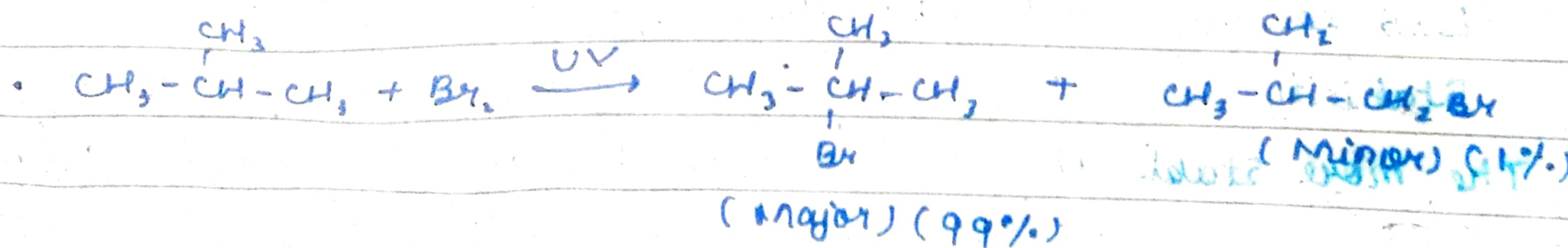
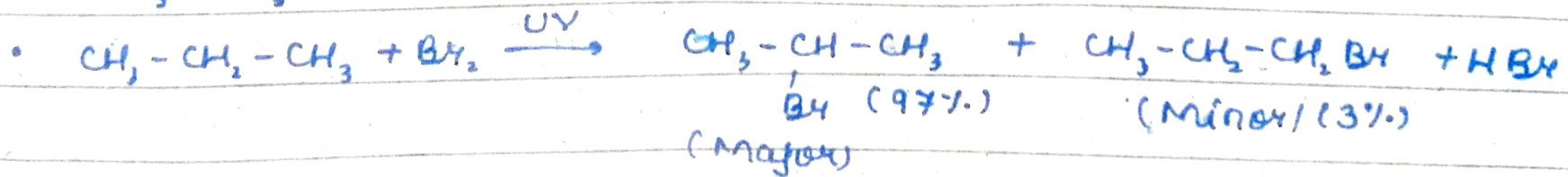
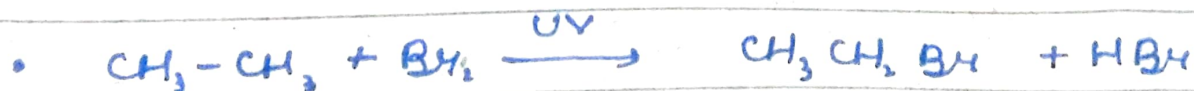
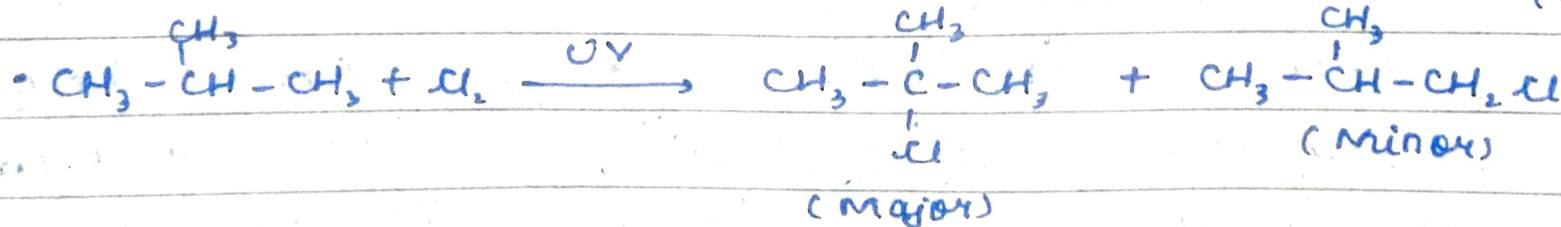
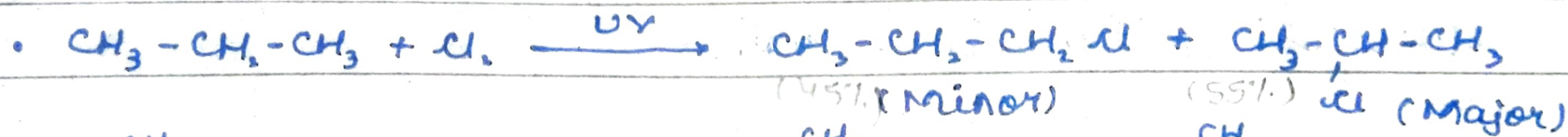
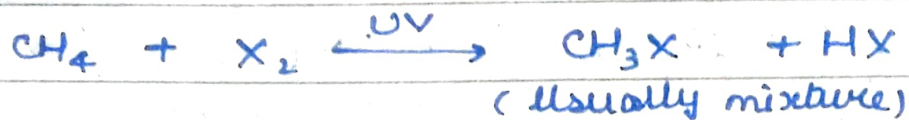


HALOGENATION OF ALKANES: 148

Under the influence of UV light, chlorine or Bromine converts alkane into chloroalkane / Bromoalkane.

