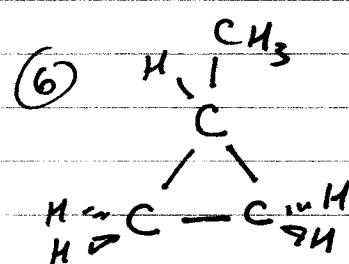
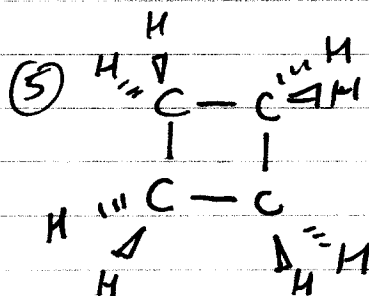
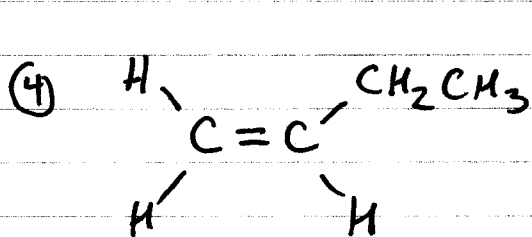
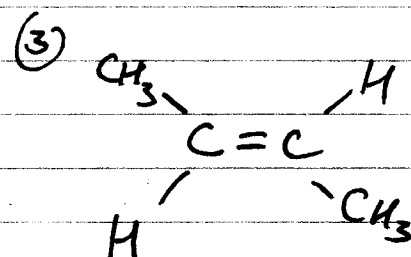
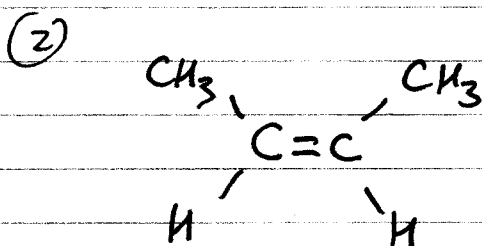
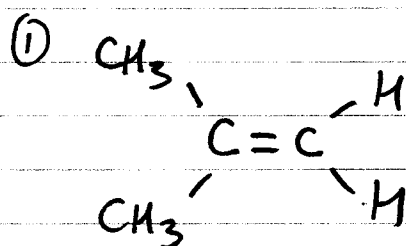


22.116 (a) The molecular formula satisfies the relationship $C_nH_{2n} \Rightarrow$ 1 "center of unsaturation" (either a ring or a double bond).



(b) (2) and (3) are diastereomers (cis and trans)

(c) No enantiomers - no C has 4 different substituents.