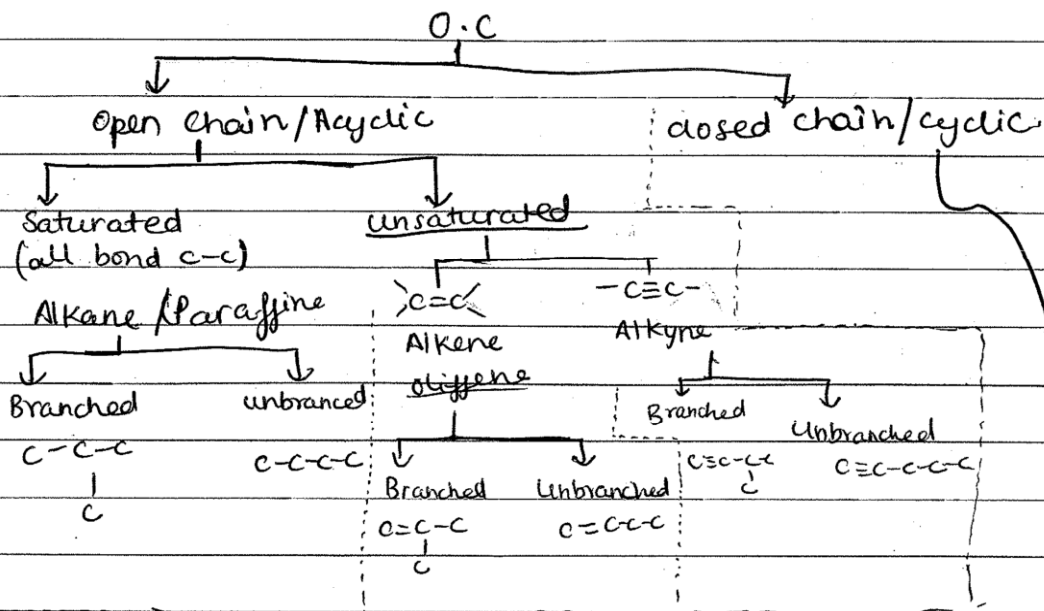
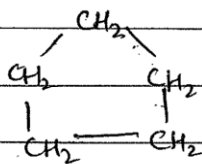
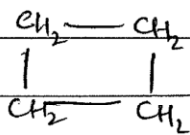
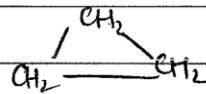


