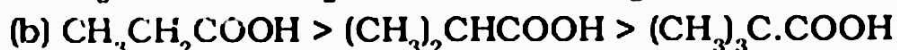
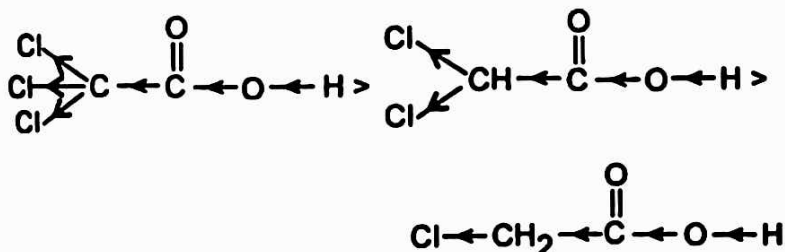


Q) Explain the terms Inductive and Electromeric effects. Which electron displacement effect explains the following correct orders of acidity of the carboxylic acids?



Ans) (i) The above order can be explained by -I effect of chlorine atoms.

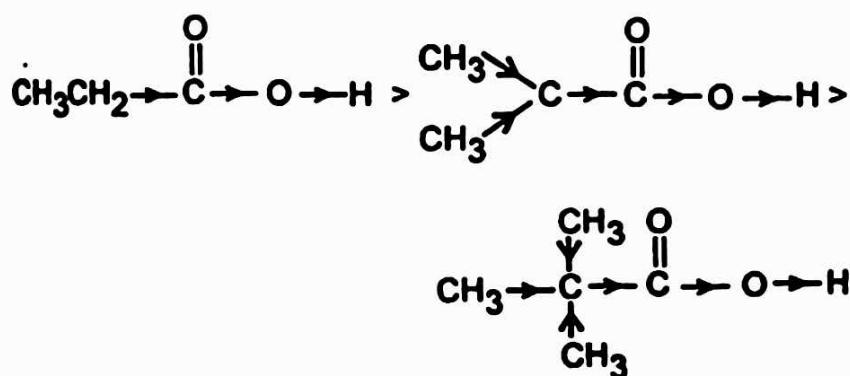


As the number of halogen atoms decreases, the overall-I effect decreases and the acid strength decreases accordingly.

(ii) The above order can be explained by +I effect of the methyl group.

As the number of halogen atoms decreases, the overall-I effect decreases and the acid strength decreases accordingly.

(iii) The above order can be explained by +I effect of the methyl group.



As the number of alkyl groups increases, the +I effect increases and the acid strength decreases accordingly.