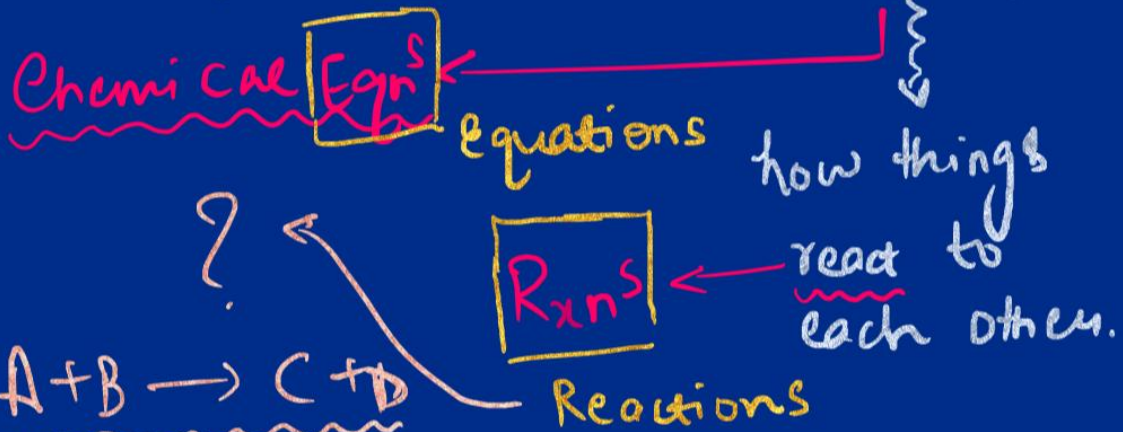


CH1 Chemical reactions and equations

Saturday, June 19, 2021 5:14 PM

When we see around our lives are made from a lot of Chemistry.



यह reaction हो रही है। [Process] का

यह उसी chemical eqⁿ है। [Denotation] is

A → Reactant
B → Reactant
सामग्री

A+B → C+D
Reactants Products

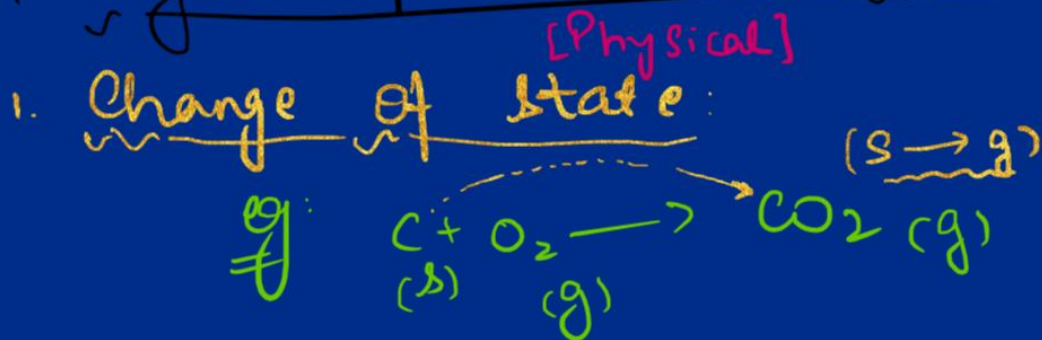
C → Product
D → Product
Mummy ka bagla
खाना

* Signs of a Chem. Rxn. [Physical]

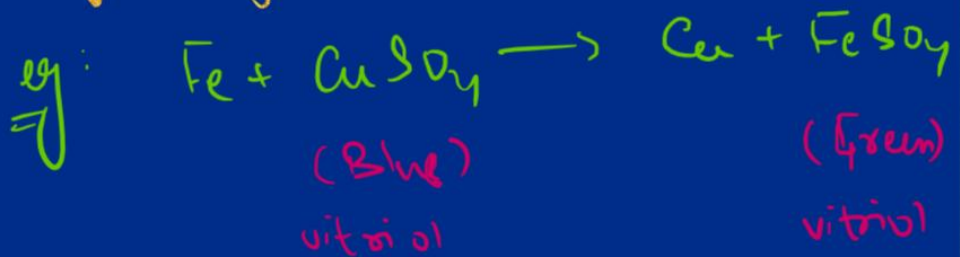
1. Change of state:

(l → a)

* Signs of a Chem. Rxn.



