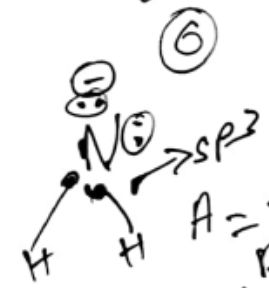
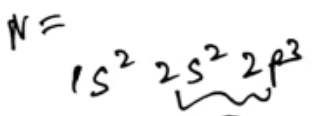


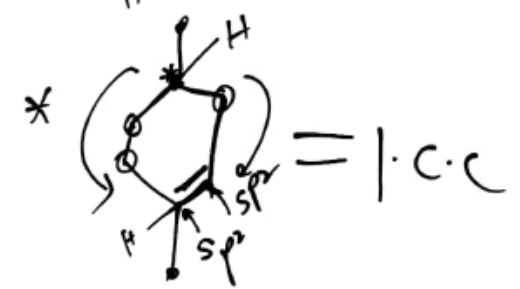
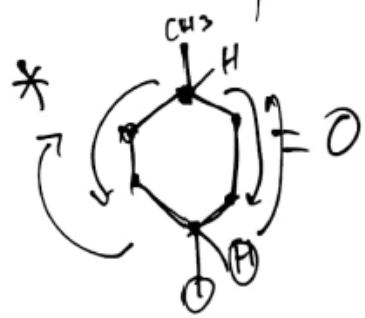
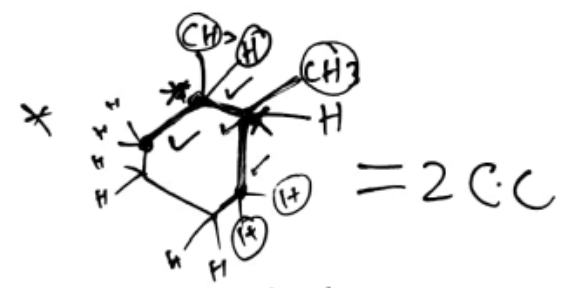
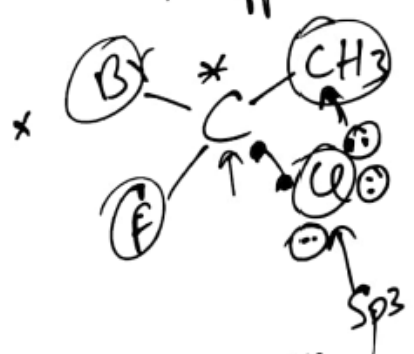
# Optical Isomerism



Chiral Centre  $\rightarrow$  A  $sp^3$  hybridised atom usually C (but can N, P, S) having 4 different valencies is k/a chiral centre (C.C)

