

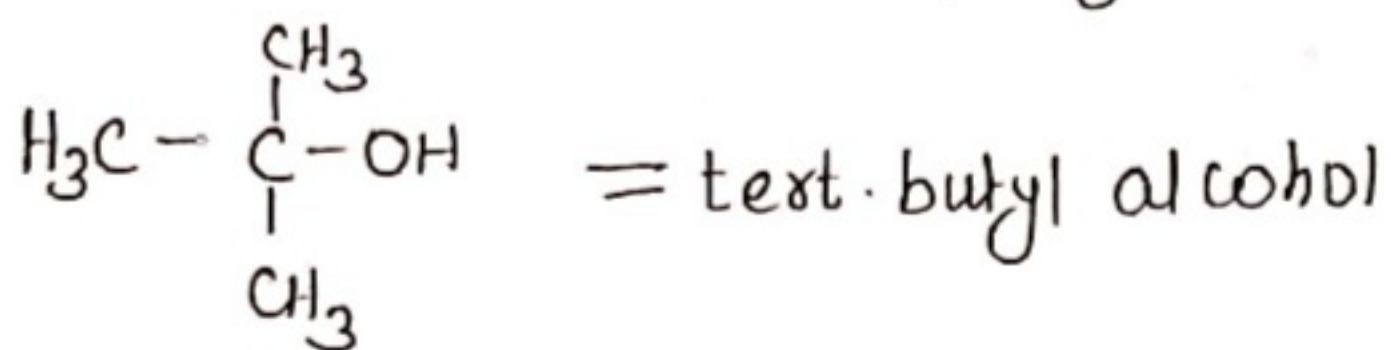
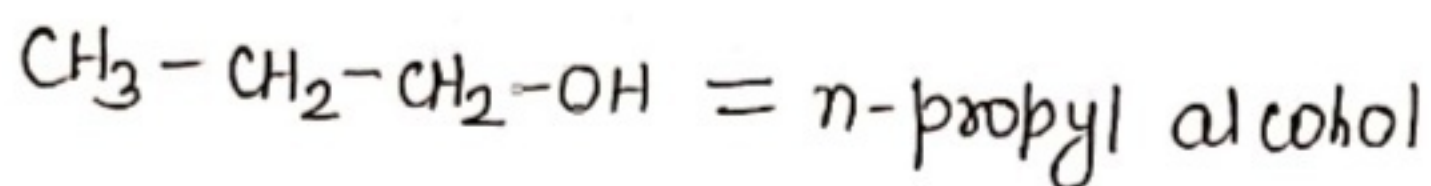
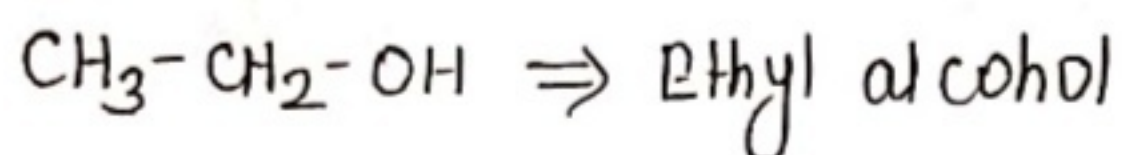
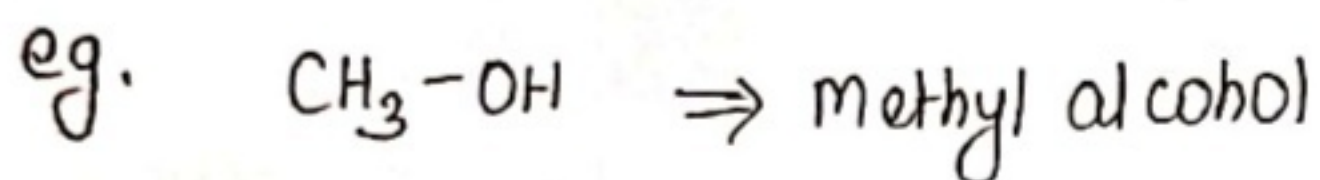
# ALCOHOLS PHENOLS AND ETHERS <sup>1.</sup>

## CHEMISTRY, CLASS-XII, UNIT-11

### Lecture-3, By-Dr.Rinky, 04-08-2020

#### Topic:- Nomenclature Of Alcohol

\* The common name of an alcohol is derived from the common name of alkyl group and adding the word alcohol to it.



### IUPAC NAME

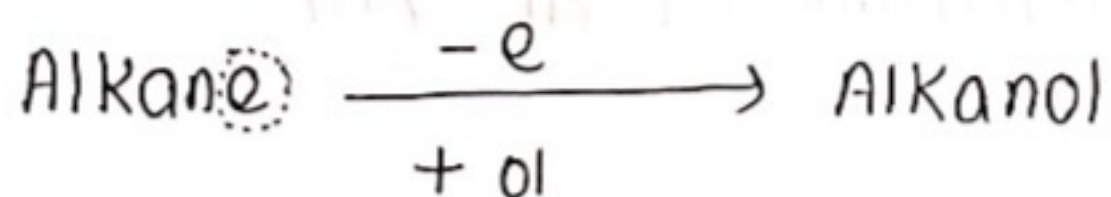
IUPAC name of alcohol is written according to some basic rule.

