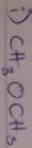
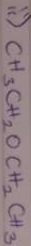


ASSIGNMENT

1) Give the IUPAC names of the following organic compounds



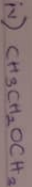
⇒ methoxymethane



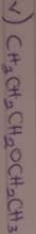
⇒ ethoxyethane



⇒ butoxybutane



⇒ ethoxymethane



⇒ ethoxypropane

2) Discuss the properties of ethers.

i) Physical states

At room temperature, ethers are colourless, neutral liquids with pleasant odours. The lower aliphatic ethers are volatile liquids or flammable gases.

solvents

Density

Most ethers

increase

some ethers

Boiling point

Ether with

corresponds

four carbon

Reactivity

Ethers are

of moderate

reactivity

3) Discuss

properties

1) Journal

Simple

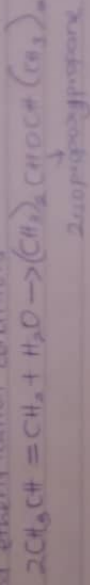
dehydration

substitution

temperature

i) Controlled catalytic hydration of olefins

This is a process for production of alcohols either by hydration and etherification of olefins feed stock containing at least one ~~lower olefin~~ ~~by containing~~ the olefinic feedstock and water in a catalytic reaction zone with porous solid metal-oxide acidic catalyst under olefin hydration and etherification conditions.



4) State three uses of ethylene oxide

- i) Ethylene oxide is used as a gaseous sterilizing agent
- ii) It is used as an intermediate in the hydroxylic manufacture of ethylene glycols
- iii) It is also used in the preparation of various emulsifying agents, plastics, plasticizers and several synthetic detergents

rapid decline in solubility. They are miscible with most organic solvents.

Density

Most ethers are less dense than water. However, density increases with increasing relative molecular mass and thus some ethers are denser than water.

Boiling point

Ethers with low molecular mass have low boiling points than corresponding alcohols but ethers with alkyl radicals higher than four carbon atoms. The reverse is true.

Reactivity

Ethers are inert at moderate temperature. Thus their inertness at moderate temperature leads to their wide use as reaction media.

3) Discuss explicitly two methods of preparing ethers and show equations of reactions.

1) Formal Dehydration of Alcohols

Simple ethers are manufactured from alcohols by catalytic dehydration. The alcohol in excess and concentrated H_2SO_4 (anhydrous)