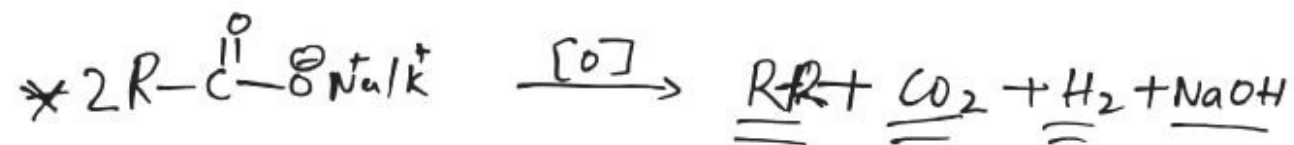
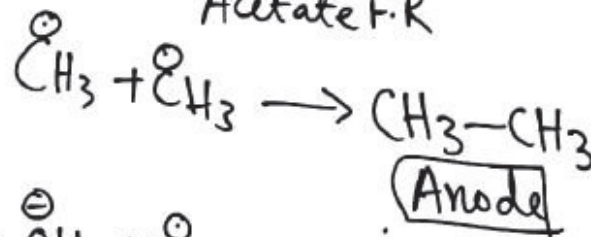
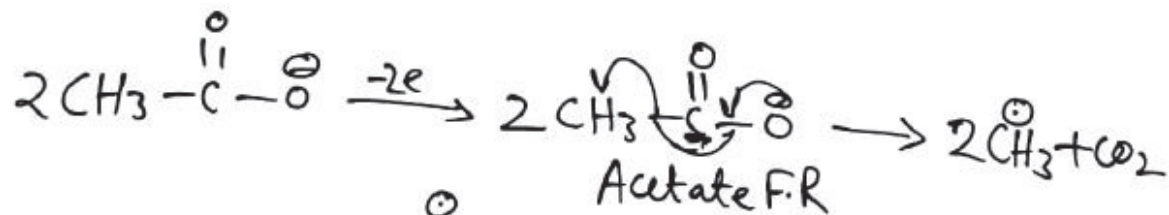


* Kolbe electrolysis

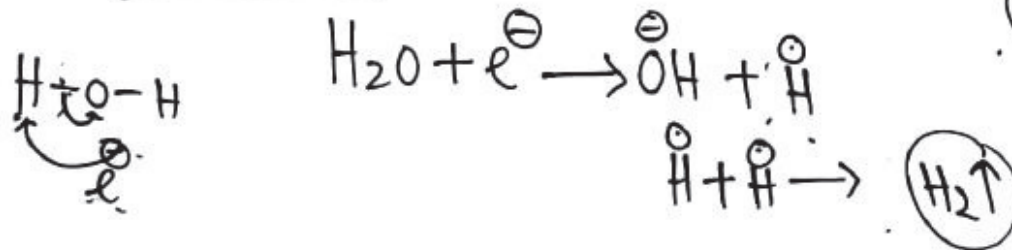


At anode

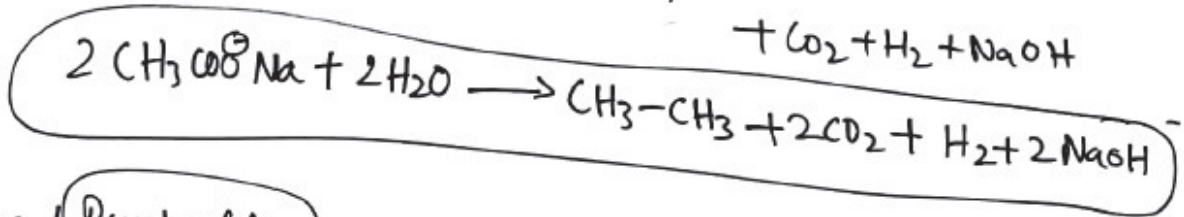
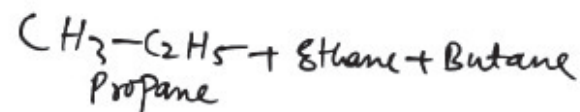
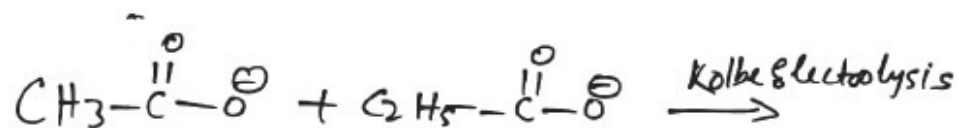
* Methane
can't be prepared
from this Rxn