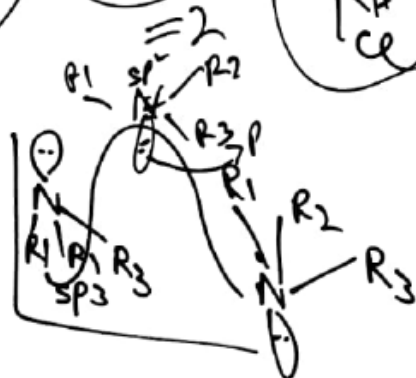
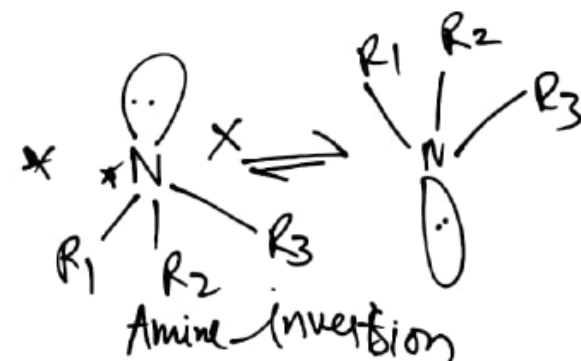
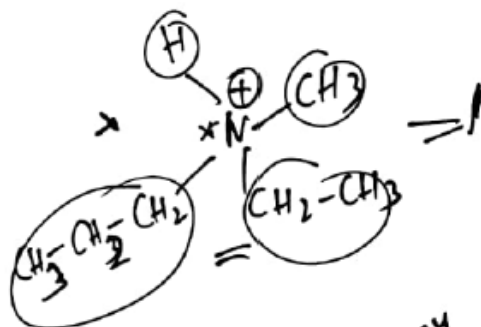
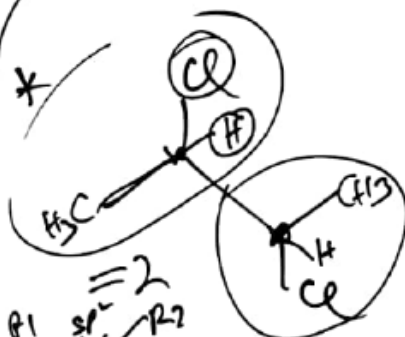
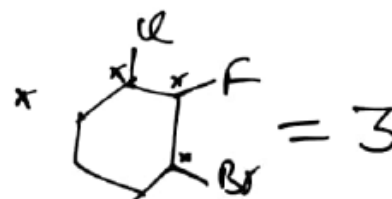
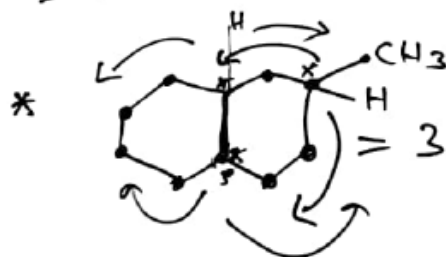
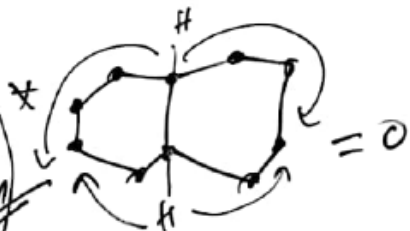
$A = 2$   
 $B = 2$   
 $A = 4$   
 $B = 0$   
 $NH_4^+$   
 $A = 4$   
 $B = 0$

NO. of  
 $A = \sigma$  bond  
 $B =$  No. of l.p  
 $A + B = 4 \rightarrow sp^3$   
 $A + B = 3 \rightarrow sp^2$   
 $2 \rightarrow sp$

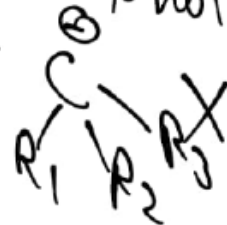


# Optical Isomerism

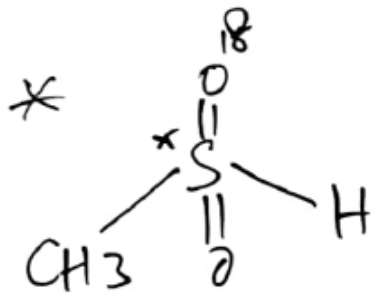
- \* Peter Sykes
- \* Paula Burke
- \* Warren/Clayden
- \* Solomon
- \* I-L Final
- \* Penny
- \* Jerry March



SP<sup>3</sup> hybridised N with l.p is not considered as C.C



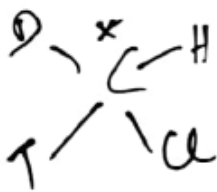
# Optical Isomerism



$C.C = 1$

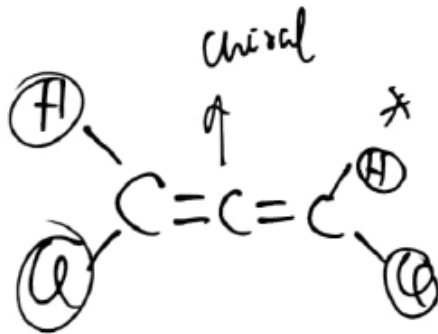
only 2 period element undergo inversion.

Achiral



\* If a compound has <sup>only</sup> 1 C.C then it will be always chiral.

\* If a compound have more than 1 C.C then it can be chiral or can't be (symmetry)



\* If a compound have 0 C.C then also it can be chiral. Eg. allene, biphenyl