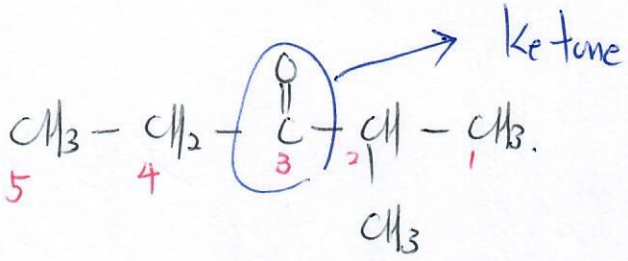
problem 19-1. -1

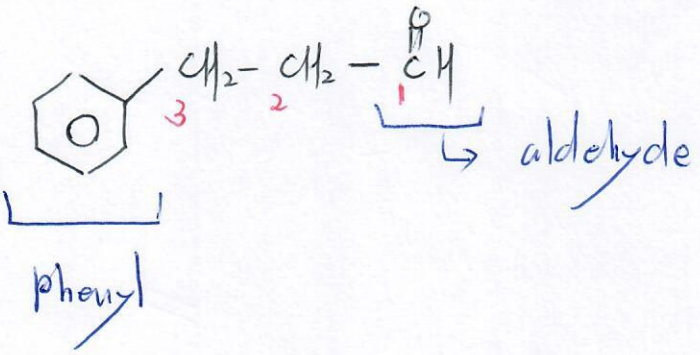
(a) 

$R-\overset{O}{\overset{\|}{C}}-R$
ketone
-e → -one

2 - Methy - 3 - pentanone.

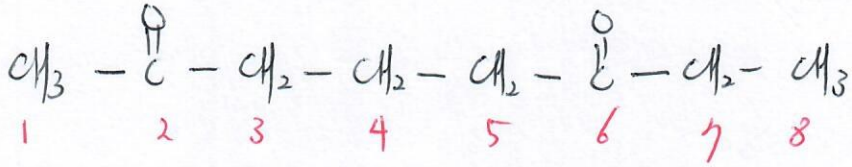
or

2 - Methy - pentan - 3 - one.

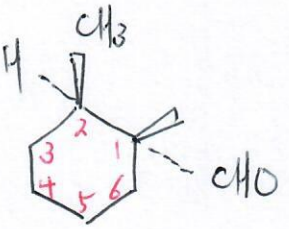
(b) 

$R-\overset{O}{\overset{\|}{C}}-H$
aldehyde.
-e → -al

3 - Phenyl propanal.

(c) 

2. 6 - octane dione

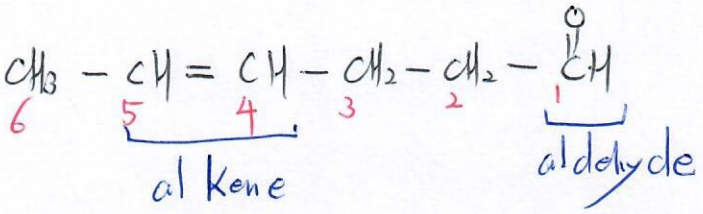
(d) 

In cyclic aldehyde
→ carbaldehyde.

trans - 2 - methyl cyclohexane carbaldehyde

Problem 19-1-2

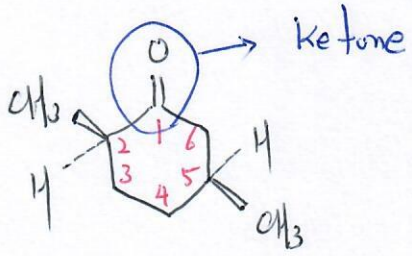
(e)



Hexane → Hexene.