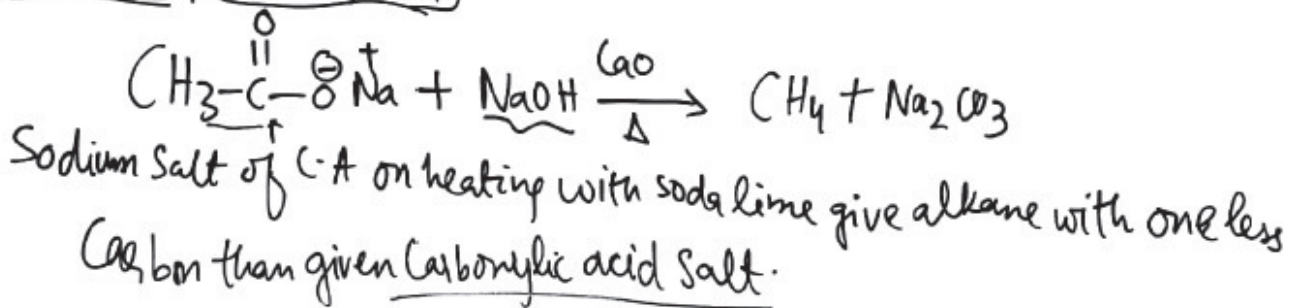
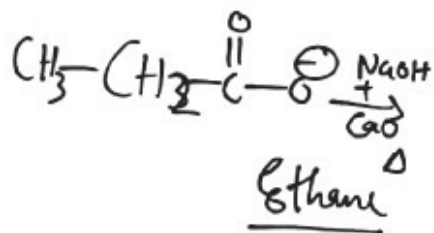
At Cathode

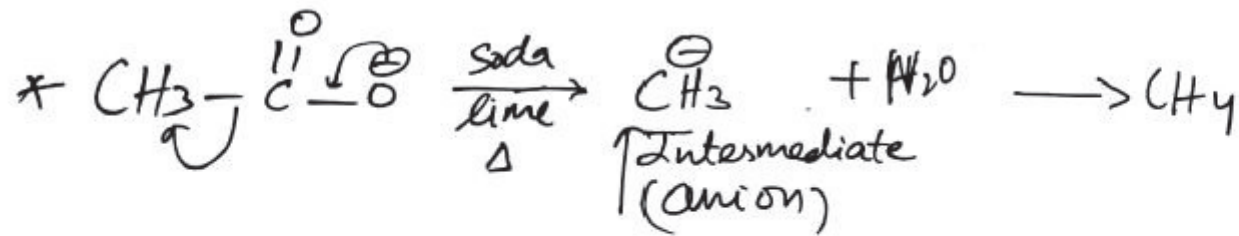


* Kolbe electrolysis (Decarboxylation)

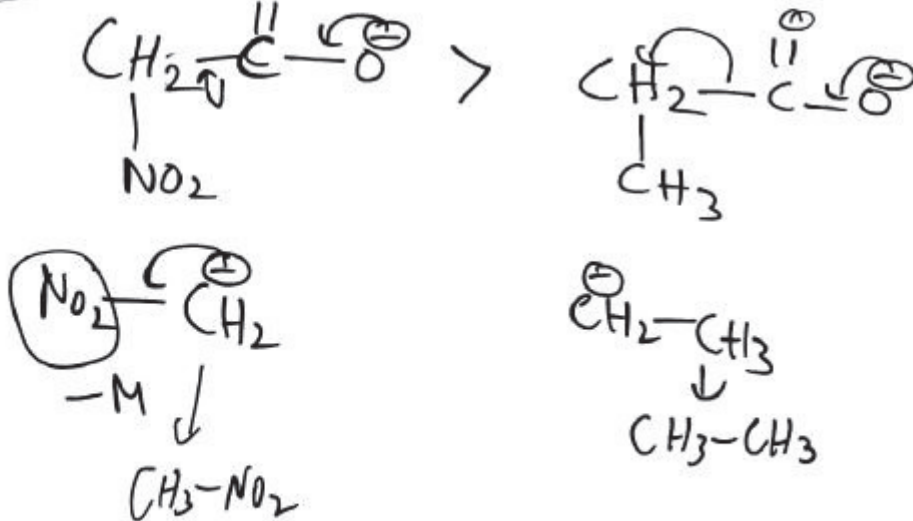


* Soda-lime (Decarboxylation)