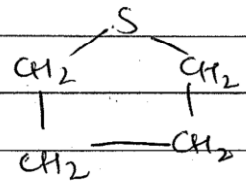
ORGANIC COMPOUNDS

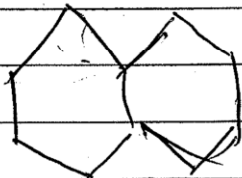
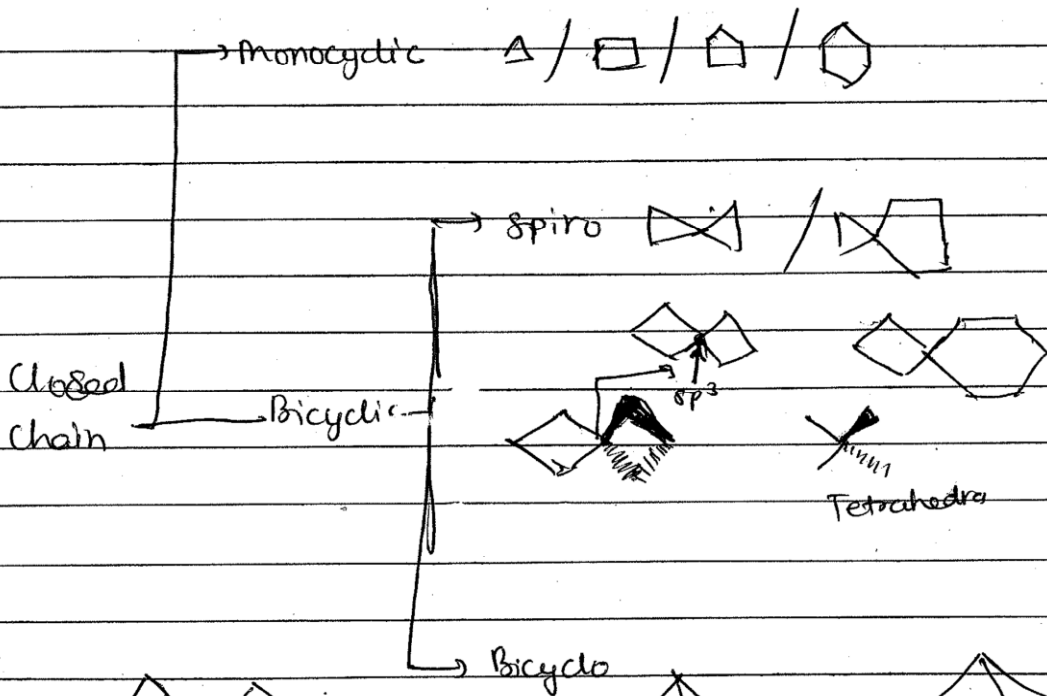


Homocyclic



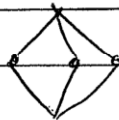
Heterocyclic



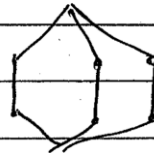
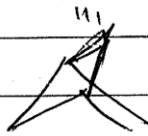


Bicyclo [4,4,0]
 decane.

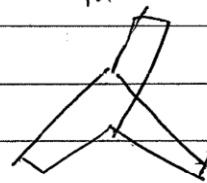
[fused bicyclo].



Bicyclo [1,1,1]

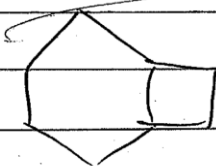


Bicyclo [2,2,2].



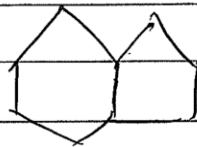
side
 view

eg →



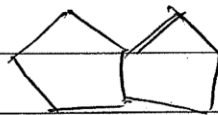
fused bicyclo.

[4,2,0] octane

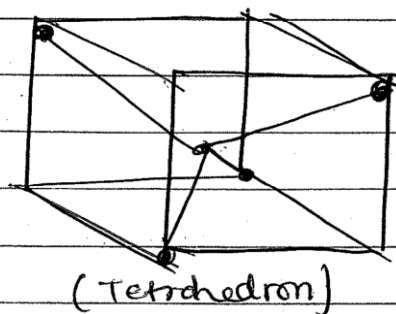
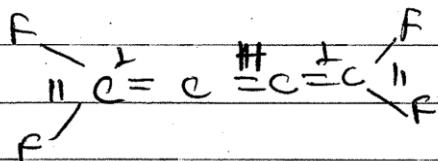
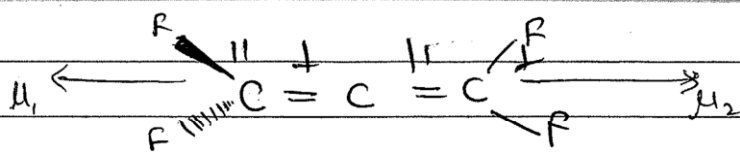


fused bicyclo

[4,3,0]