4 – Hexenal

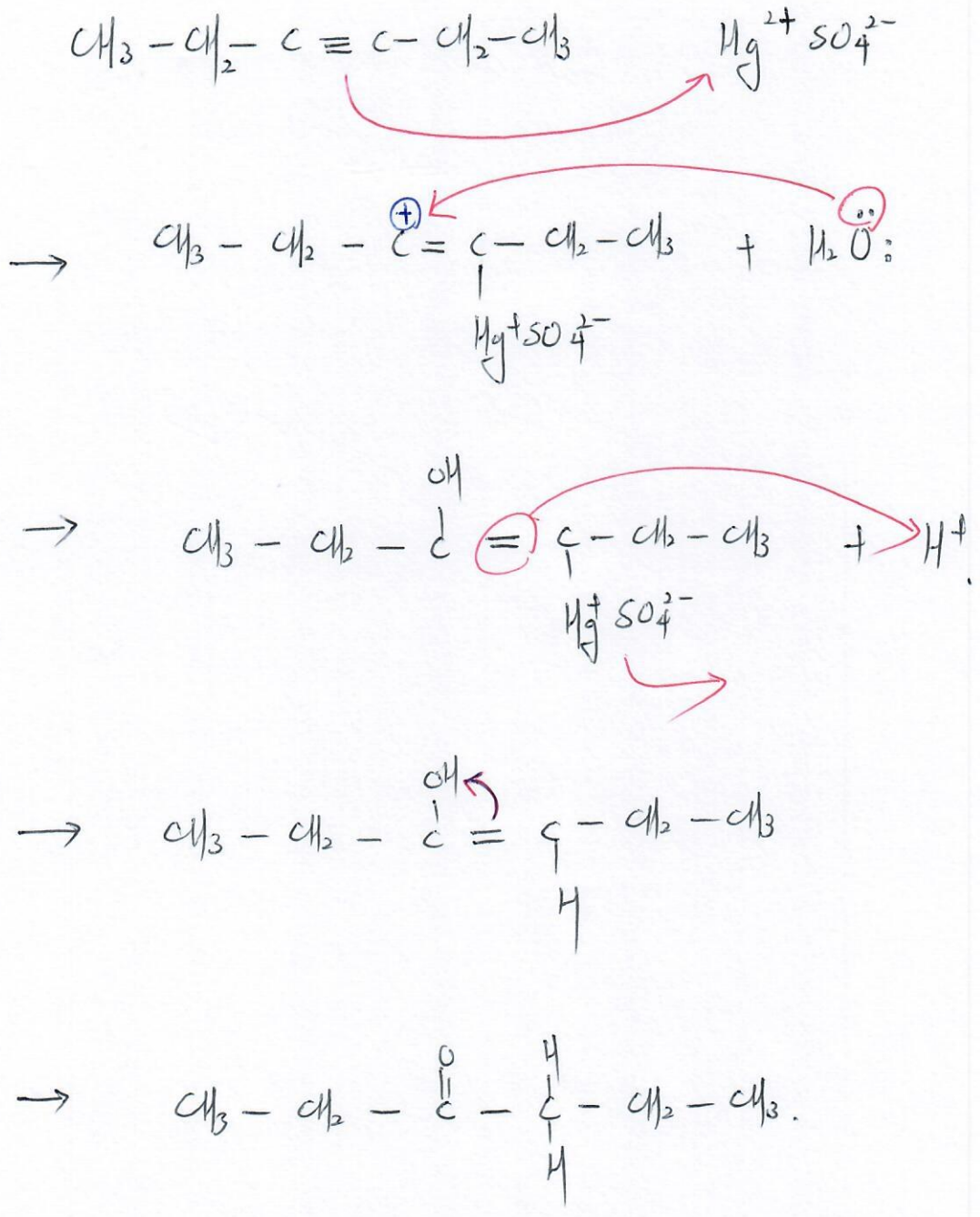
(f)