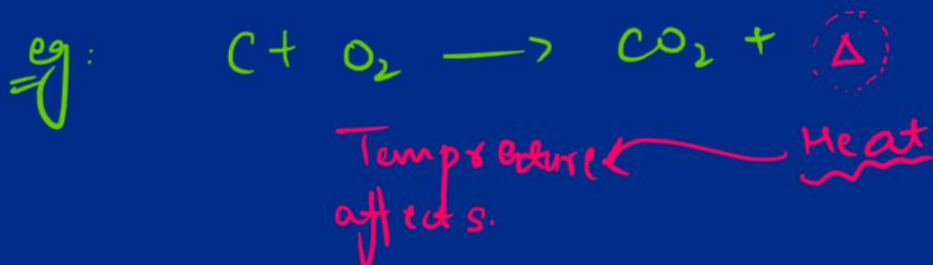
2. Change of colour



3. Evolution of a gas



4. Change of temperature



* Equations

Words * Long

Symbolic
↓

* Carbon (+) Oxygen
Carbon Dioxide



* Symbols

↑ gas evolution

↓ precipitate

(g) gas

(s) solid

(l) liquid

(aq) water solution.

(amm.) ^{Liq.} Ammonia solution
(NH₃)

* Balancing

In real sense atoms are destroyed
thus → for dealing with real life
chemistry scenarios ⇒ Balance the
rxn.

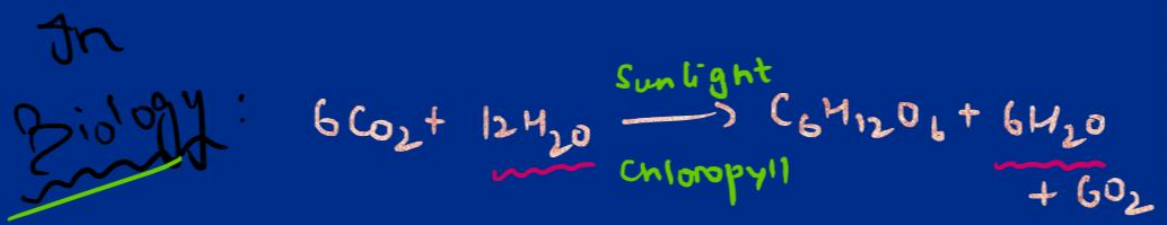
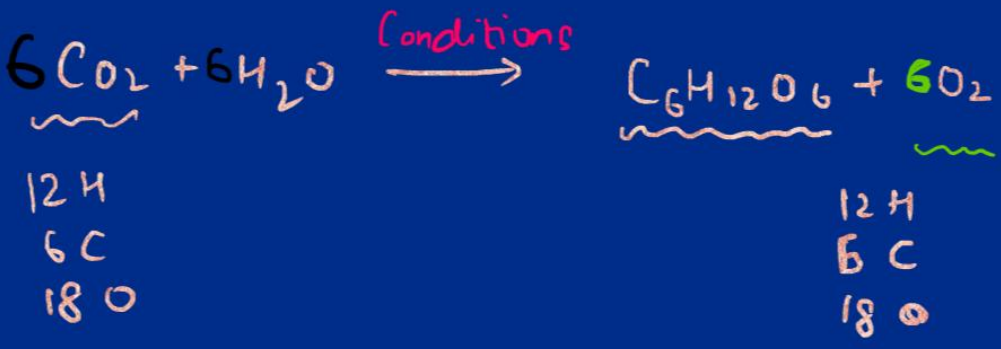
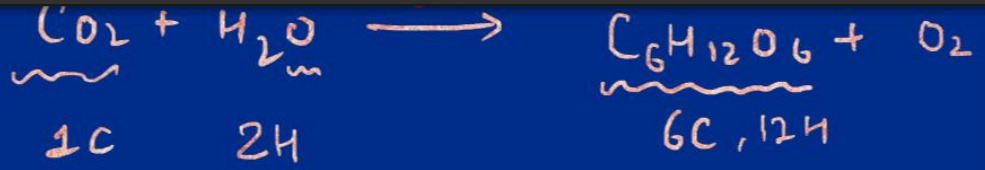
Q: Plants use Carbon Dioxide and water
Imp: in presence of sunlight and chlorophyll
to form glucose; give us oxygen.



