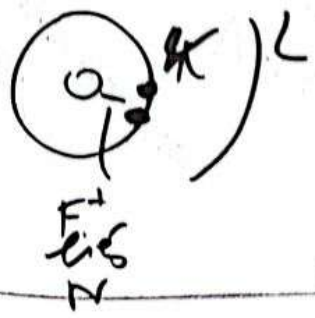
stable ~~radical~~ 6n.

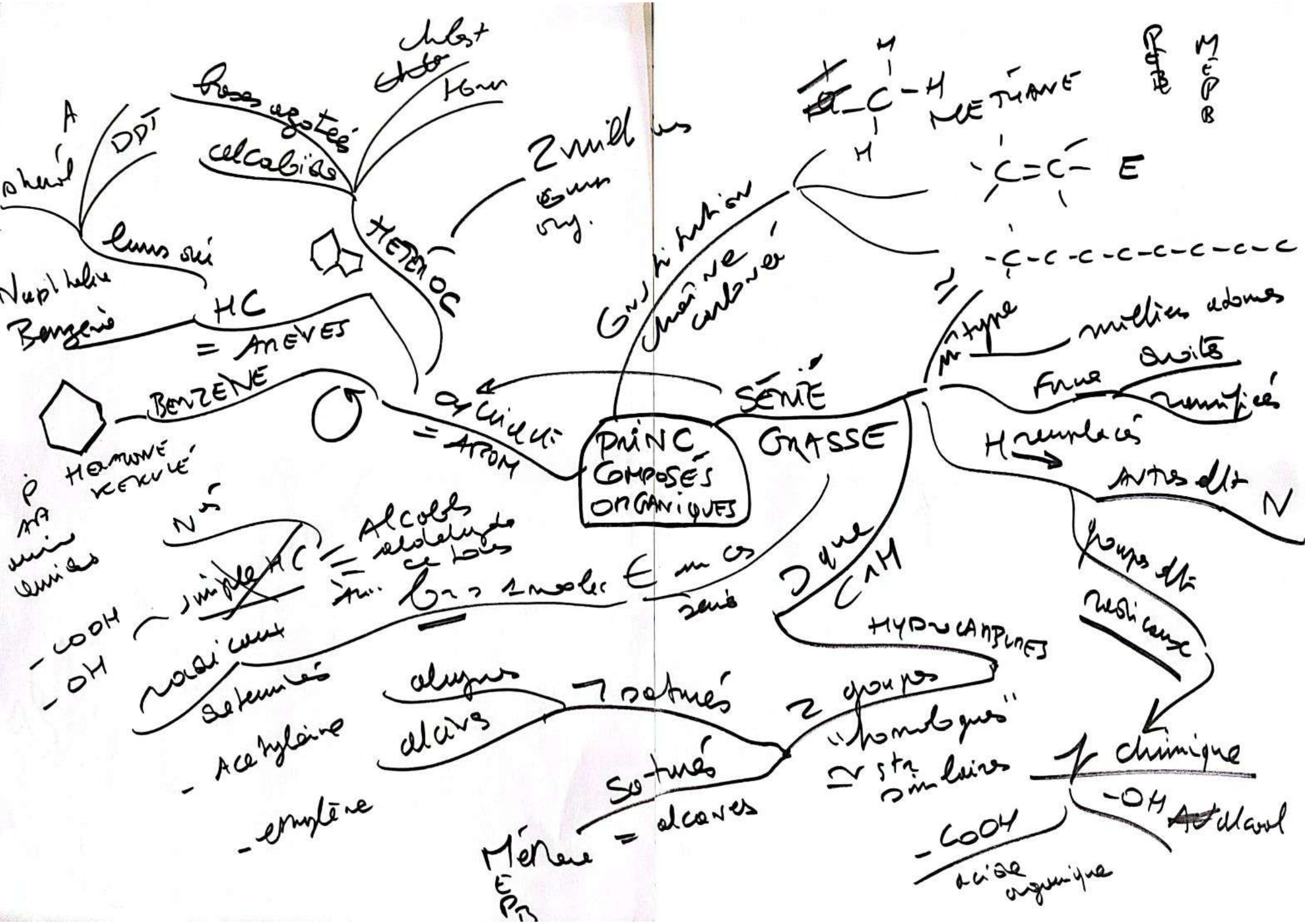
repartition 2
6 élect

6n
C 14
12

(mis en jeu
TOUT l'Énergie

Ni l'un
ni l'autre





PRINCIPALES COMPOSÉS ORGANIQUES

HÉTÉROOC

2 millions

série

SÉRIE GRASSE

2 que CH

HYDROCARBURES

2 groupes "homologues" → structure similaires

chimique

-COOH acide organique

Ménage = alcôles

alcools saturés = alcôles

Alcôls saturés