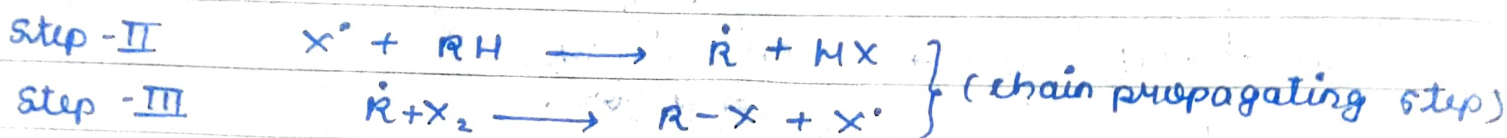
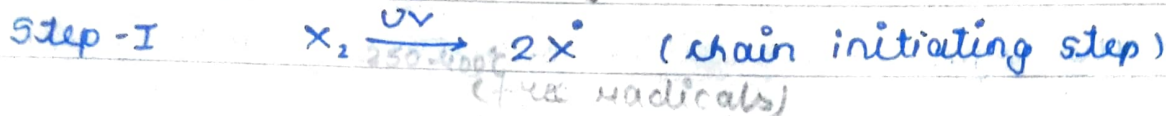


Bromine is less reactive and more selective

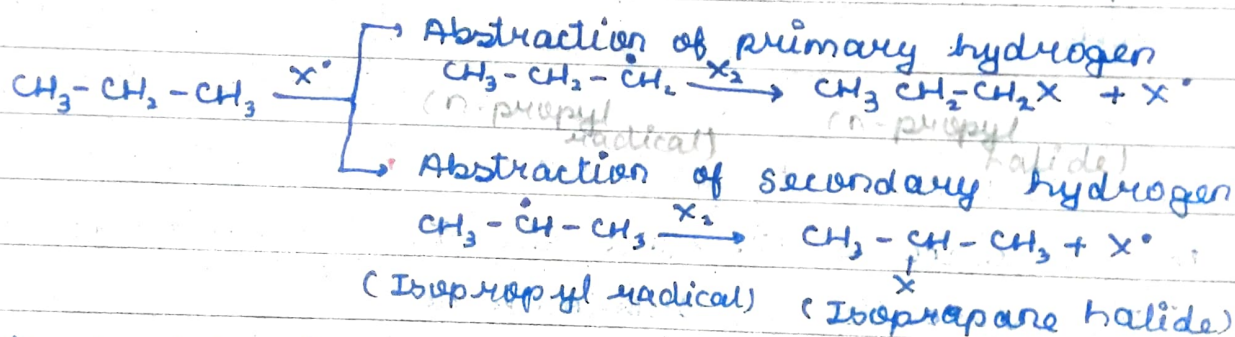
* Chlorination gives mixture in which no isomer greatly predominates but in Bromination, one isomer predominates due to low reactivity of Bromine atom.

^{Low} No reactivity. more selectivity

* Mechanism of Halogenation:



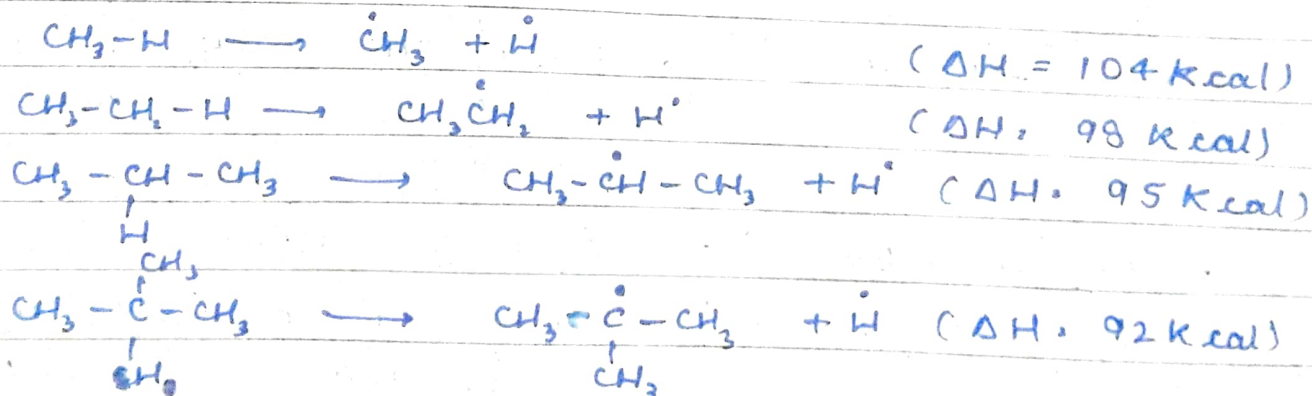
↳ step II, III (repeats)



Rate of abstraction of Hydrogen $3^\circ > 2^\circ > 1^\circ$.

* Stability of free radicals: 156

Homolytic dissociation energies -



Less energy, More stability.

Stability order: $3^\circ > 2^\circ > 1^\circ$

The more stable the free radical, the more easily it's formed.