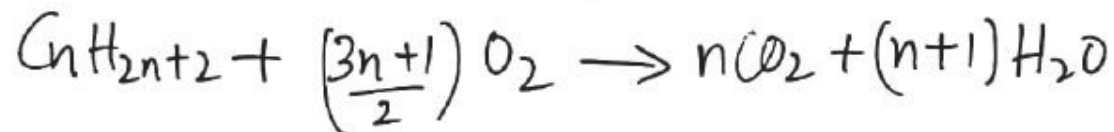


Rate of decarboxylation (decided on the basis of stability of carbocation form)



Reaction/Chemical Properties

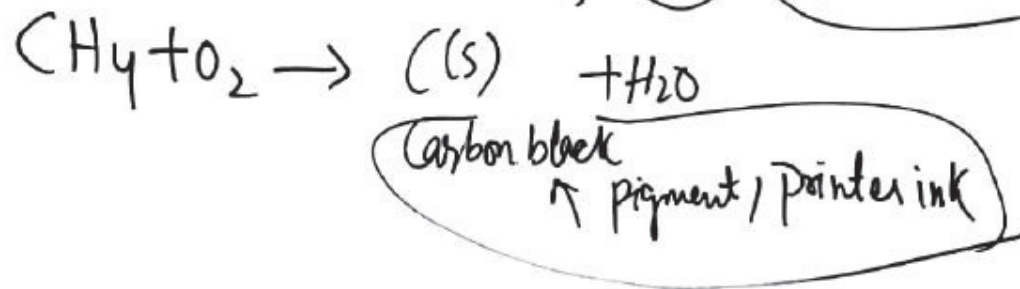
* Combustion → Heating of alkanes in presence of O₂ or Air



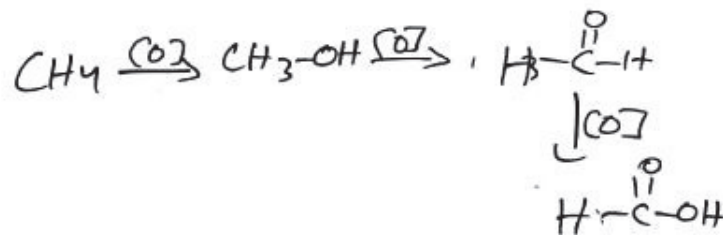
* Combustion is an exothermic Rxn

Alkane is used as fuel 'because of this

⇒ Natural gas (LPG) (propane + butane)