cis – 2.5 – Dimethyl cyclohexanone

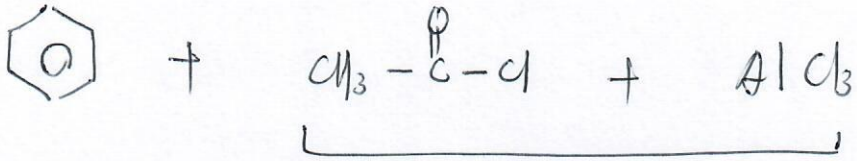
problem 19-4

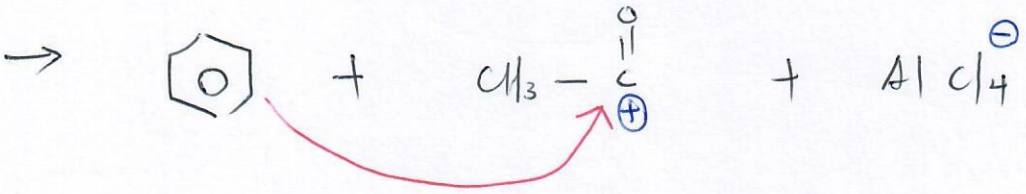
(a) 3 - Hexyne

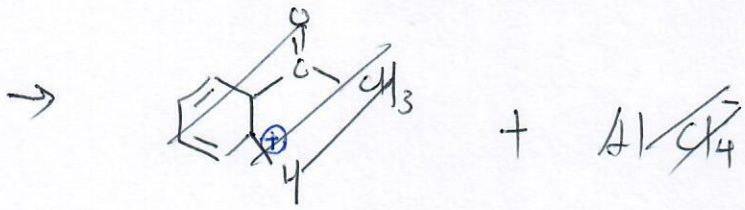


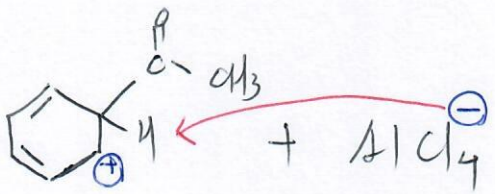
Problem 19-4-2

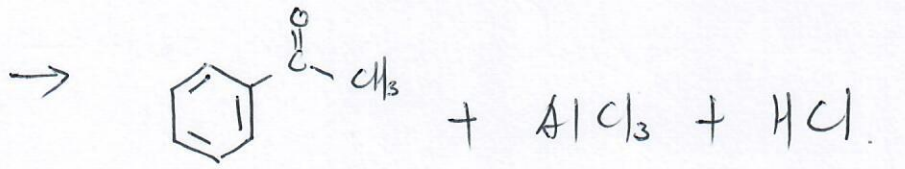
b)

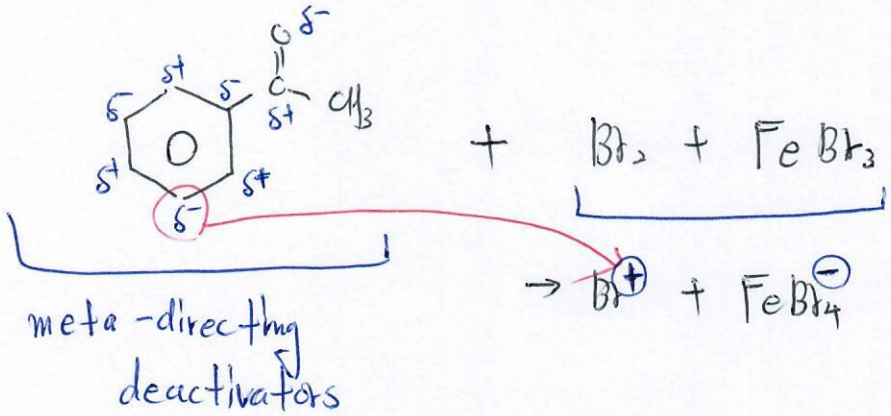


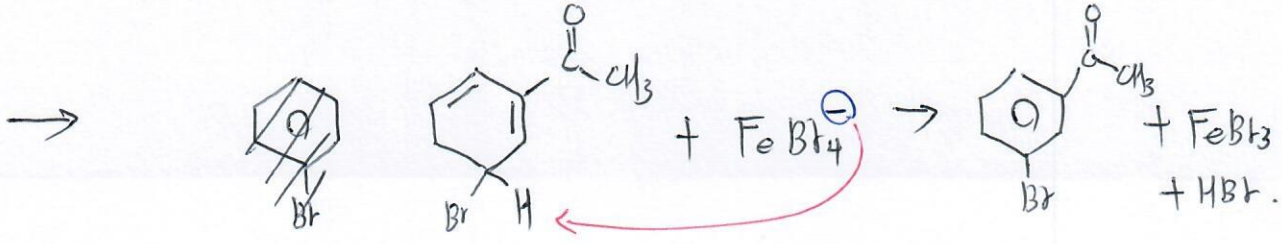




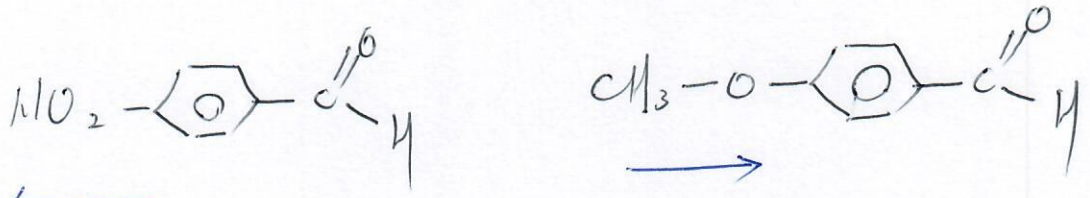








Problem 19-6.