### RULE

\* Select the longest carbon chain containing functional group.

Number the carbon atom in such a way so that functional group falls to lowest position.

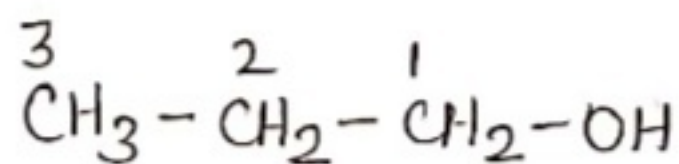
Name of alcohol is written as :-



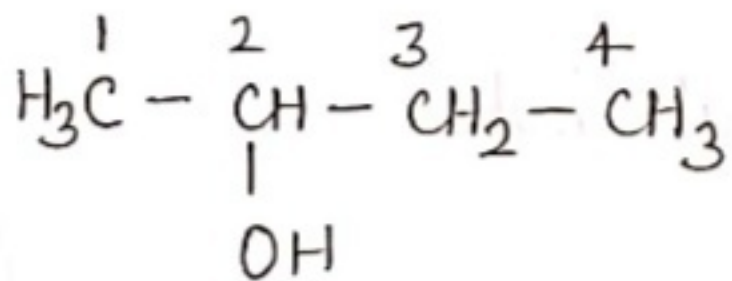
Rest all rule is similar to naming of branched alcohol.



Methanol



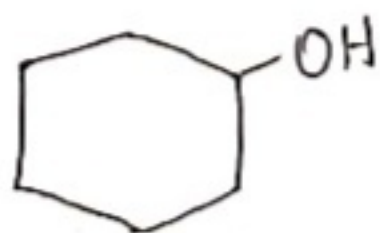
Propan-1-ol



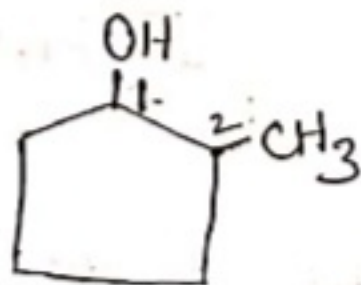
Butan-2-ol

Cyclic alcohols are named using the prefix cyclo and considering the -OH group attached to C-1.

e.g.



**Cyclohexanol**

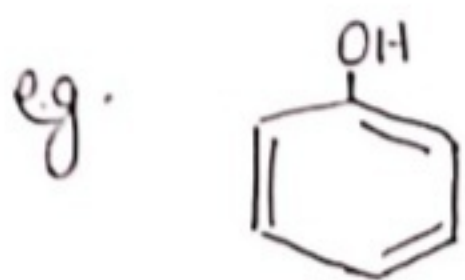


**2-methylcyclopentanol**

# PHENOL

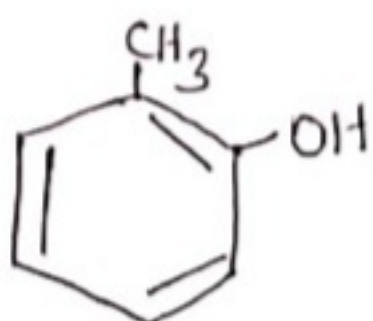
3.

- \* The simplest hydroxy derivative of benzene is phenol.
- \* It is its common name and also an accepted IUPAC name.
- \* As structure of phenol involves a benzene ring in its substituted compounds the term ortho, meta and para are often used in the common names.