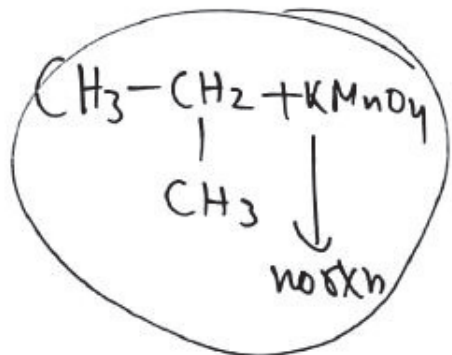
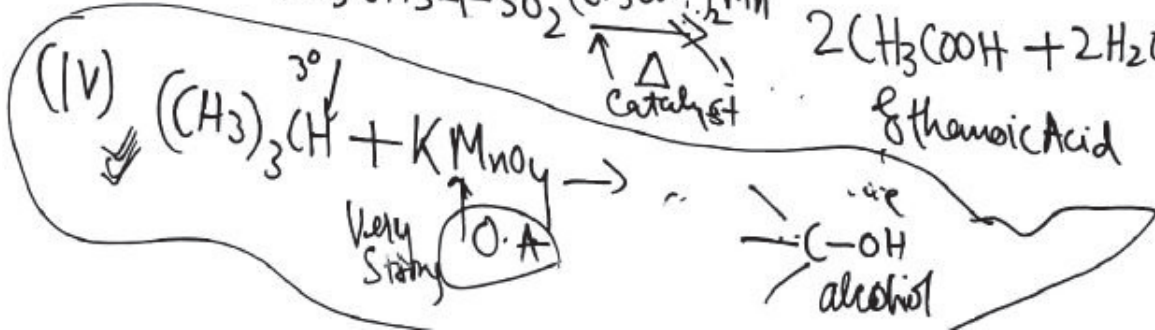
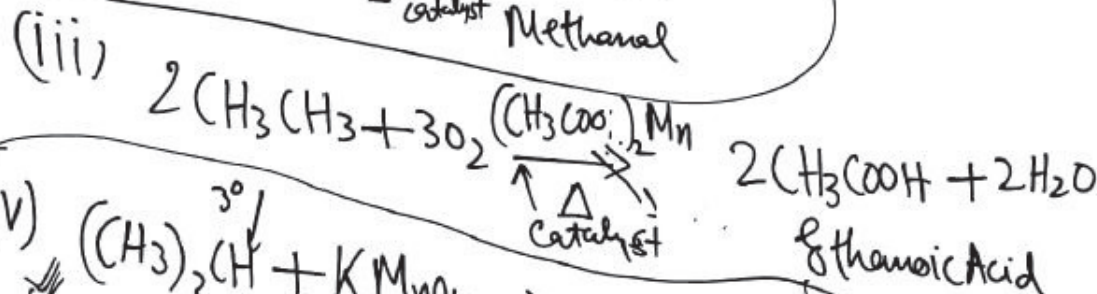
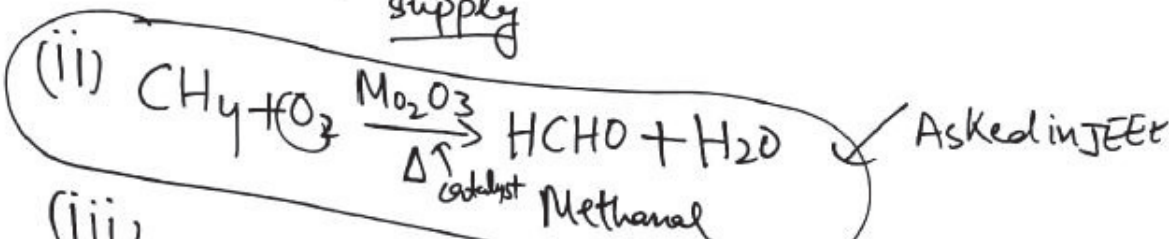
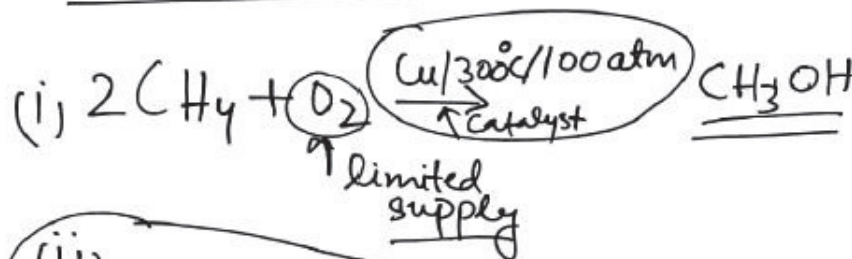


Reaction/Chemical Properties

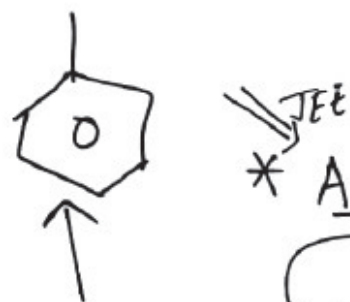
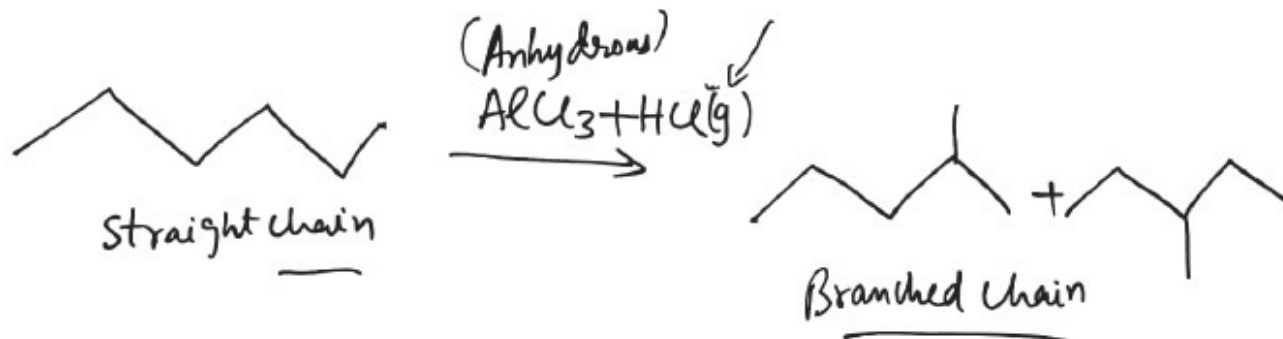


