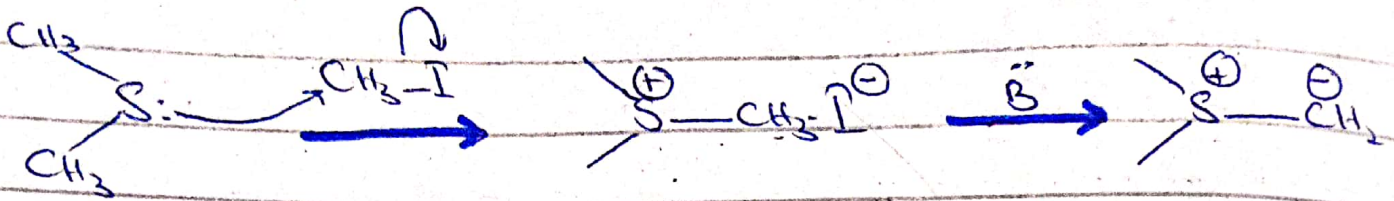


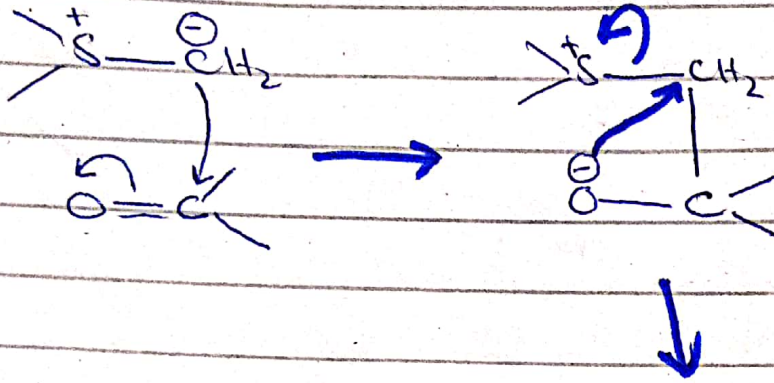
Sulphur ylide:

ylide \rightarrow adjacent +ve & -ve charge

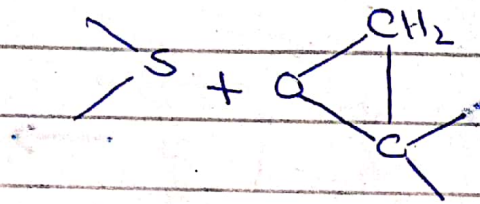


Sulfonium salt

S-ylide



O-S bond is not as strong as O-P
So O prefer to attack on C instead of S



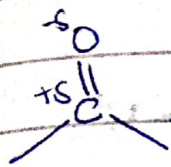
insertion of CH_2 in carbonyl compound.

Oxitanes epoxides

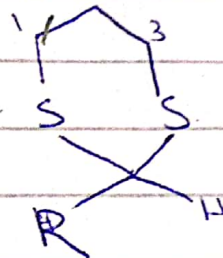
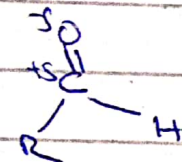
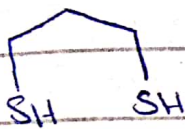
Ylide: - opposite charge on adjacent atom & from these atom 1 is heteroatom eg (N,P,S) in this more electro-ve atom attain +ve charge & less e-ve atom have -ve charge.

if N heteroatom then nitrogen ylide
if S heteroatom then S ylide
if P heteroatom then P ylide

>C=O ROH^- Acetal ~~gem~~ ~~acid~~
 KC Eukol⁺ → biggest name in Organic Synthesis
 EJ Corey?



