

E silver Nitrate

L)



lilac

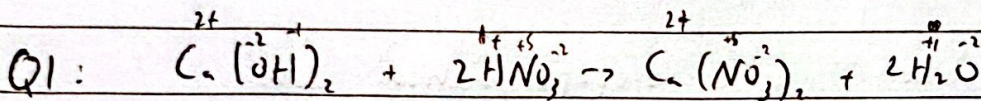


yellow

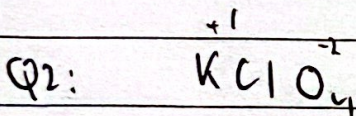


Apple green

\* Homework



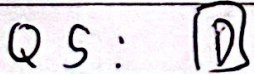
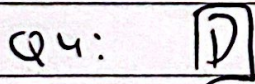
D



$1 + Cl - 8 = 0$

$Cl = +7$

D

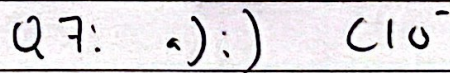


?

Q6)

~~scribbles~~  
0.15 = 9.093

A



$Cl - 2 = -1$

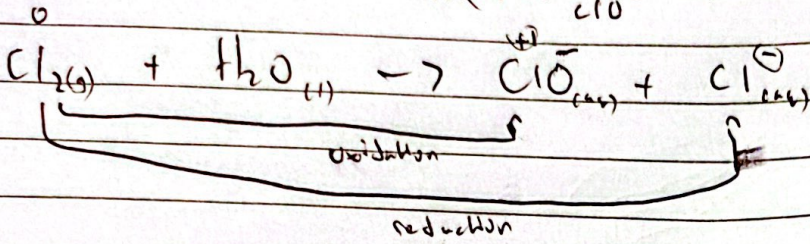
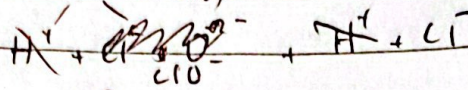
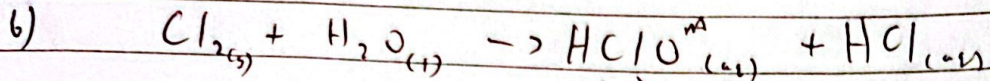
$Cl = +1$

ii) ~~scribbles~~

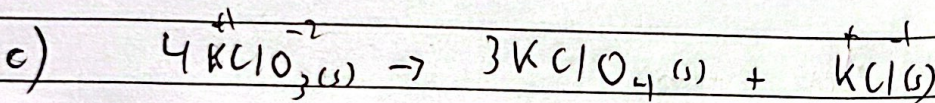
~~scribbles~~



$$\begin{aligned} \text{Cl} = 2 &= -1 \\ \text{Cl} &= +1 \end{aligned}$$



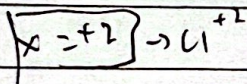
$\text{Cl}_2$  is both an oxidising agent and reducing agent.



$$3 + x - 8 = 0 \quad \text{Cl}^-$$

$$4 + x - 6 = 0$$

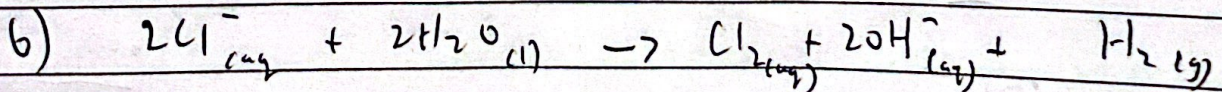
$$x = +5$$



This reaction is a disproportionation reaction,  $\text{Cl}^{+2}$  oxidises to form  $\text{Cl}^{+5}$  and  $\text{Cl}^{+2}$  also reduces to produce  $\text{Cl}^{-1}$ .