2) Controlled oxidation →

Learn them

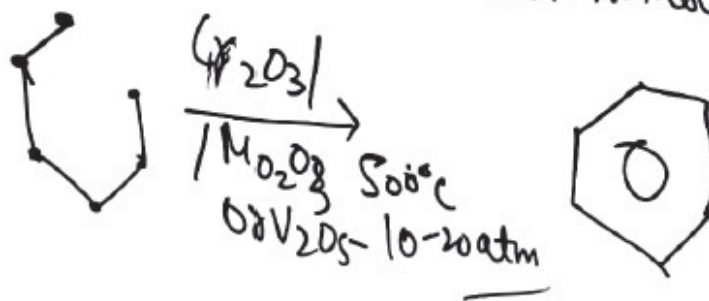
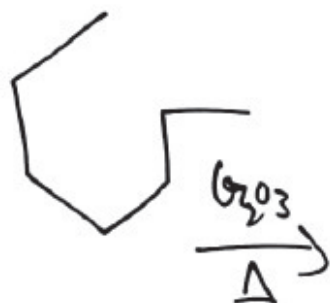


* Isomerisation

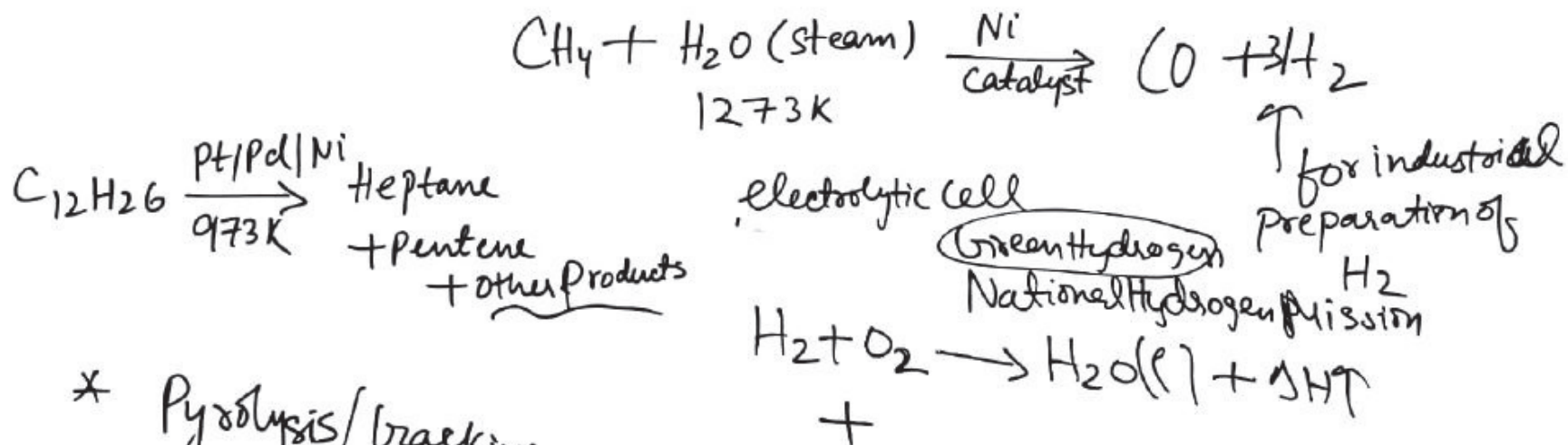


* Aromatization

Alkanes having $n \geq 6$ on heating at 500°C at 10-20 atm in presence of oxides of Cr, Mo, V get dehydrogenated and cyclised to benzene & its homologues.



* Reaction with Steam



* Pyrolysis/Cracking

✓ * Higher alkanes on heating at higher temp decomposes into lower alkanes, alkenes etc. Such decomposition rxn into smaller fragments hydrocarbons by application of heat is called

* It is a Pyrolysis/Cracking rxn