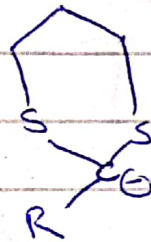
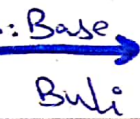
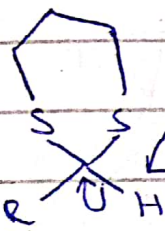
used it as Nu not E₂



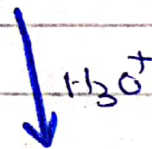
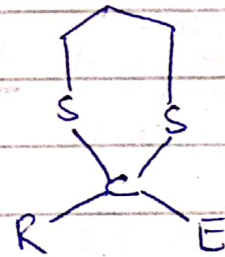
1,3-dithiane

dithione

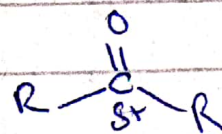
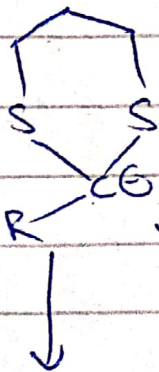
thioacetel



unpolarity
reversal of polarity



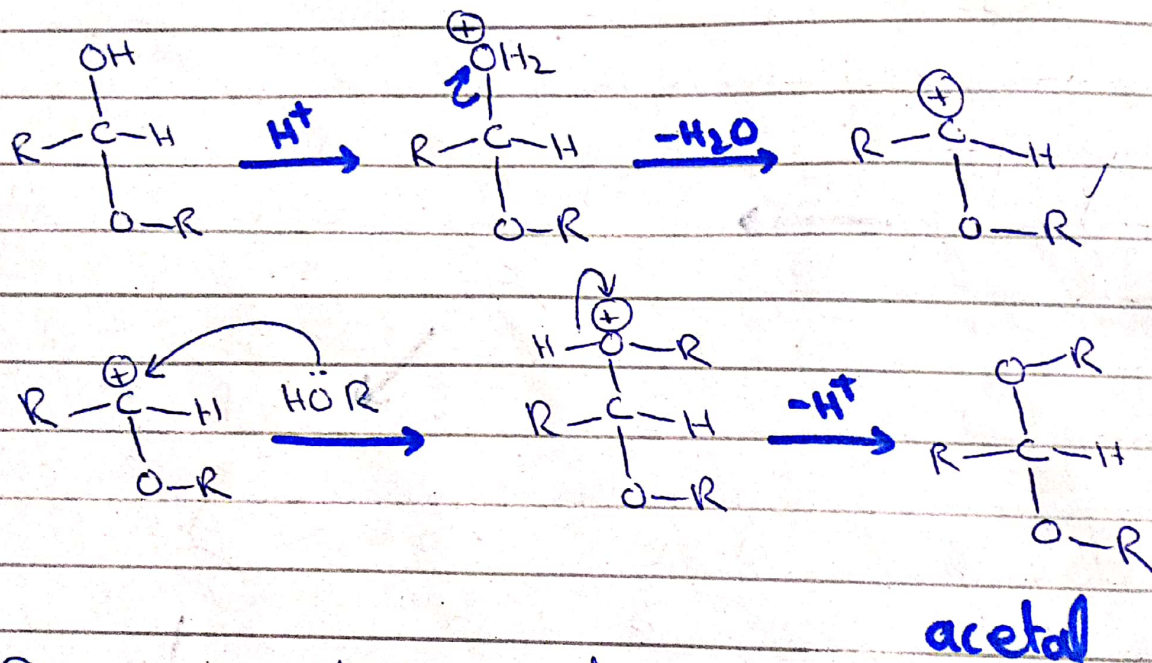
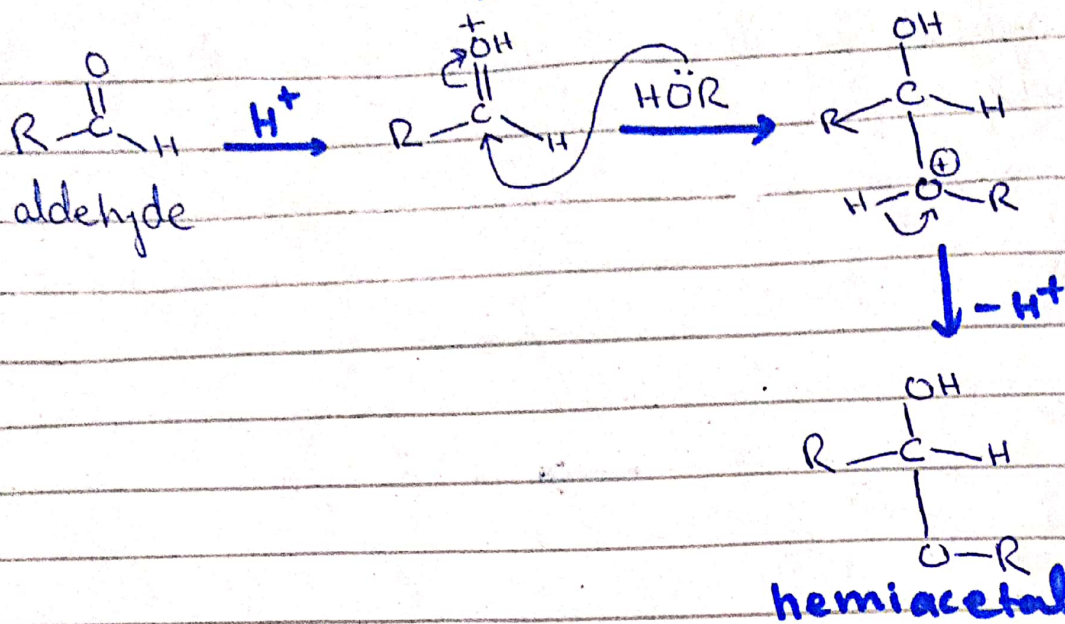
acetal form in slight acidic
cond & also remove by slight
acidic cond



