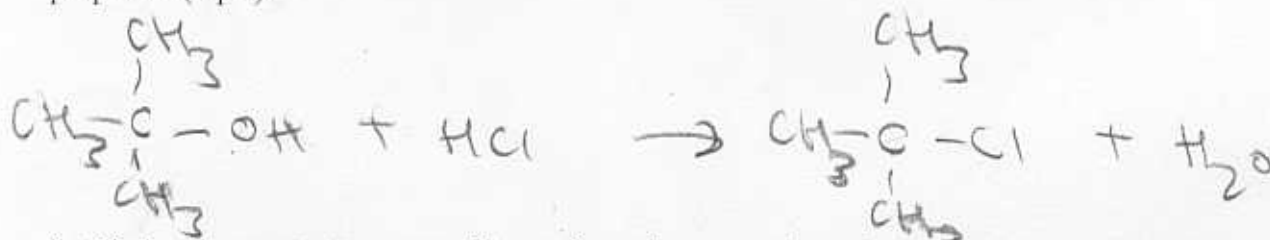


1. Show the names and formulas of two common drying agents! (4 pts)

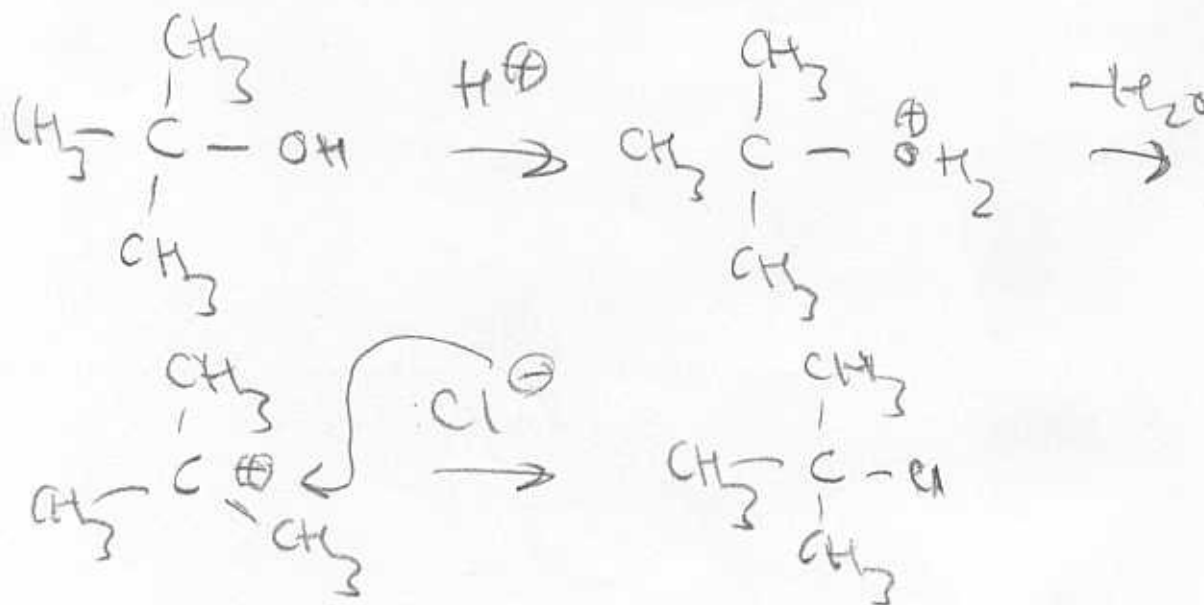
Sodium sulfate,  $\text{Na}_2\text{SO}_4$   
 Calcium chloride,  $\text{CaCl}_2$

2. Show a balanced equation for the reaction of hydrogen chloride with 2-methyl-2-propanol! (5 pts)



3. Circle all correct statements. They refer to the preparation of 2-chloro-2-methylpropane: A "The 2-methyl-2-propanol I used last time is a secondary alcohol" B "I could have achieved the same conversion by using sulfuric acid instead of hydrochloric in last week's experiment" C "I could have prepared 2-chloro-2-methylpropane by addition of HCl to propene" D "I could have prepared 2-chloro-2-methylpropane by addition of HCl to 2-methylpropene" E "I could also prepare 2-chloro-2-methylpropane by addition of chlorine to 2-methylpropene" (5 pts).

4. Show a valid mechanism for the preparation of 2-chloro-2-methylbutane! What type of reaction is this? (e.g., electrophilic addition) 6 pts



$\text{S}_{\text{N}}1$  reaction