Acétylène

-COOH

-OH

simple HC

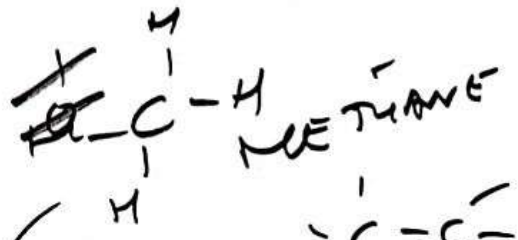
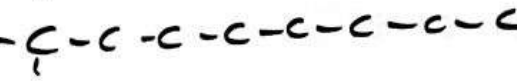
Alcôls saturés

Alcôls saturés

groupes de résineux

milliers d'atomes

fruits

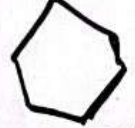


R
P
R
M
P
R

ANÈNES

BENZÈNE

HOMME KERULE



N° 5

alcobides

Rosa agates

châst

lunus sui

HC

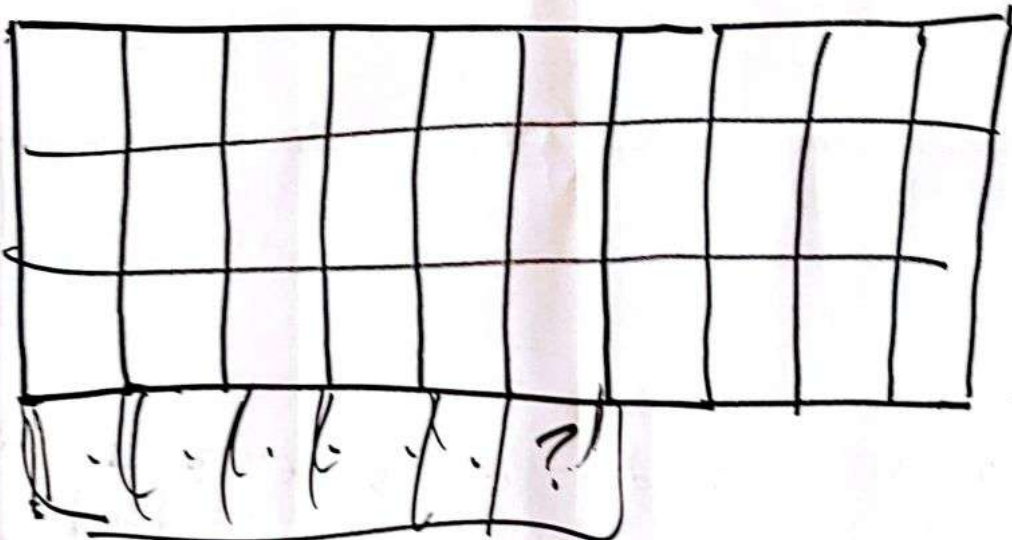
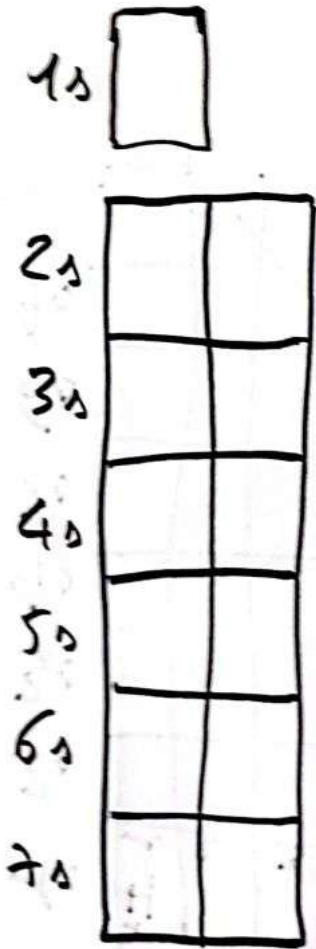
Benzène