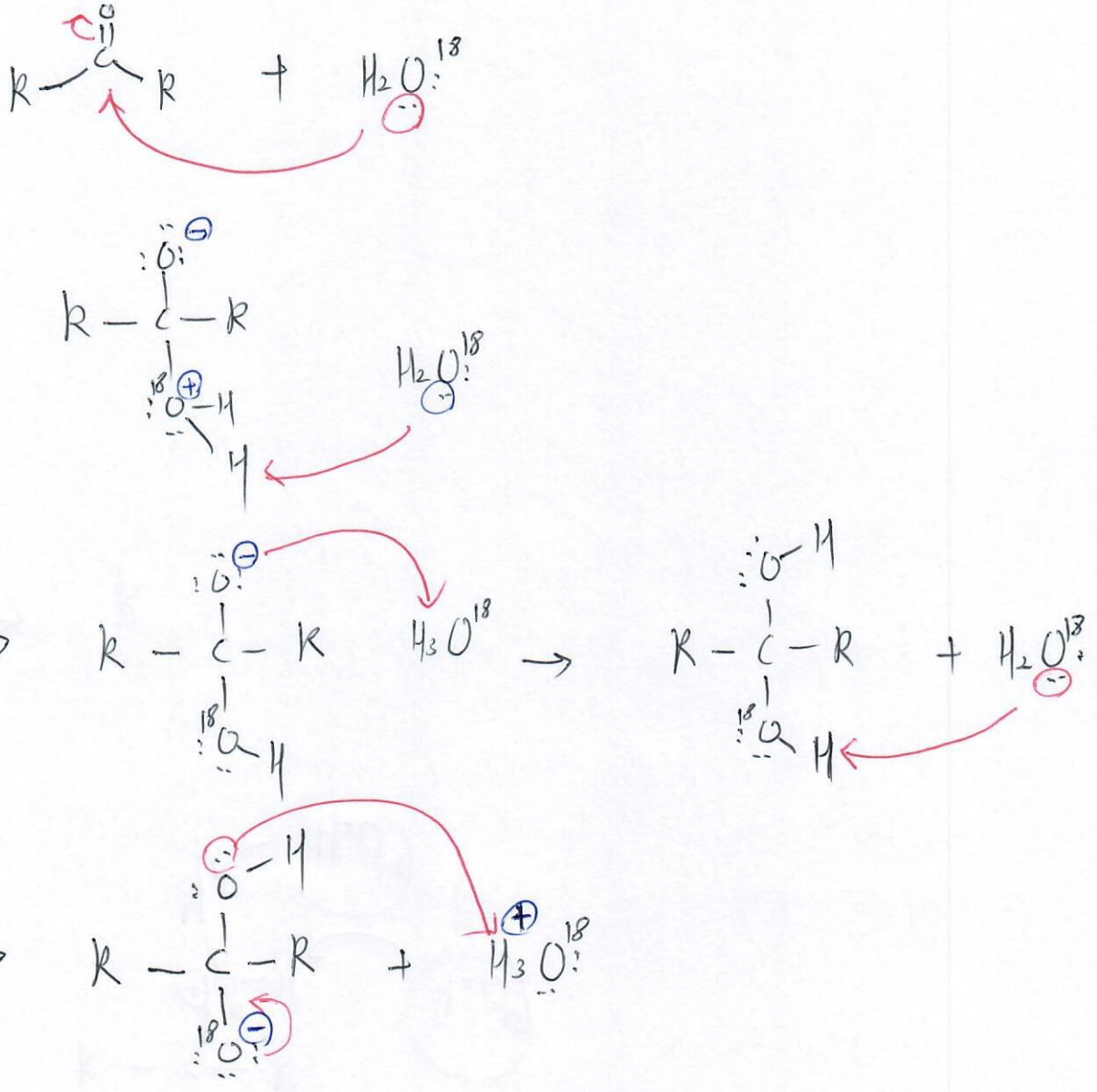


Electron-withdrawing

Electron-donating.

