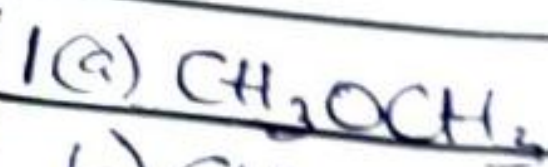


RUFUS FORTUNE CHINNEC

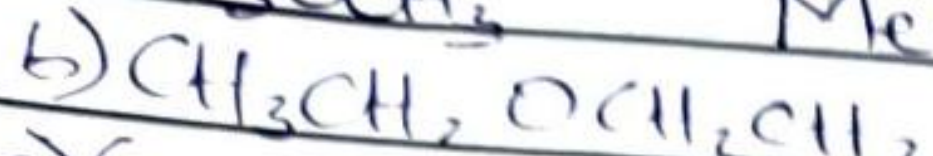
19/MHSOL/388

MHS/MRBS

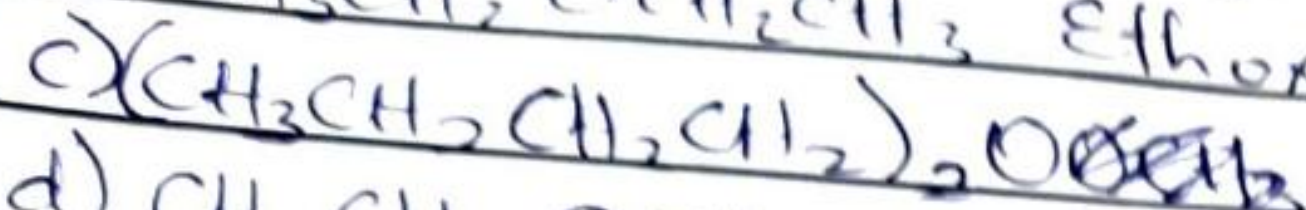
CHEM 102



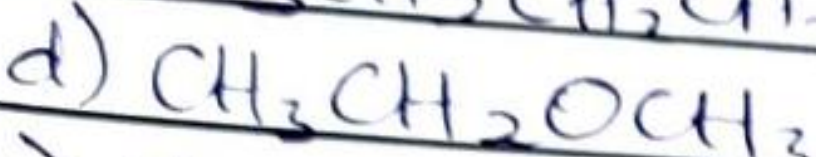
Methoxymethane



Ethoxyethane



Butoxymethane



methoxyethane



Ethoxypropane

2 - Physical states: At room temperature, they are colourless, neutral liquids having pleasant odour. Lower aliphatic

- Ethers are unreactive at moderate temperature.

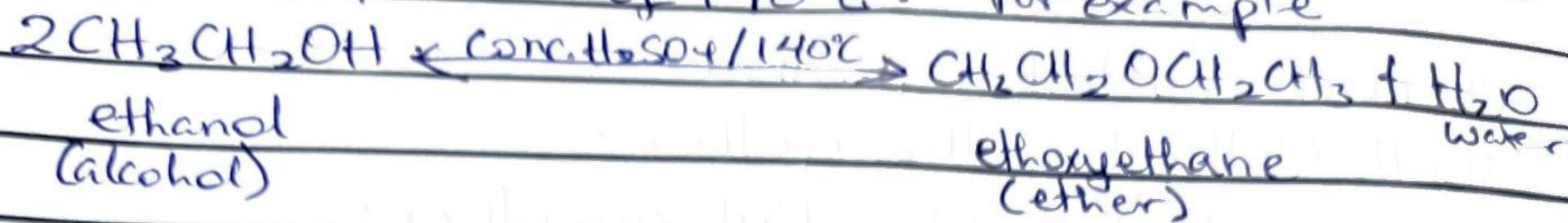
- Ethers have lower boiling points compared to corresponding alcohols because ethers lack hydrogen bonds which are present in alcohols.

- Ethers containing up to three carbon atoms are soluble in water, due to their hydrogen bond formation with water molecules. Their solubility decreases with increase in number of carbon atoms. They are appreciably soluble in organic solvents.

- Most simple ethers are less dense than water. Density increases with increasing molecular mass. Some aromatic ethers are denser than water.

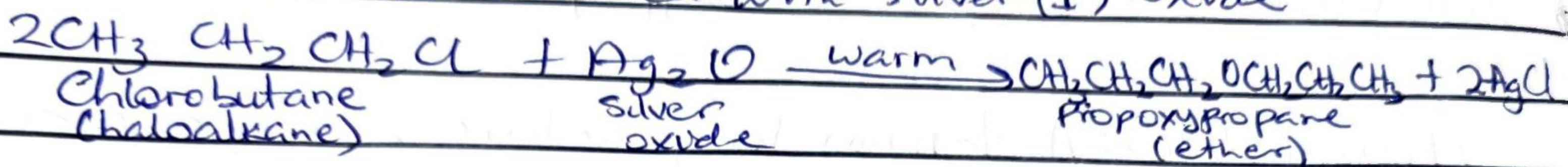
3(a) Partial dehydration of alcohols

This leads to formation of simple ethers. The alcohol is in excess and concentrated H_2SO_4 is heated at a carefully maintained temperature of $140^\circ C$. For example



b) From haloalkanes and dry silver (I) oxide

A haloalkane is warmed with silver (I) oxide



A. - As a gaseous sterilizing agent

- In preparation of plastics and synthetic textiles

- As an intermediate in the hydrolytic manufacture of ethylene glycol