then hydrolysis

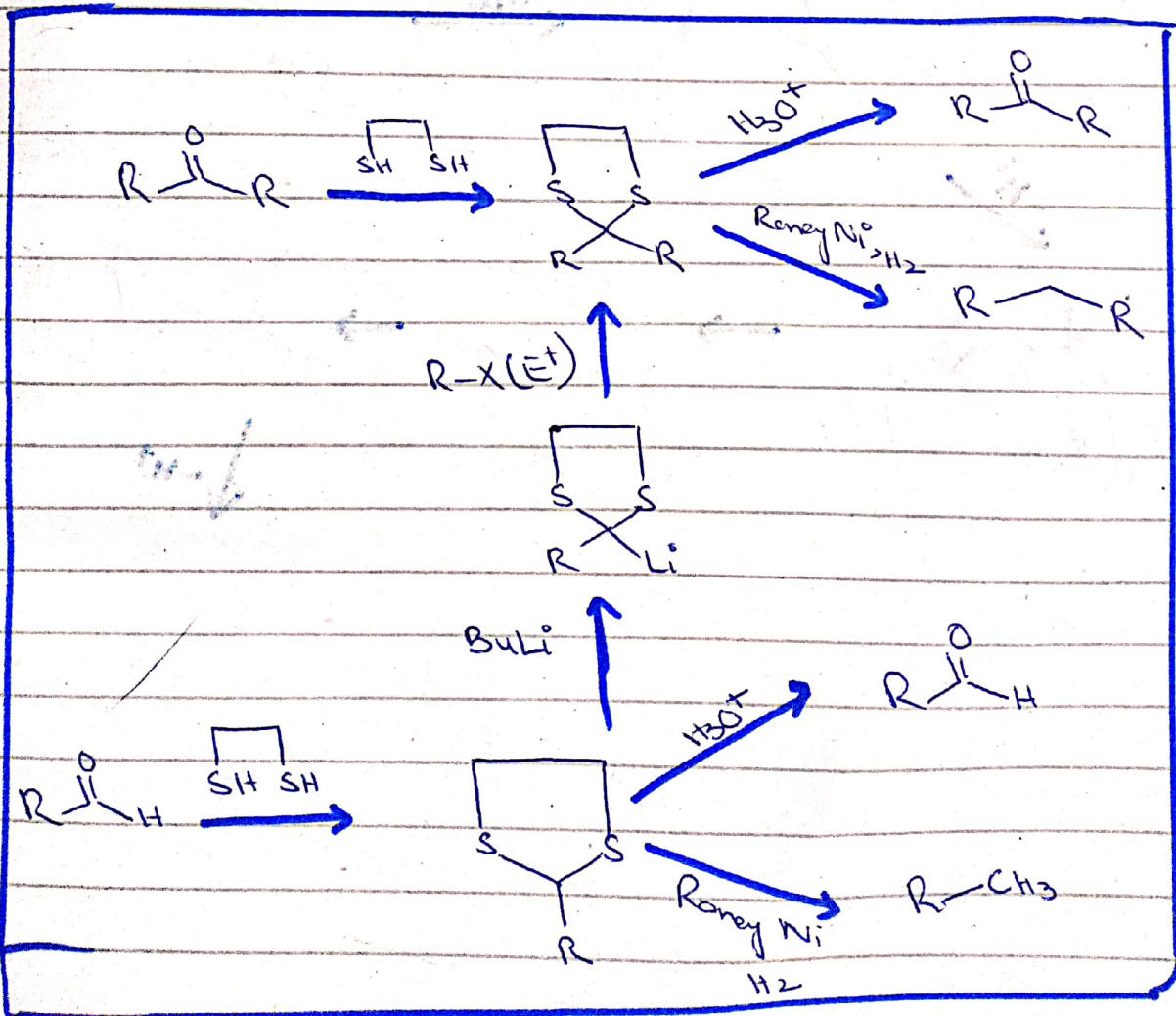