The electron-withdrawing nitro group makes the aldehyde carbon of p-nitrobenzaldehyde more electron-poor (more electrophilic) and more reactive ~~to~~ toward nucleophiles than the aldehyde carbon of p-methoxybenzaldehyde.

Problem 19-8

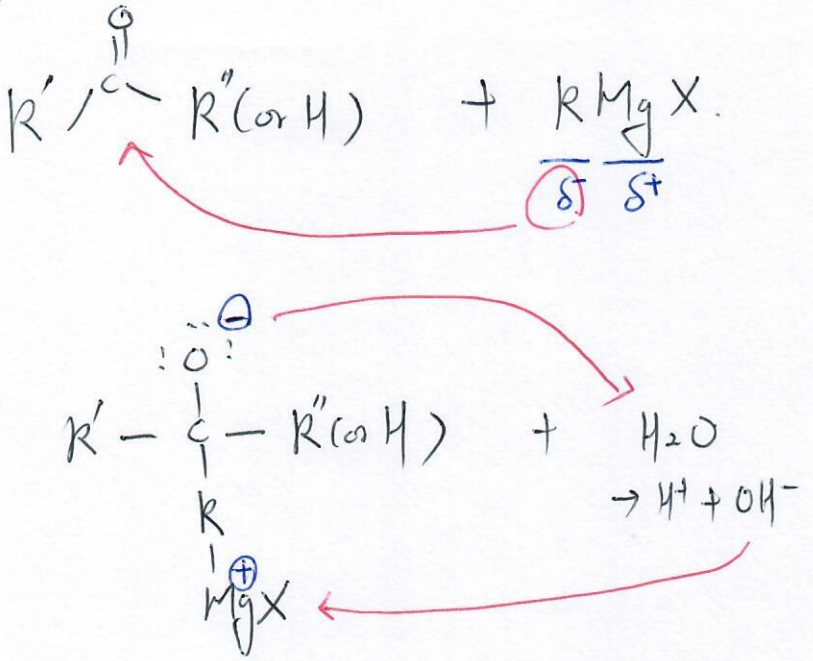


Two H_2O^{18} is used on rxn. ~~and~~

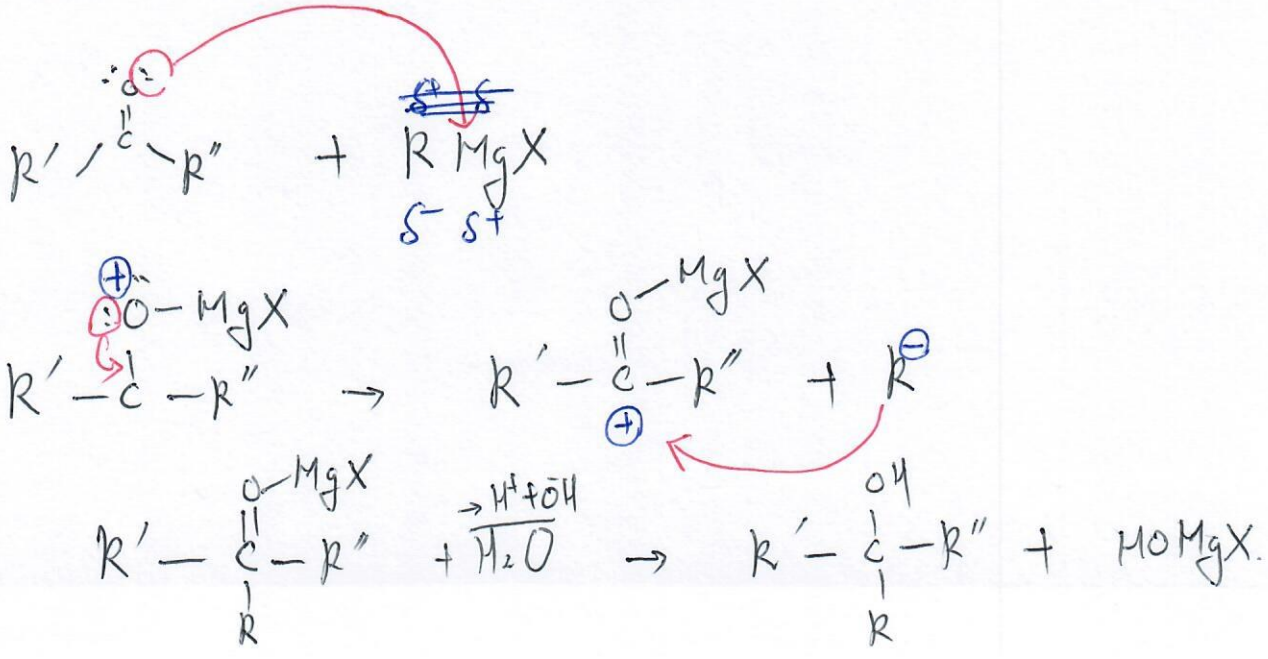
Section 19-7.

