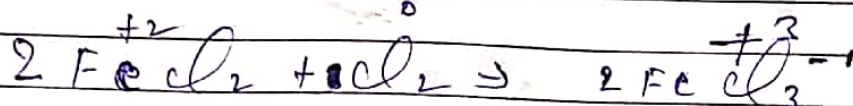


Topic Properties of Chlorine gas.
Cl₂ gas shows following properties.

(a) Cl₂ acts as an oxidising agent.

it oxidises FeCl₂ [Ferrous chloride]
into Ferric chloride. FeCl₃

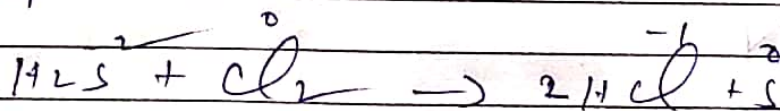


oxidation no. of Fe changes (+2) to (+3)
it means it loses electron and oxidation

no. of Cl changes 0 to (-1)

it means Cl₂ accepts electron and
it acts as an oxidising agent.

(b) It oxidises H₂S into "S". Reaction
is represented as.



oxidation no. of central atom

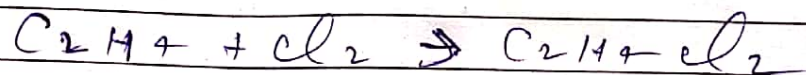
"S" of H₂S change -2 to 0 means

it increases. in terms of electron

it loses electron, on the other hand

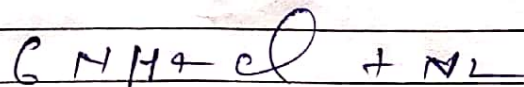
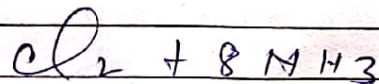
Oxidation no. of Cl_2 changes 0 to -1 it means it accepts electron and acts as an oxidising agent.

(c) Cl_2 undergoes a addition reaction

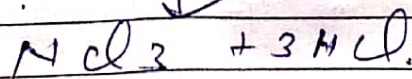
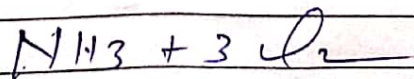


In the above reactions Cl_2 undergoes addition reaction.

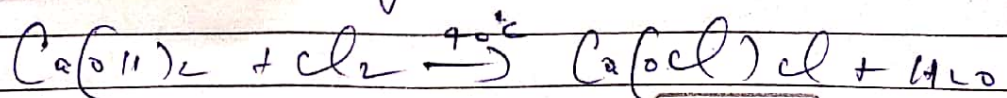
(d) In presence of excess NH_3 Cl_2 forms N_2



(e) In presence of ^{excess} Cl_2 NH_3 forms NCl_3 an explosive compound.



(f) Cl_2 at $90^\circ C$ on reaction with $Ca(OH)_2$ gives Bleaching powder



(g) Cl_2 liberates nascent oxygen $Cl_2 + H_2O \rightarrow 2HCl + O$