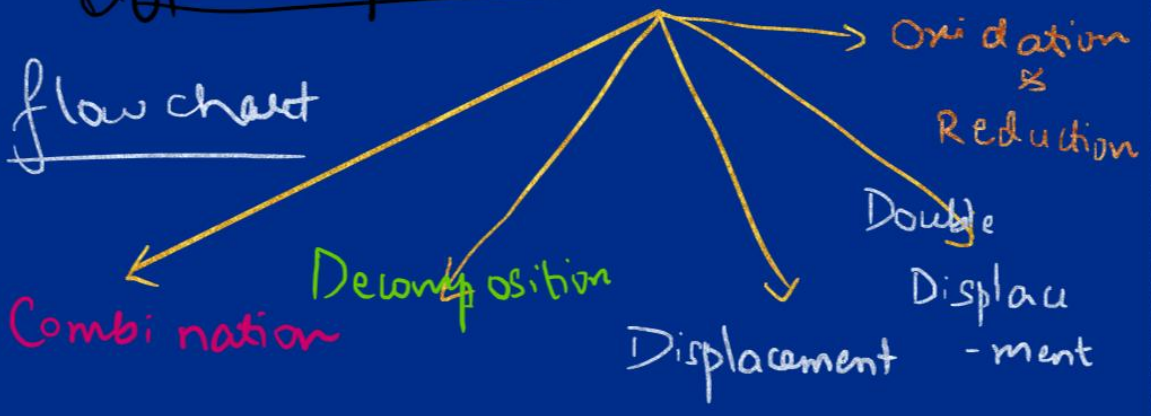
Learn: We mention required cond.
on the arrow. $\xrightarrow{\quad}$

Balancing:

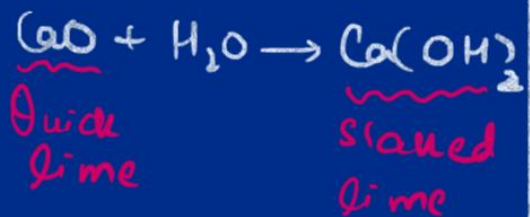
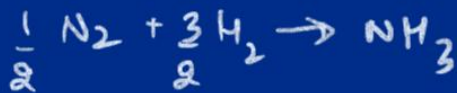




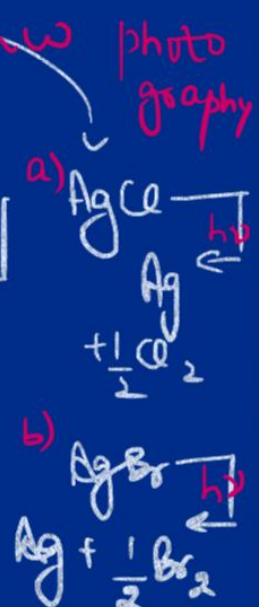
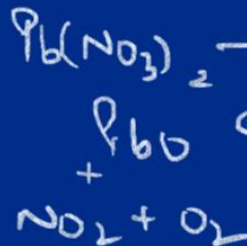
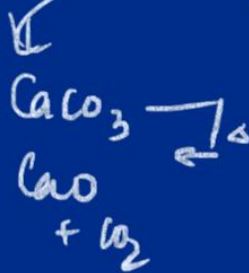
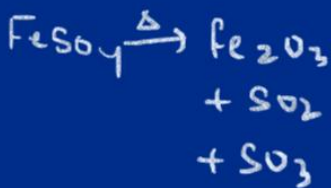
* Types of Chemical Reactions



i) COMBINATION Rxn (generally exothermic)



ii) De-composition rxn. (generally endothermic)

$$[C \rightarrow A + B]$$


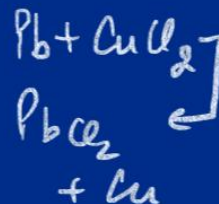
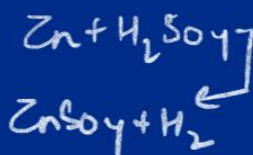
iii) Displacement rxn