Addition of Grignard Reagents. $RMgX$.

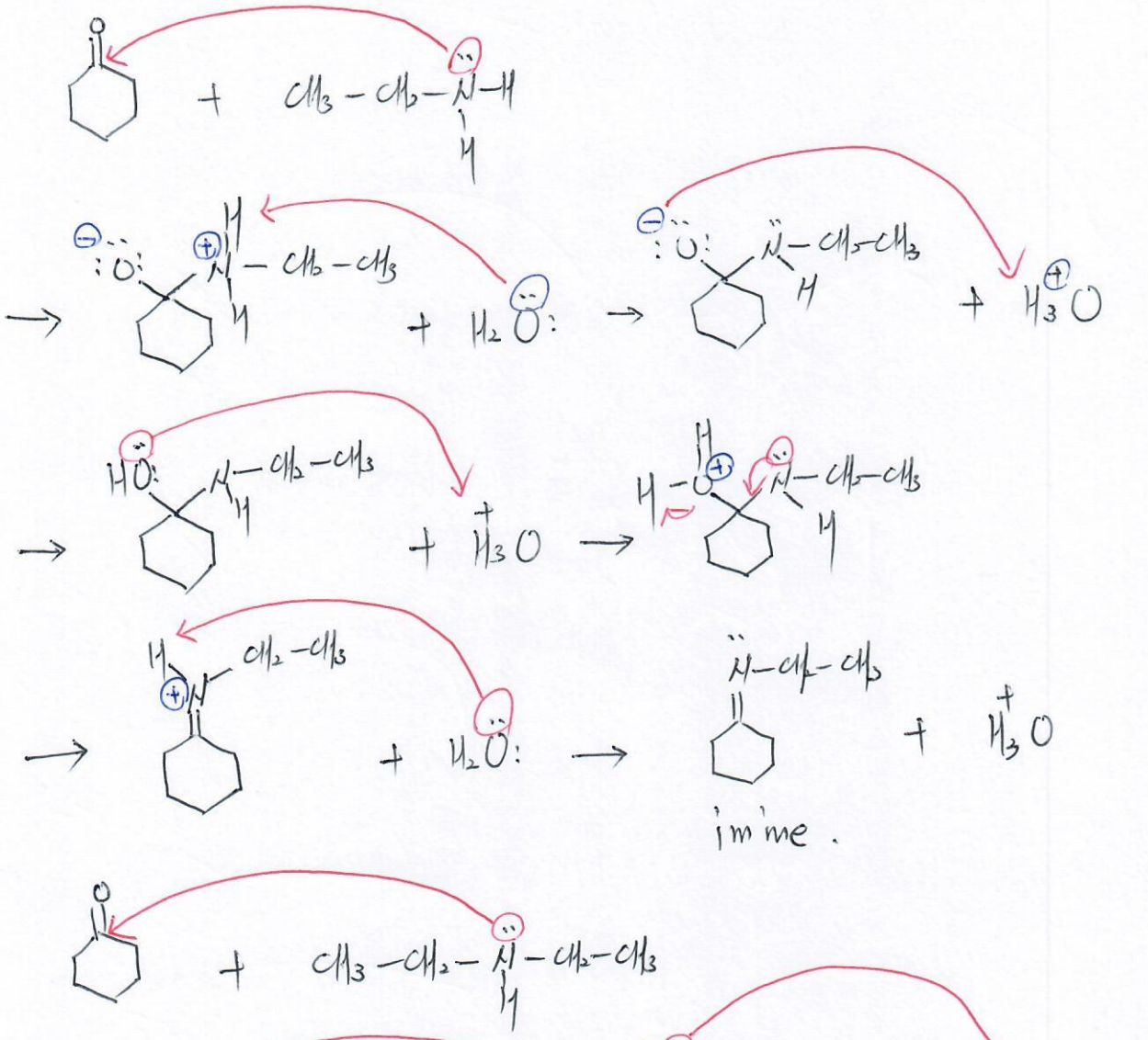
< simple mechanism >