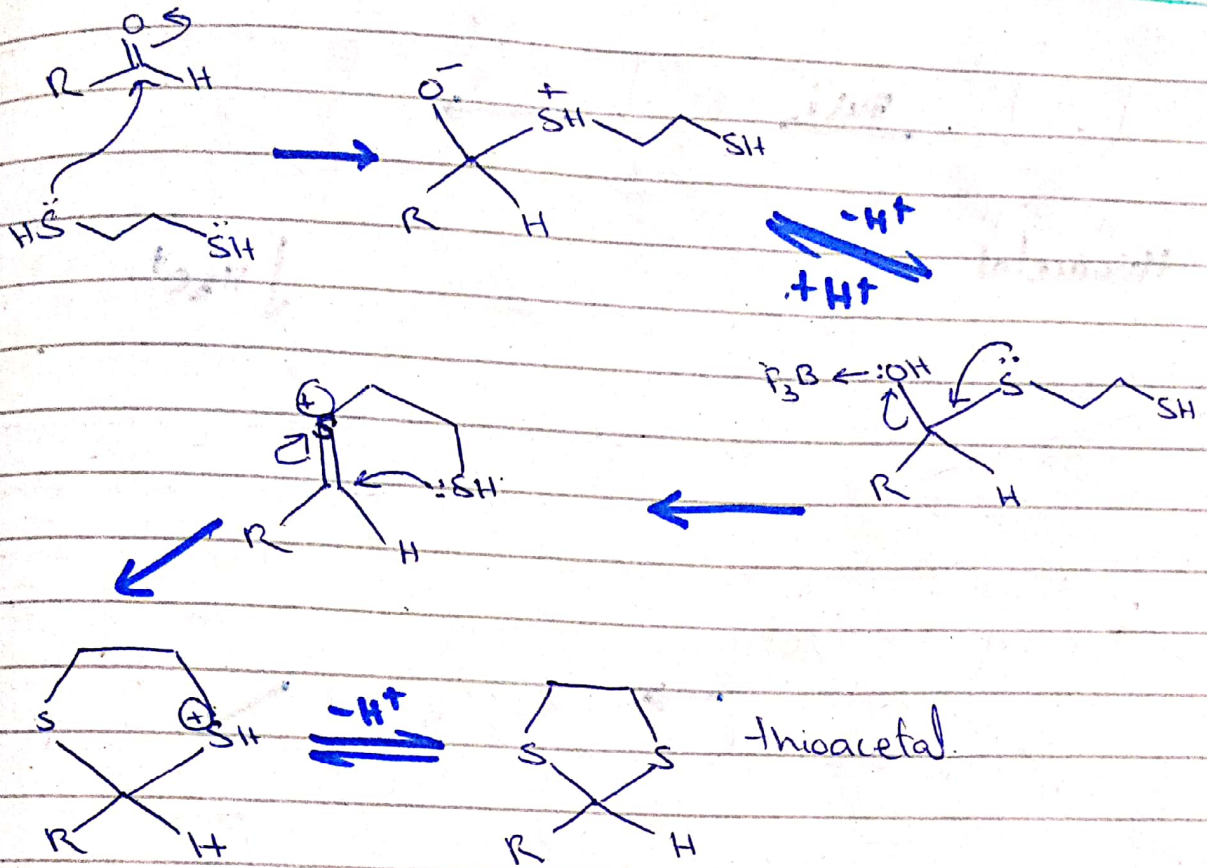