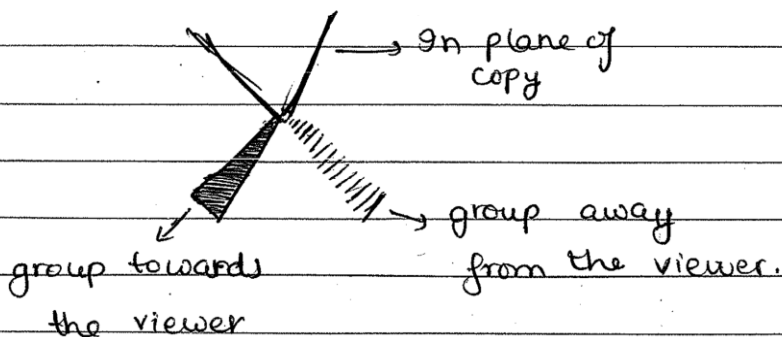


fused bicyclo



Spiro

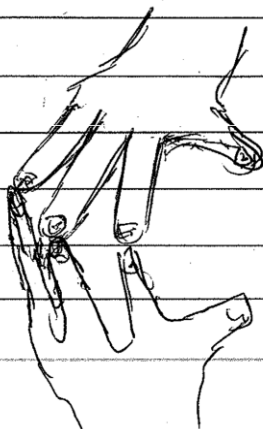
- ⊙ Bicyclic compound having two rings connected with one common carbon atom are known as spiro.
- ⊙ Common carbon is tetrahedral which has v-shaped valencies in two perpendicular plane and these valencies are represented by wedge and dash projection.



- ⊙ Two rings of spiro are perpendicular to each other because common atom is tetrahedral.

Bicyclo

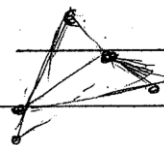
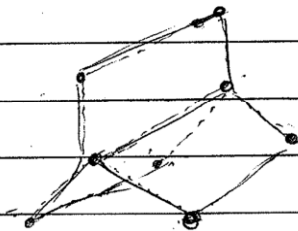
If three valencies of two common atoms are connected by three carbon bridge then resultant structure



is known as "Bicyclo [x.y.z] alkane"

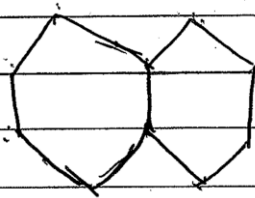
① x, y, z are arranged in decreasing order of no. of carbon.

② Bicyclo structures have three bridge in trigonal orientation.



Bicyclo [2.2.2] Octane

③ If one bridge have zero carbon, then it is known as fused bicyclo.
eg →



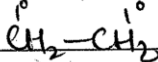
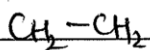
Bicyclo [4.4.0] Decane.

Bond line presentation

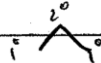
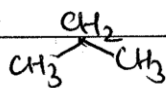
Alkanes



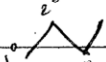
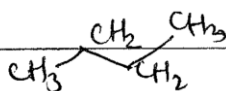
(Methane)



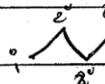
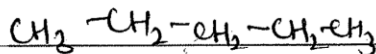
(Ethane)



(Propane)

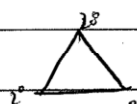


(Butane)



(Pentane)

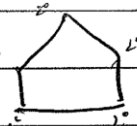
cycloalkanes



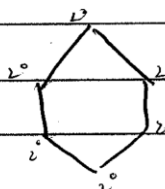
cyclopropane



cyclobutane



cyclopentane



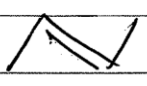
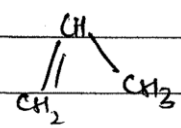
cyclohexane

A B C D E K
 water soluble

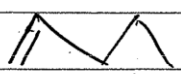
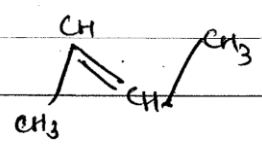
Alkenes ($C_n H_{2n}$)



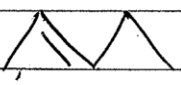
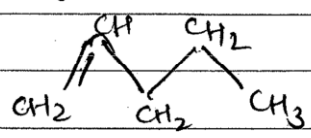
propene