reactivity $A > B$

iii) Displacement rxn

reactivity
 $A > B$



* Reactivity order

Li	Mg	Sn
K	Zn	Pb
Ba	Cr	H ₂
Sr	Fe	Cu
Ca	Cd	Hg
Na	Co	Ag
Mg	Ni	Au
		Pt

लिफ्टा भरका

नहिवा अम

जकरकी कड को

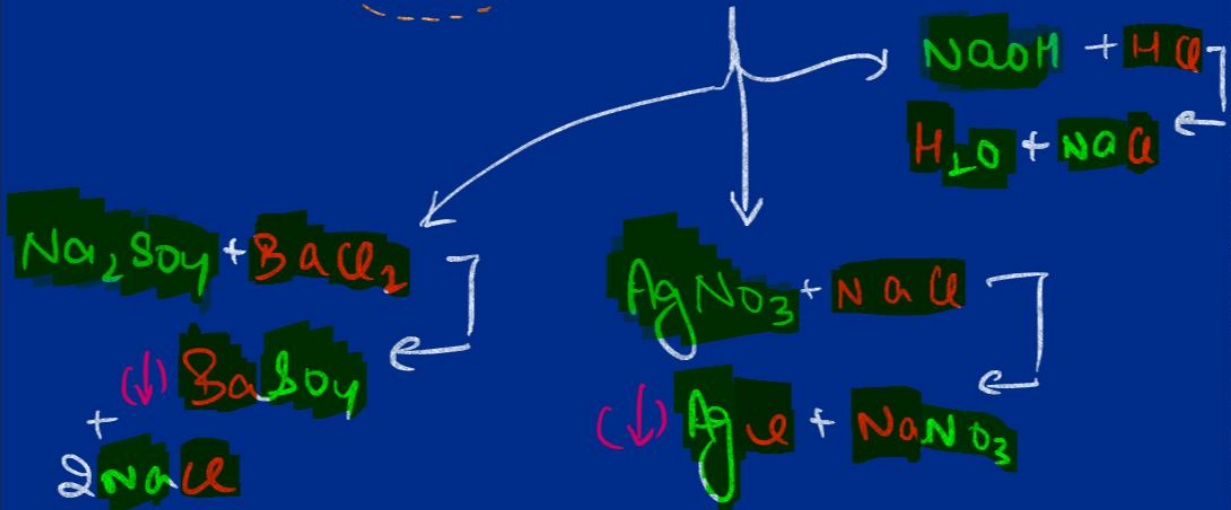
नी सनपव ह ।

CHAAP.

* Double Displacement rxn (gen. ppt)



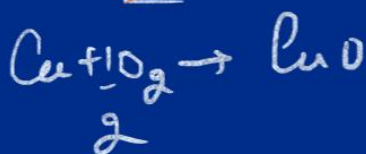
* Double Displacement rxn (gen. ppt)



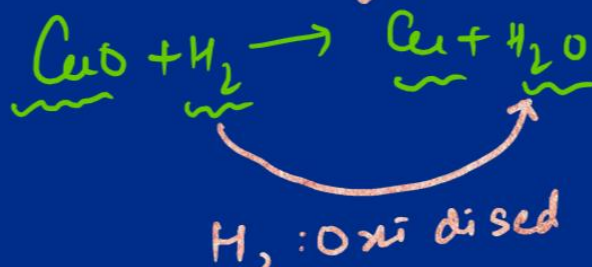
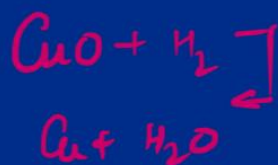
v) Oxidation & Reduction

Basic: Ox^n = adding O or rem. H.

Redn: removing O or adding H.

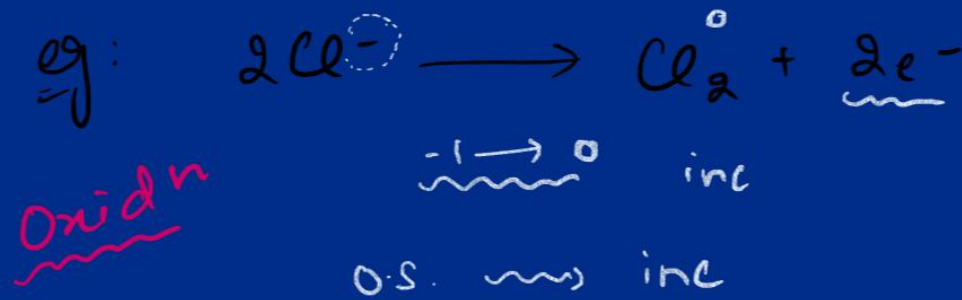
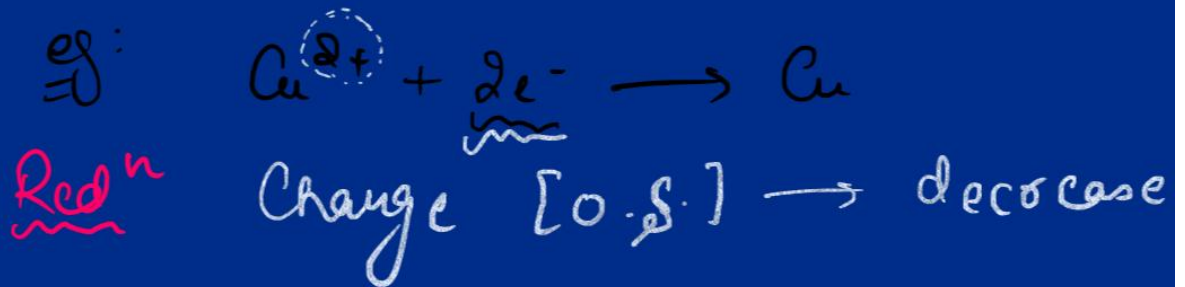