DPF

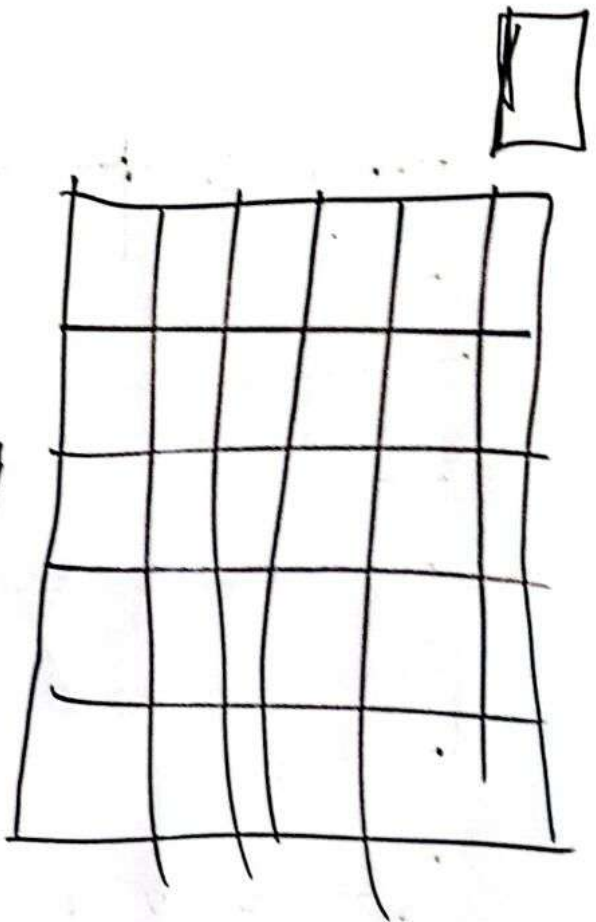
A

Napil helu

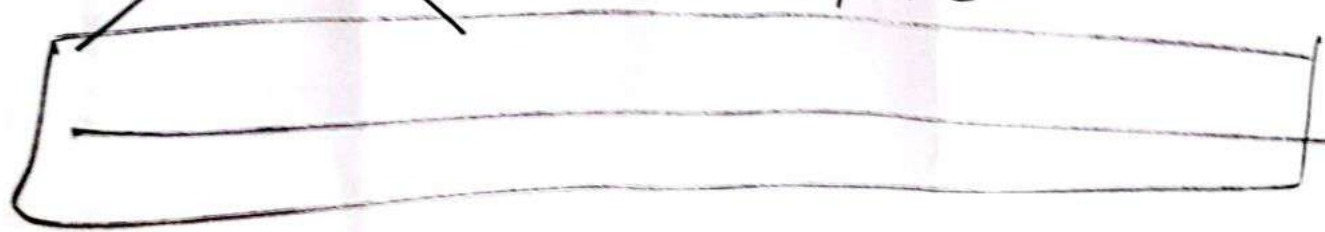
18 col



14 x 2



7li



→ nr people when
 = nr when
 & act P cliniques