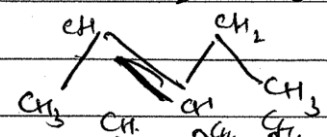
~~Butene~~ But-2-ene



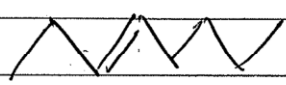
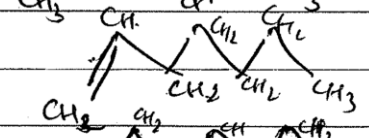
~~pentene~~ pent-1-ene



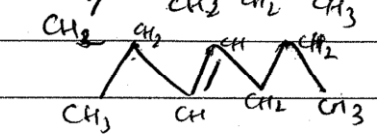
~~pentene~~ pent-2-ene



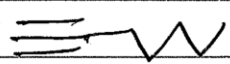
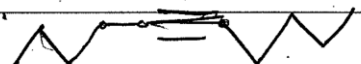
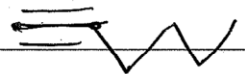
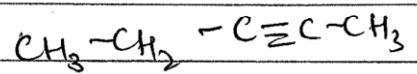
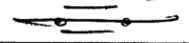
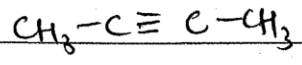
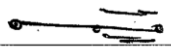
hept-1-ene



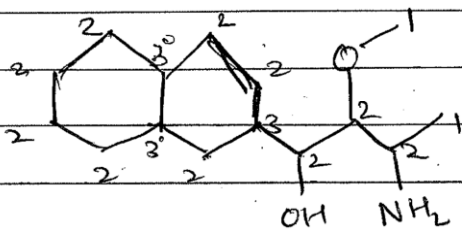
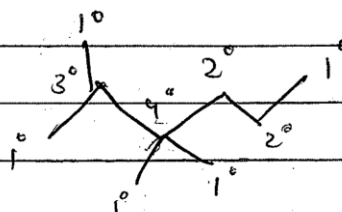
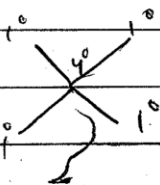
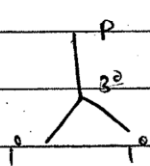
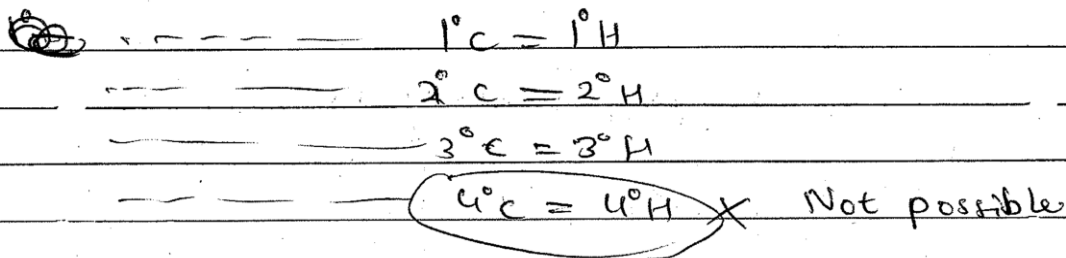
oct-3-ene



Alkynes ($C_n H_{2n-2}$) ★



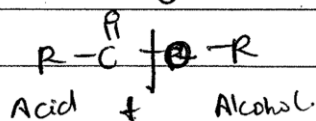
Q23 Carbons attached with with one carbon or zero carbon are known as 1° , attached with 2 carbon are 2° , attached with 3° C are known as 3° C and with 4 carbons are known as 4° C.