CuO: Reduced



REDOX rxn

Advanced: Gain of e^- \rightarrow Reduction
 Loss of e^- \rightarrow Oxidation.

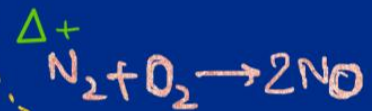


vii) Exothermic & Endothermic

heat released
 on rxn
 ~~~~~  
 T  $\uparrow$   
 (hot)

heat req.  
 or  
 consumed for  
 rxn.  
 ~~~~~  
 T \downarrow
 (cold)





Effects of Oxidⁿ in life:

i) Rancidity

fatty materials and oils get stinking after some time. ↓

these fats are oxidised by the air in our surroundings.

> thus we add antioxidants in them

> prefer keeping these stuff air tight.

> adding relatively inert gases like



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these fats are oxidised by the air in our surroundings.

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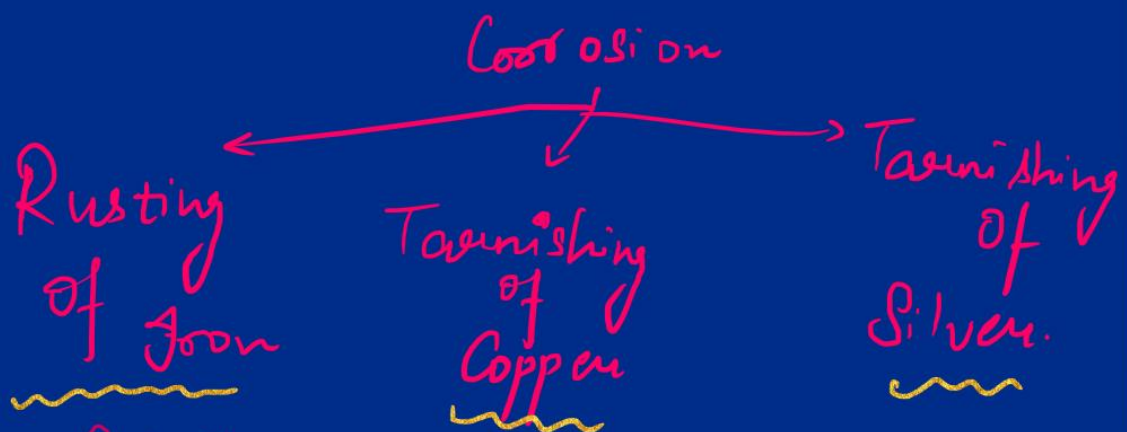
> prefer keeping these stuff air tight.

> adding relatively **inert** gases like **N₂** to these. {lays, chips etc.}

Nitrogen

ii) Corrosion (≠ Rusting)

as Rusting is a case of corrosion.



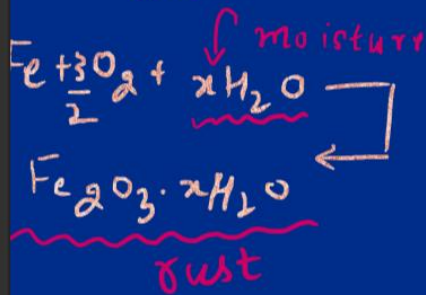
↓ moisture

ii) Corrosion (≠ Rusting)

as Rusting is a case of corrosion.

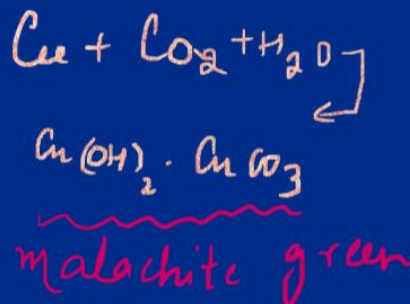
Corrosion

Rusting of Iron



- * moisture
- * oxygen
- * time

Tarnishing of Copper



Tarnishing of Silver

etc.

