

# ALDEHYDES KETONES AND 1.

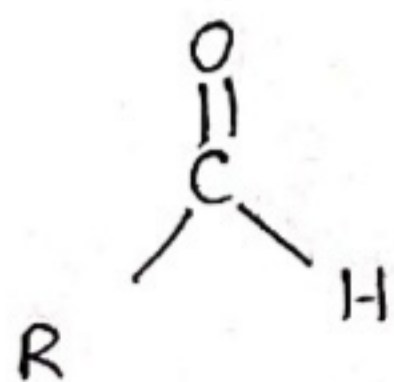
CARBOXYLIC ACIDS 01 Dec.2020

## CHEMISTRY, CLASS-XII, UNIT-12

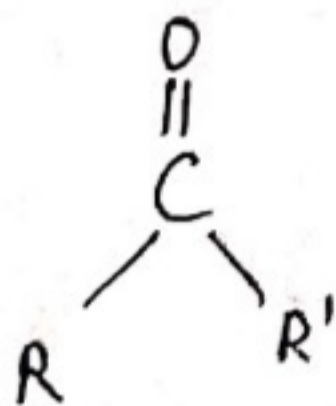
\* Organic compounds containing carbon-oxygen double bond ( $>C=O$ ) is called carbonyl compound.

\* In aldehydes, the carbonyl group is bonded to a carbon and hydrogen while in ketones, it is bonded to two carbon atoms.

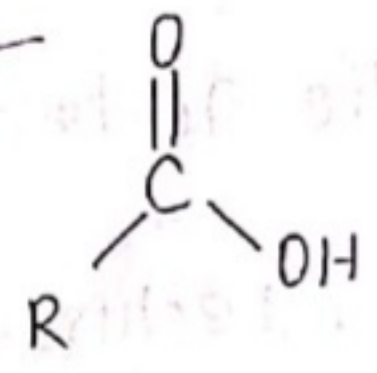
\* The carbonyl compounds in which carbonyl group ( $>C=O$ ) is bonded to oxygen are known as carboxylic acids, and their derivatives (eg. esters, anhydrides) while in compounds where carbon is attached to nitrogen and to halogens are called amides and acyl halides respectively.



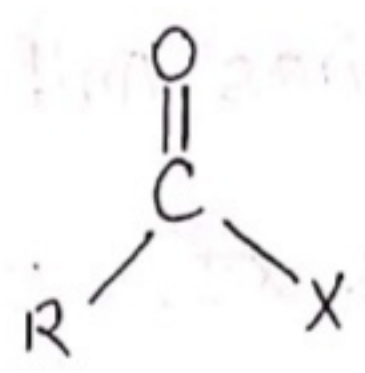
Aldehyde



Ketone

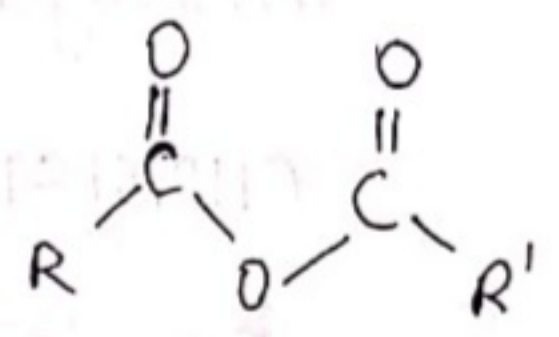


Carboxylic acid

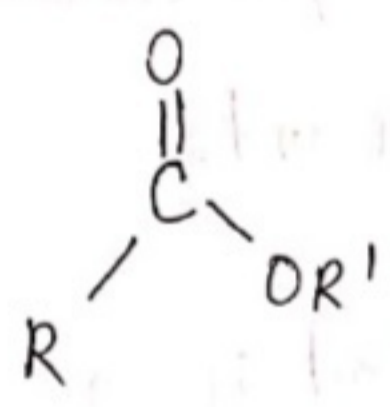


Acyl halide

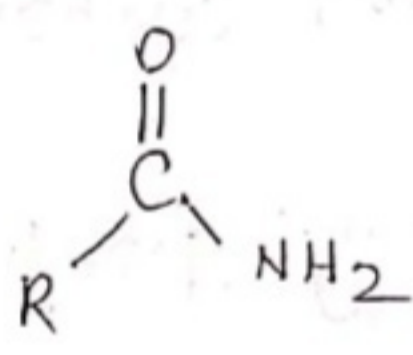
(X = Cl, Br, I)



Acid anhydride



Ester



Amide

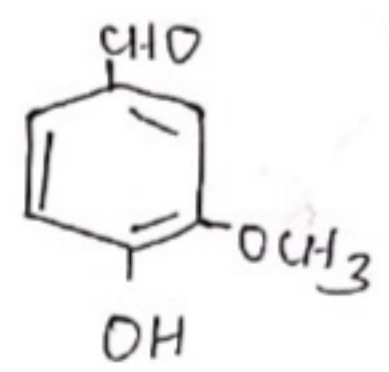
### Carboxylic acid and their derivatives.

\* Aldehydes, ketones and carboxylic acids are widespread in plant and animal kingdom.

\* They add fragrance and flavour to nature.

For example;

Vanilline (from vanilla beans)



Cinnamaldehyde (from cinnamon)

\* They have very pleasant fragrances.

\* They are used in many food products & pharmaceuticals to add flavours.

To be continued in next lecture..