

Chemistry H.W

1) D

2) D

3) C

4) D

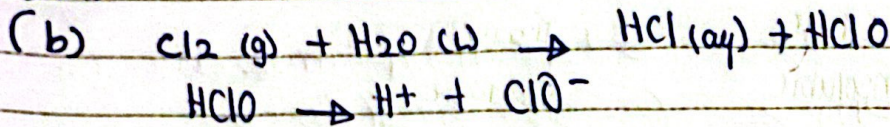
5) D

6) B

7) (a)(i) +1

(a)(ii) chlorate (I) ion

(a)(iii)



its a disproportion reaction because same element is oxidised and reduced.

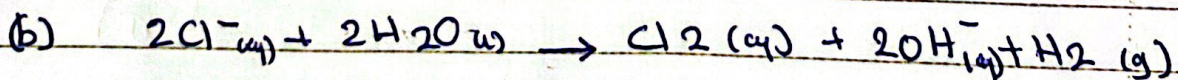
(c) it changed, to balance the equation-

8)(i) oxidation: loss of electrons

reduction: gaining of e^- .

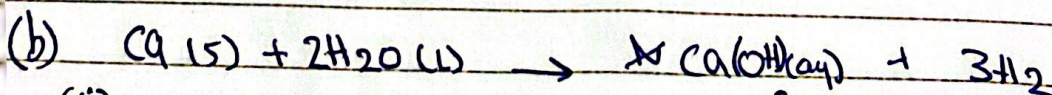
(ii) oxidising agent: ~~2Br⁻~~ ~~Br⁻~~ $\text{Cl}_2 \rightarrow 2\text{Cl}^-$

Reducing agent: $2\text{Br}^- \rightarrow \text{Br}_2$



(9) (a) MgO

Mg₃N₂



(ii) greater ~~for~~ radius, so less ² charge density, so less forces of attraction between nucleus and cloud of e^- , so more reactive.

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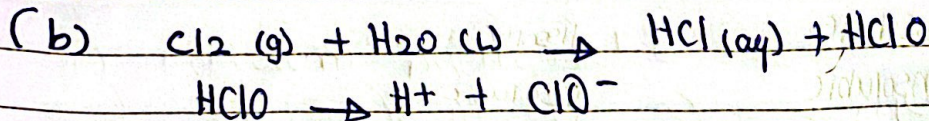
5) D

6) B

7) Ca(OH)₂

(a)(ii) chlorate (I) ion

(a)(iii)



its a disproportion reaction because same element is oxidised and reduced.

(c) it changed, to balance the equation.

8)(i) oxidation: loss of electrons

reduction: gaining of e⁻.

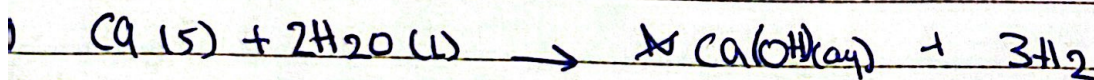
(ii) oxidising agent: ~~2Br⁻~~ Br₂ Cl₂ → 2Cl⁻

Reducing agent: 2Br⁻ → Br₂



1) (a) MgO

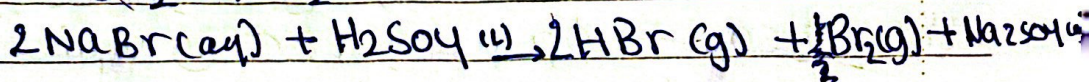
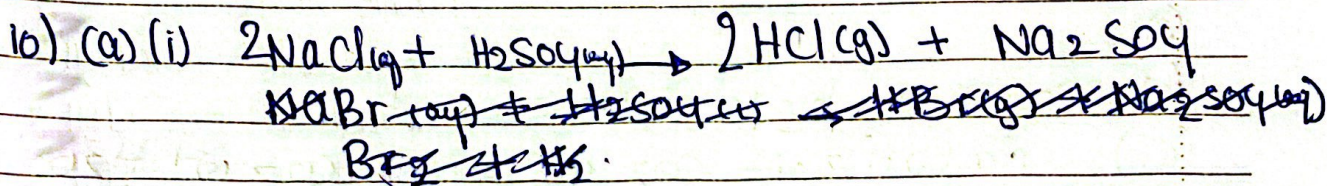
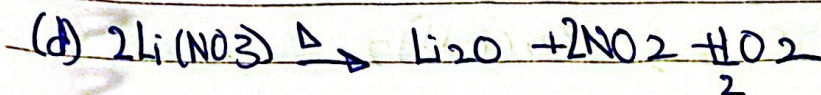
Mg₃N₂



(ii) greater ~~for~~ radius, so less charge density, so less forces of attraction between nucleus and cloud of e⁻, so more reactive.

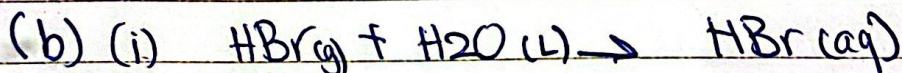
(iii) as we go down the group the solubility increase, because size of cation increases, forces of attraction decreases, Lattice energy decreases.

(c) size of cation increases, so P.P decreases, so less distortion, so higher thermal stability.



(ii) H_2SO_4 can't oxidise Cl^- to Cl_2 , But H_2SO_4 can oxidise Br^- to Br_2 because its a strong reducing agent

(iii) Because HCl when it reacts with ammonia it produces a white cloud see 1.1.3

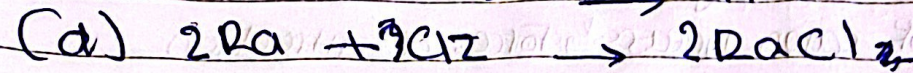
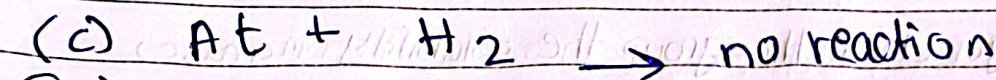


(ii) turns Red

(c) add $AgNO_3$ with gentle warming $\rightarrow Cl^- \rightarrow$ white ppt
 $I^- \rightarrow$ yellow ppt

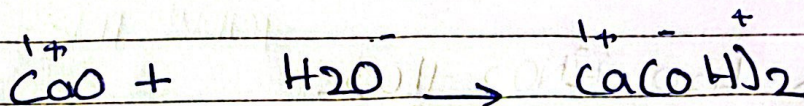
ii) Radium \rightarrow solid
At \rightarrow solid

(b) astatine is less reactive than iodine, because astatine has more shells and shieldings, so ~~greater~~ less forces of attraction between nucleus and cloud of e^- , so less likely to attract e^- .



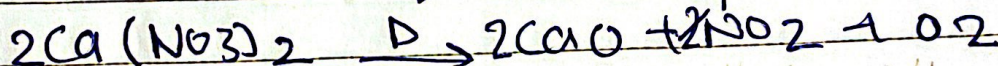
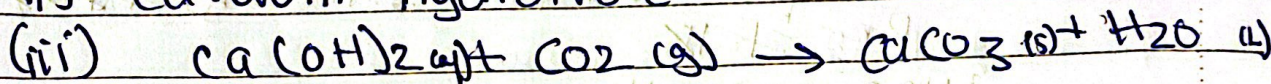
(e) D

12) $Ca(OH)_2$ is a product from this reaction



(i)

(i) Calcium hydroxide



(ii) & down the group size of cation increases,
polarising power decreases, distortion
decreases, thermal stability increases