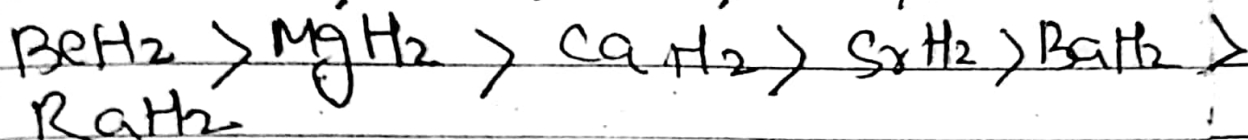
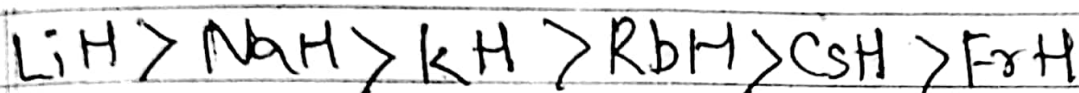
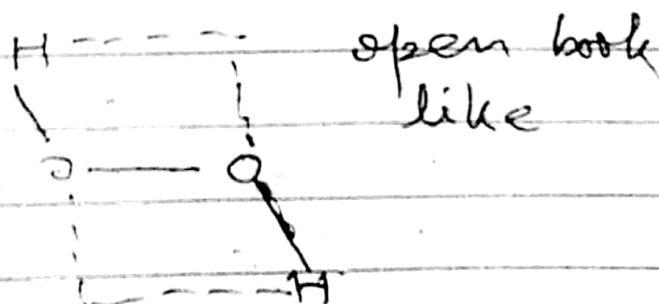
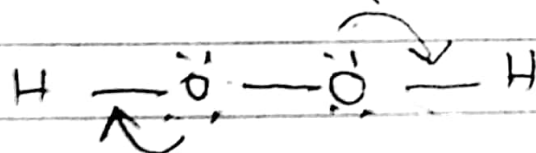


Basic nature, volatile nature,
 K_b value, PK_a value, pH
value, decrease from top to
bottom in a group.



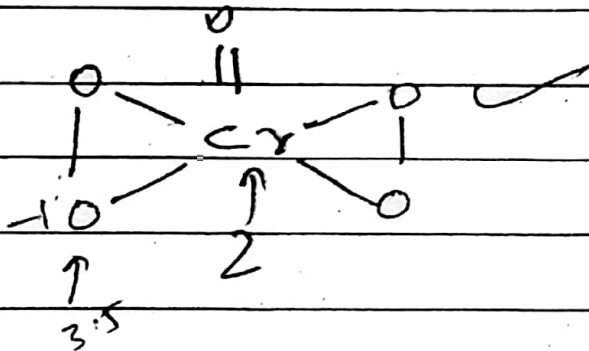
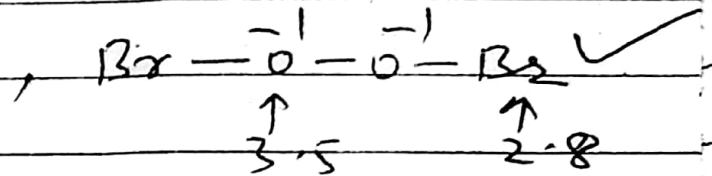
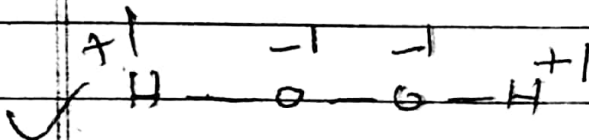
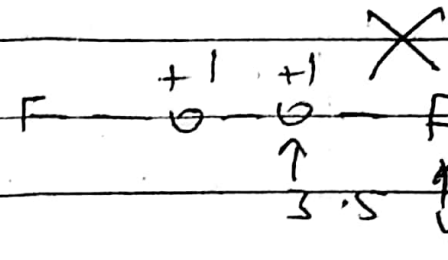
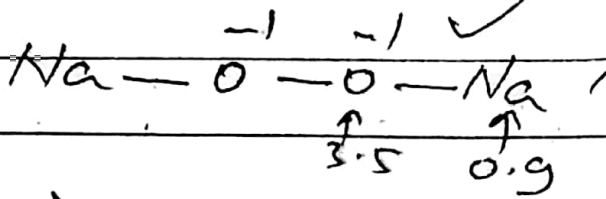
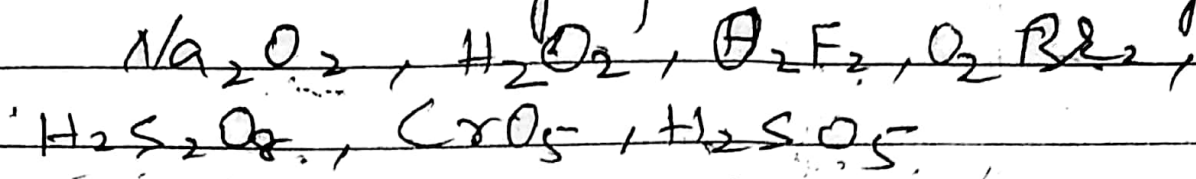
* Hydrogen peroxide :- $(H-\ddot{O}-\ddot{O}-H)$

- It having 3 s, 4 lone pair, electron
hybridisation sp^3 , tetrahedral,
B. angle $109^\circ - 5' = 104^\circ$, B. length
 $1.54 \text{ \AA}$, shape or geometry
open book like due to lone
pair-lone pair repulsion.



- It having +1 oxidation no.
- It having peroxide linkage
($-\ddot{O}-\ddot{O}-$)

Q:- Which having peroxide linkage



It acts as oxidising agent as well as reducing agent becuz oxygen having oxidⁿ no. in betⁿ max^m & min^m (+6 & -2) i.e -1 oxidⁿ no.

Range of O.N → -2 to +6

-2, -1, 0, 1, 2, 3, 4, 5, 6

R.A

Both O.A & R.A

O.A

min^m O.N

max^m O.N

- It acts as oxidising agent hence oxidised to other & reduce itself. $H_2O_2 \rightarrow H_2O + [O]$ — (i)

↑ Nascent oxygen acts as O.A

- Fixed eqn of H_2O_2

Always $\rightarrow C \rightarrow CO_2$

$P \rightarrow H_3PO_4$ ($P_4 \rightarrow 4H_3PO_4$)

$S \rightarrow H_2SO_4$ ($S_8 \rightarrow 8H_2SO_4$)

◊ $I_2 \rightarrow HIO_3$ ($FeSO_4 \rightarrow Fe_2(SO_4)_3$)

* Red^n of H_2O_2 with carbon