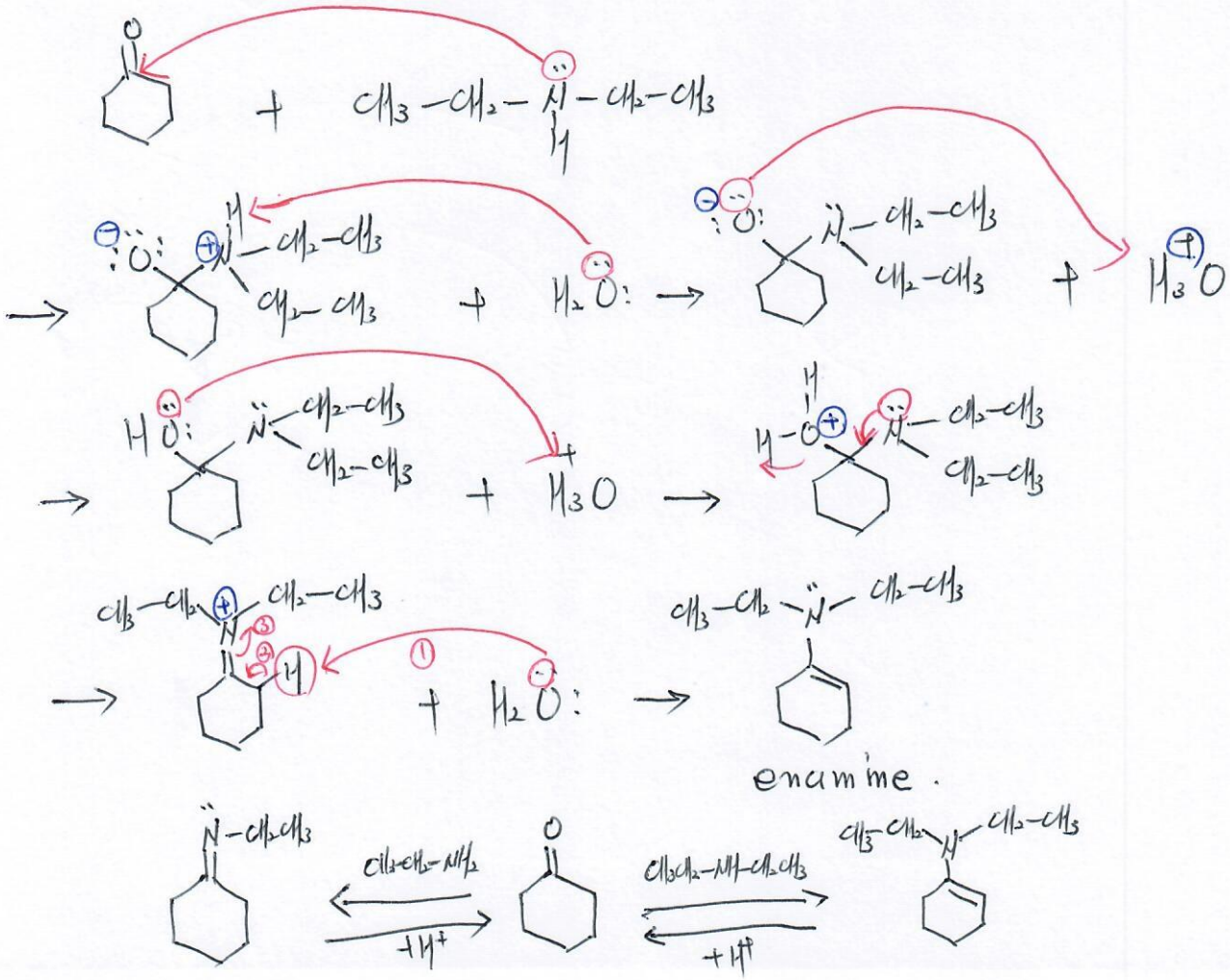
< More detail >



problem 19-10.



imine.



enamine.

Problem 19-12.