

CLASS- X

CHAPTER- 12

SUBJECT- CHEMISTRY

TEACHER- ANAMIKA

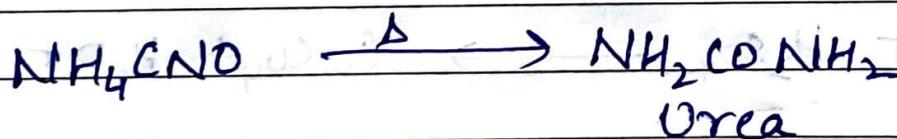
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ORGANIC CHEMISTRY

The word organic means pertaining to life.

Organic chemistry is essentially the chemistry of carbon compounds.

The vital force theory of organic compound was soon discarded. When in 1828, a German Chemist named Friedrich Wohler showed that it was possible to obtain an organic compound urea.



ORGANIC COMPOUNDS:-

These are compounds of carbon and it is the study of carbon compounds excluding oxides of carbon, metallic carbonates and related compounds like metal cyanides, metal carbides.

Sources of Organic Compounds:-

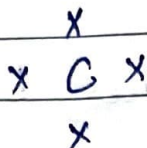
1. Plants:- Compounds like sugar, starch and cellulose.
2. Animals:- Urea, protein, fats etc.
3. Coal:- Coal produces benzene, toluene, naphthlene
4. Petroleum:- Organic Compounds like gasoline, fuel gases, petrol
5. Fermentation:- Compounds like ethyl alcohol and acetic acid
6. Wood:- Methyl alcohol, acetone etc.
7. Synthetic Methods:- Most organic Compounds are now synthesized in lab.

Application of Organic Compound:-

The soaps and shampoo we use while taking bath the powder, perfumes, we apply on body the clothes we wear food we eat, all natural products are all organic compounds.

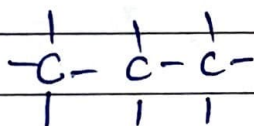
Unique nature of Carbon atoms:-

1. **Tetravalency** Carbon has 4 valance e^-
It forms covalent bond by sharing its four e^- with other atoms.

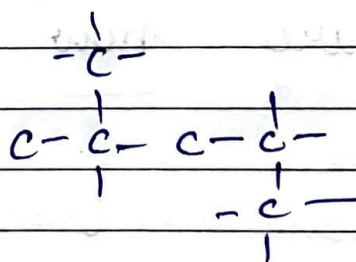


2. **Catenation**:- Carbon atoms posses a unique property to link together to form very long chain. This is due to greater strength of carbon-carbon bond and due to tetravalency of carbon.

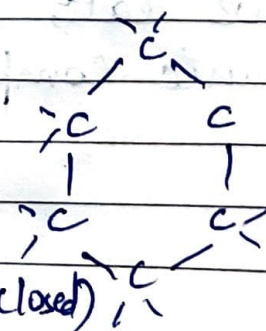
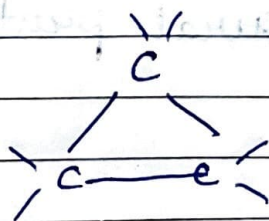
- a) Formation of Straight, branched and cyclic chains of Carbon atoms:-



[Straight chain]

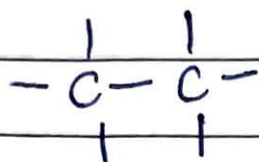


[Branched chain]

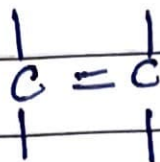


(Cyclic or closed)

b) Formation of single, double, and triple bond



[Single bond]



[Double
bond]



[Triple
bond]

c) Isomerism:- Carbon shows tetrahedral arrangement of its valencies and shows isomerism.