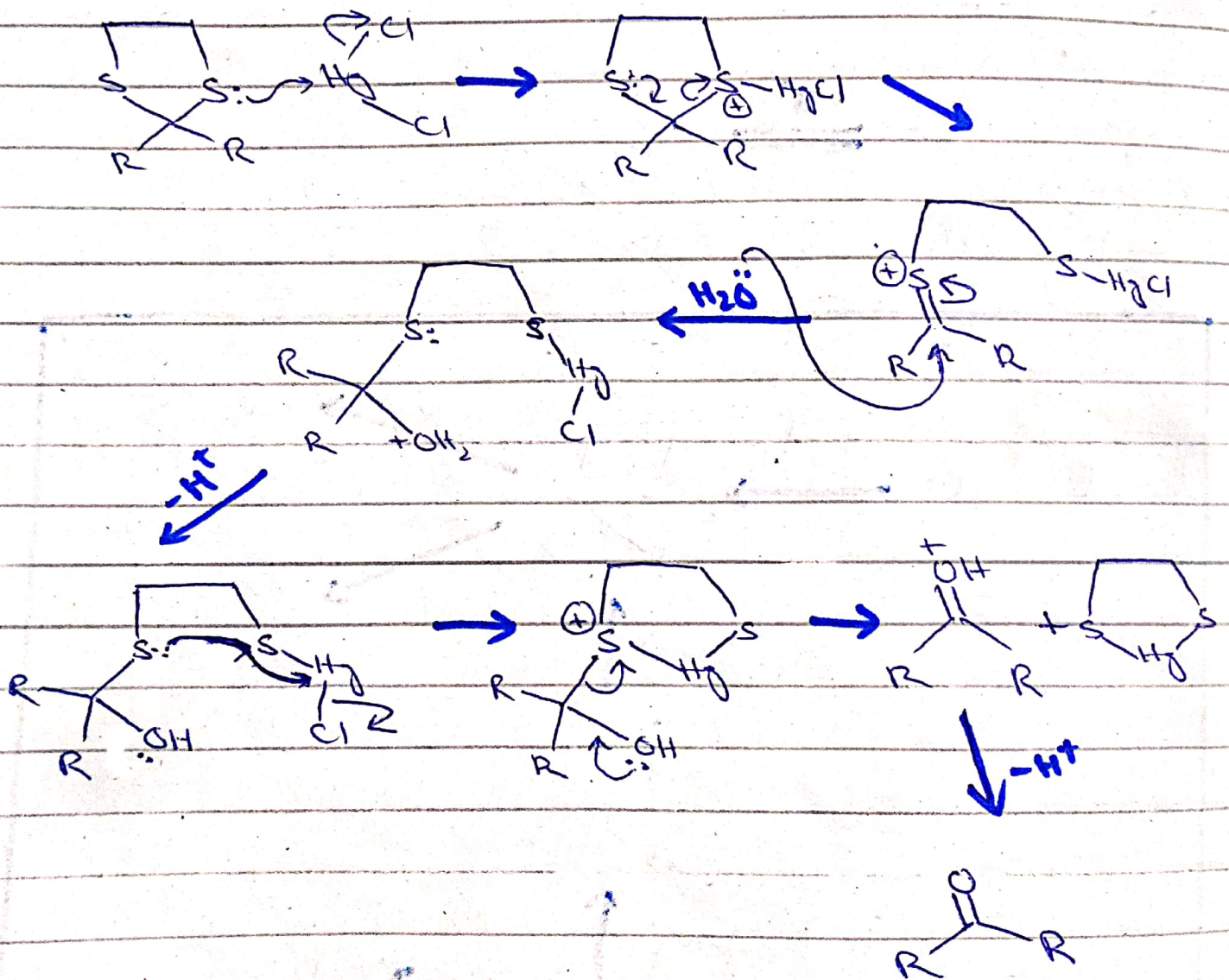
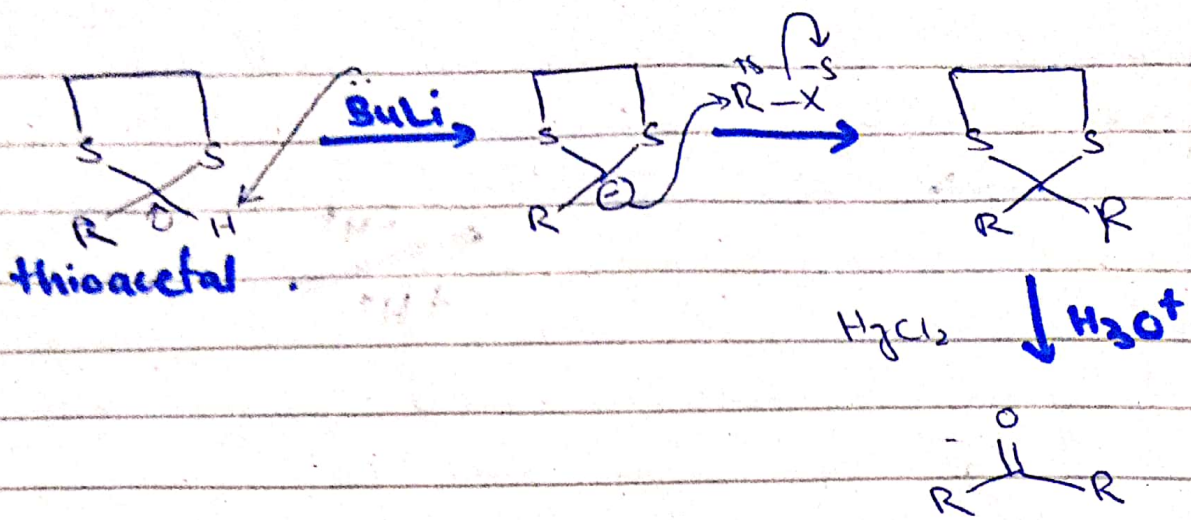
Mechanism of Acetal formation:-

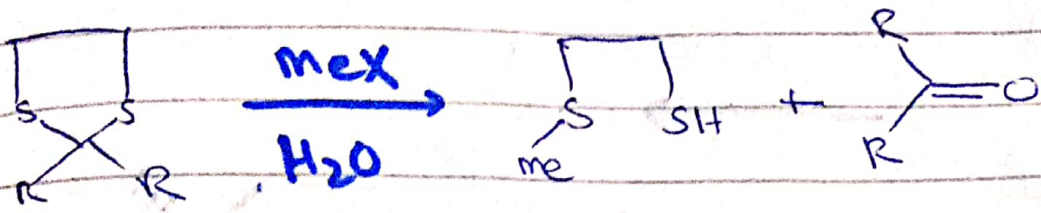


- It has been demonstrated that H_2O adds rapidly to carbonyl function of aldehyde & ketones to form geminal-diol.
- In similar reaction alcohol add reversibly to aldehyde & ketones to form hemiacetal. Formation of acetal occurs when hydroxyl group of hemiacetal becomes protonated & is lost as water.
- acetal used for aldehyde
- ketal used for ketone

Mechanism of thioacetal formation







Mechanism:-

