

Name : AGBO HELEN CECILIA

MATRIC NO : 19/148507/007

DEPT. : NURSING

CHM 102 ASSIGNMENT

1) IUPAC NAMES OF THE FOLLOWING

i) CH_3OCH_3 — Methoxymethane

ii) $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ — Ethoxyethane

iii) $[\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2]_2\text{O}$ — Butoxymethane

iv) $\text{CH}_3\text{CH}_2\text{OCH}_3$ — Methoxyethane

v) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_3$ — Ethoxypropane

2

Properties of ethers

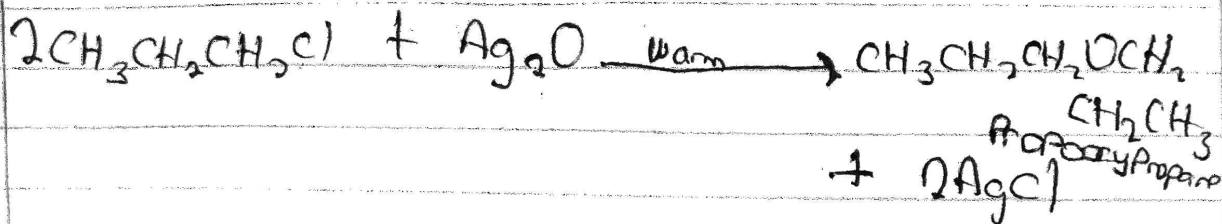
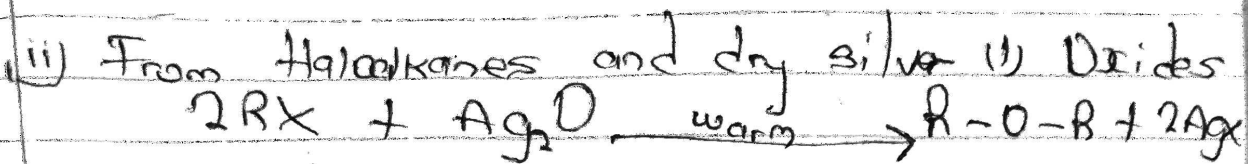
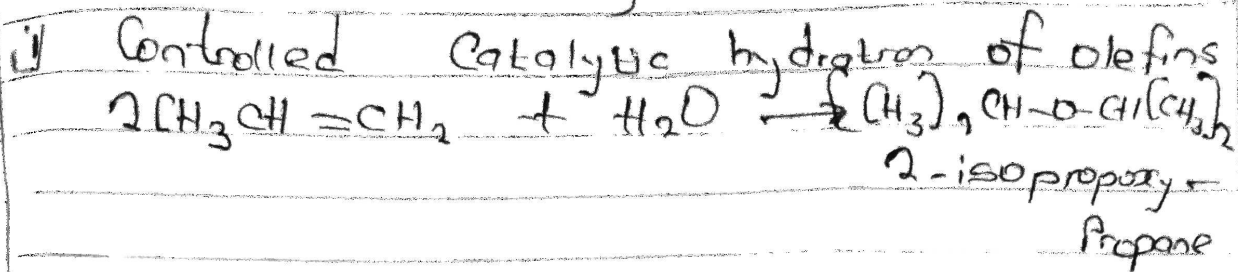
i) Physical states : at room temperature, ethers are colourless, neutral liquids with pleasant odours.

ii) Solubility : Ethers are less soluble in water than are the corresponding alcohols. Lower molecular weight ethers are fairly soluble in water. Since the molecules are able to form hydrogen bonds with the water molecules but as the hydrocarbon content of molecules increases, there is a rapid decline in solubility.

iii) Density : Most of the simple ethers are less dense than water.

iv) Boiling point : low molecular mass ethers have a lower boiling point than the corresponding alcohols but those ethers containing alkyl radicals larger than four carbon atoms the reverse is true.

3



④

a) Uses of ethylene Oxide

i) Ethylene oxide is used in the production of nonionic emulsifying agents, plastics etc.

ii) Ethylene oxide is used as an intermediate in the hydrolytic manufacture of ethylene glycol.

iii) Ethylene Oxide is used as a gaseous sterilizing agent.