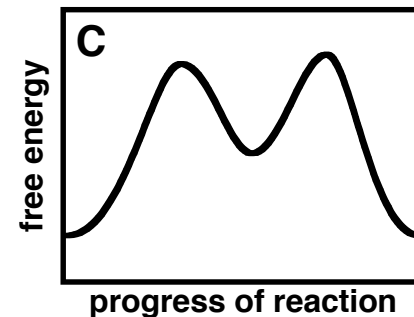
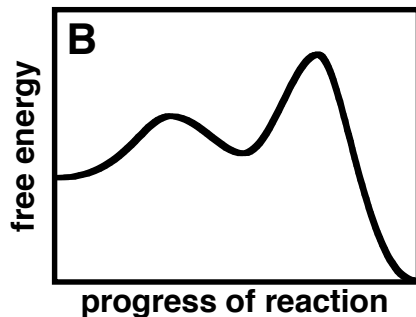
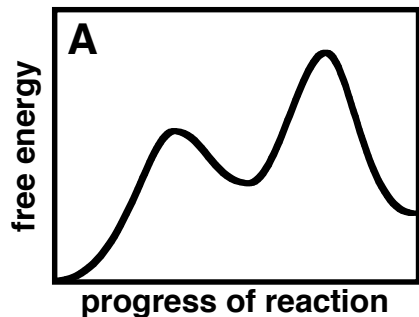


Discussion Problem

Free Energy Diagrams for Nucleophilic Acyl Substitution Reactions



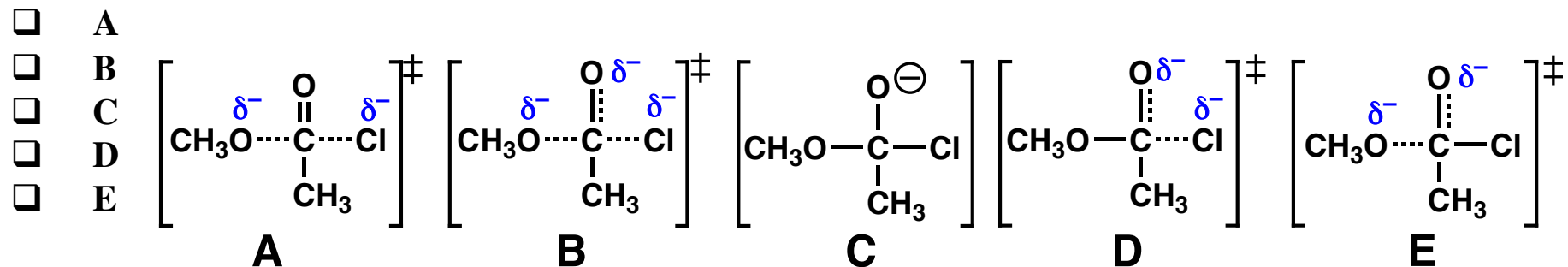
Which free energy diagram? [A B C (circle one)]



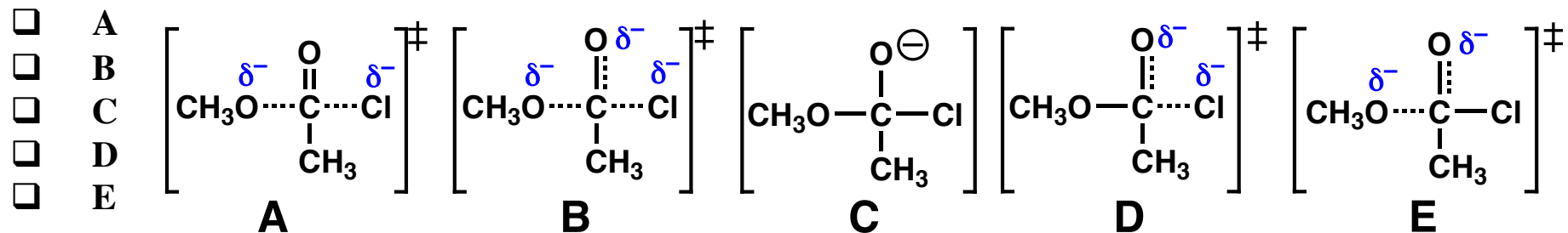
Which free energy diagram? [A B C (circle one)]

Discussion Problems

(1) Which best represents the TS^\ddagger of the first step of nucleophilic acyl substitution in which a methoxide anion displaces the chloro group in acetyl chloride?



(2) Which best represents the TS^\ddagger of the second step of nucleophilic acyl substitution in which a methoxide anion displaces the chloro group in acetyl chloride?



(3) Rank these from slowest to fastest for hydrolysis in aqueous NaOH (-OBn = -OCH₂Ph).