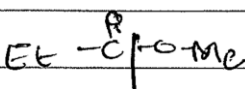
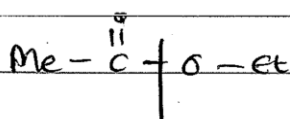
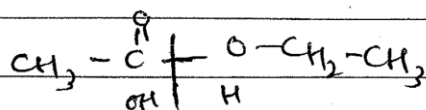
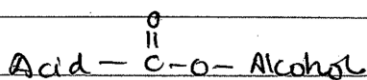
~~Carbonyl~~

Various functional group in Organic Chemistry

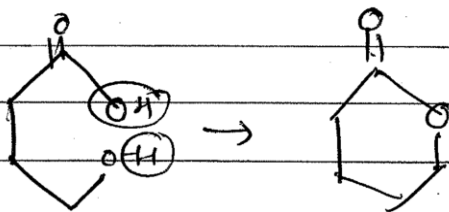
- 1) R-OH Alcohol
- 2) R-NH₂ Amine
- 3) R-O-R Ether
- 4) R-SH Thiol
- 5) R-S-R ~~Thioether~~ Thioether
- 6) R-C(=O)-H Aldehyde
- 7) R-C(=O)-R Ketone
- 8) R-C(=O)-OH Carboxylic acid
- 9) R-C(=O)-O-R



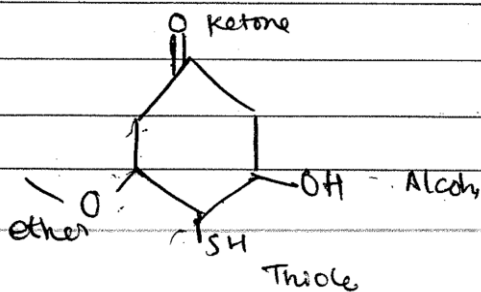
Ester (carboxylic acid derivative)

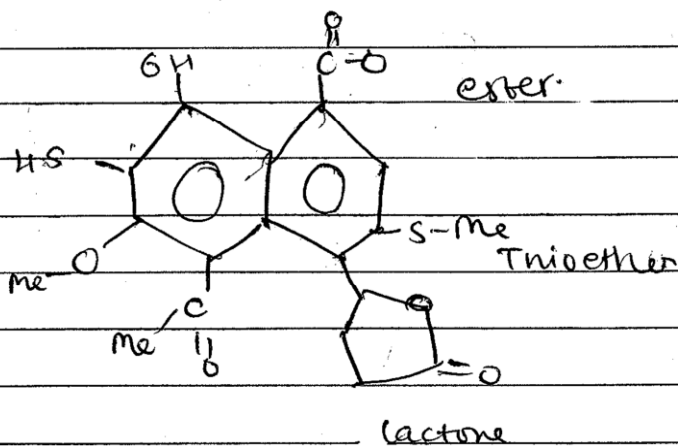
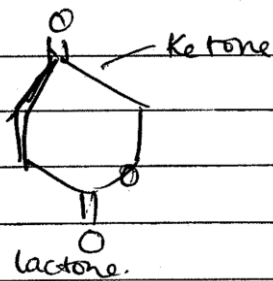


↓
Different

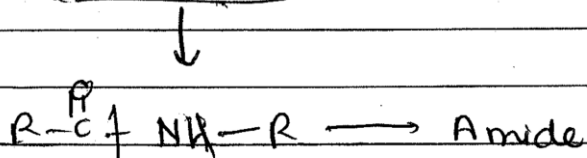
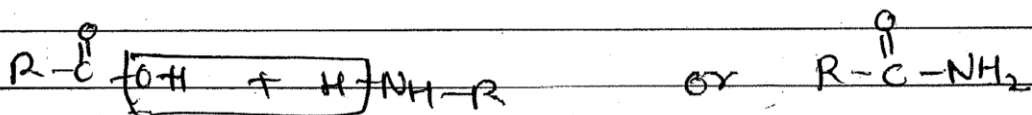


[cyclic ether or Lactone]





10] Amide



Acid

Amine