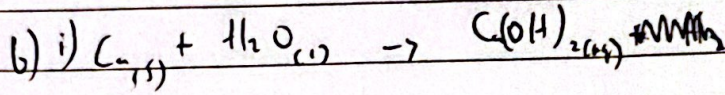
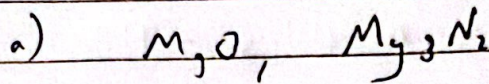
Q8 a) i) oxidation is losing electrons while reduction is gaining electrons.

ii)  $\text{Cl}_2$  is the oxidising agent, because it oxidises  $2\text{Br}^-$  and itself is reduced.





Q 9

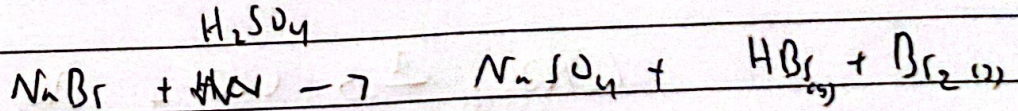
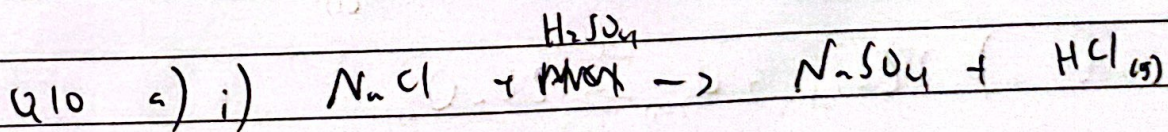
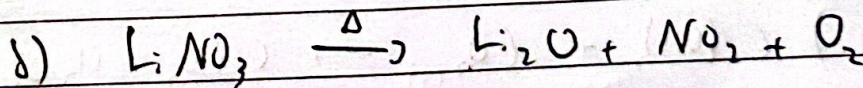


ii) it increases down the group, because down the group, ~~more~~ shells and shielding, so ~~weaker~~ weaker forces of attraction so ~~less energy needed~~ less energy needed to remove ~~electron~~ electron  
less ionization energy

iii)

Increases

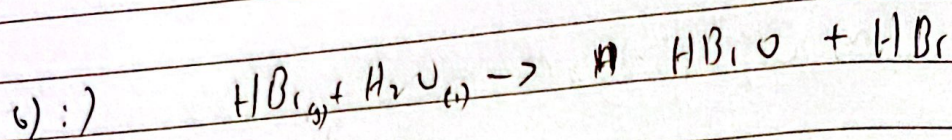
c) Down the group the size increases so ~~gives~~ less charge density so less polarizing power so causes less distortion so less able to decompose so more thermally stable



ii) ??

iii)





ii) ~~and~~ turns ~~from~~ brown orange to red

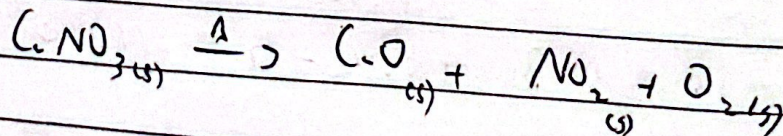
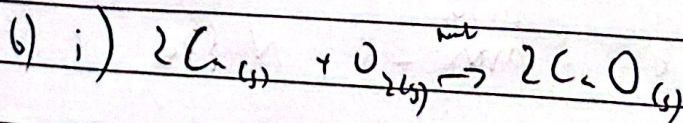
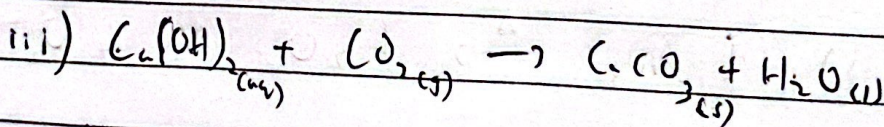
c) Test for chloride and iodide using  $\text{AgNO}_3 / \text{HNO}_3$

$\text{Cl}^-$  with  $\text{AgNO}_3$  produces white ppt.  
and  $\text{I}^-$  produces yellow ppt.

Q11 Did we take this?

Q12 a) i) it is an exothermic reaction

ii)  $\text{Ca}(\text{OH})_2$ , ~~is~~ pH



ii) Down the group, ionic size is less charge density, so less p.p. so causes less distortion so less able to decompose so more thermally stable