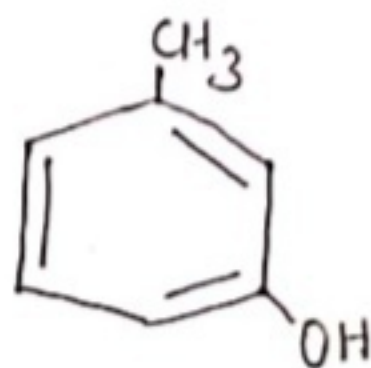
Common name - Phenol

IUPAC → Phenol



O-cresol

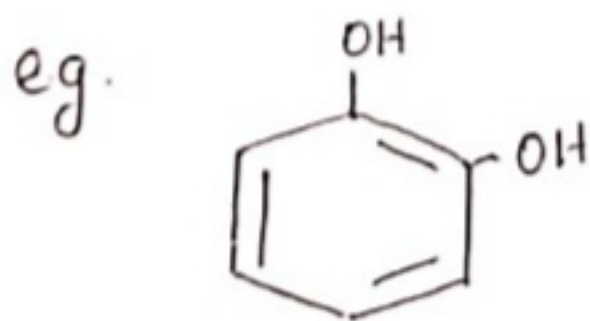
2-methylphenol



m-cresol

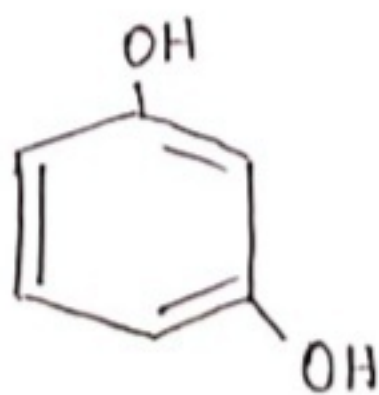
3-methylphenol etc.

- \* Dihydroxy derivatives of benzene are known as 1,2-, 1,3- and 1,4-benzenediol.



**Common Name - Catechol**

**IUPAC Name - Benzene-1,2-diol**

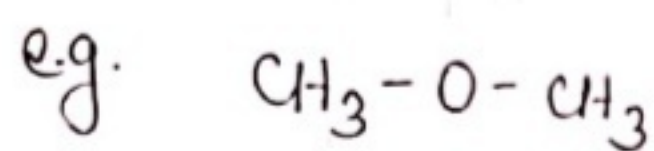


**Common - Resorcinol**

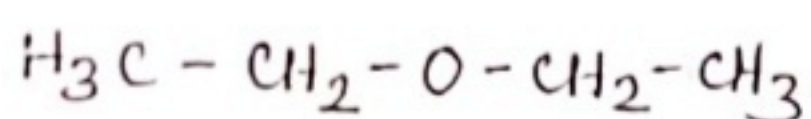
**IUPAC - Benzene-1,3-diol**

# Nomenclature of Ethers

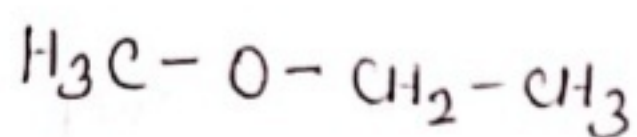
Common name of ethers are derived from the names of alkyl/aryl groups written as separate words in alphabetical order and adding the word 'ether' at the end. If both the alkyl groups are same, the prefix 'di' is added before the alkyl group.



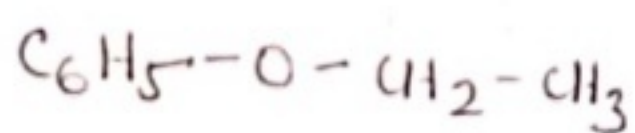
Common name - Dimethyl ether



Diethyl ether

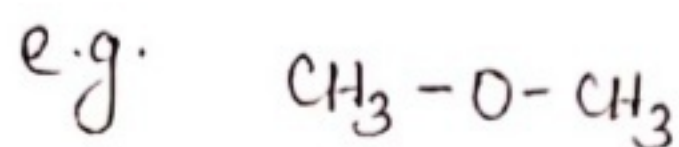


Ethyl methyl ether

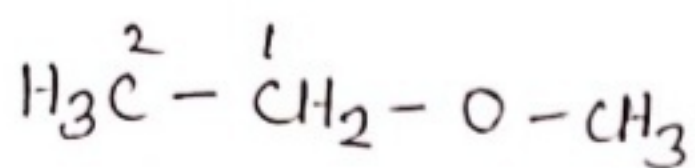


Ethyl phenyl ether etc.

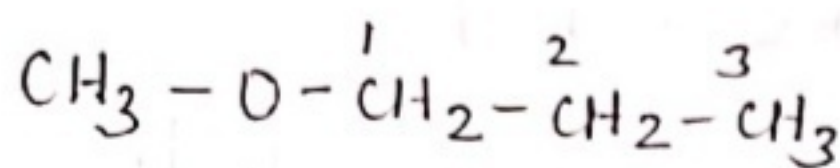
- \* IUPAC name of ether is written as alkoxy alkane.
- \* Oxy suffix is added with smaller alkyl group.



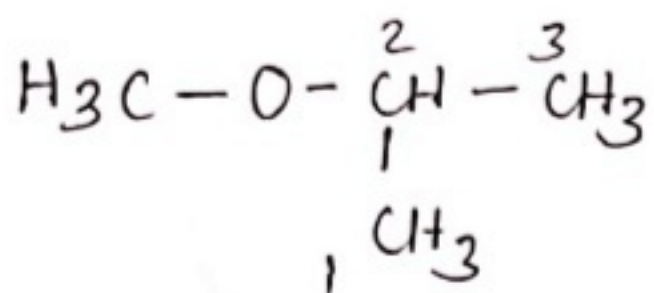
IUPAC name  
Methoxy methane



Methoxy ethane



1-methoxy propane



2-methoxy propane. etc.

**Nomenclature Completed..**