

**NOIDA PUBLIC SCHOOL**

**CHEMISTRY**

**Class XI**

**Assignment ( HYDROCARBONS)**

- How will you bring about following conversions:
  - 2-chloro propane to 2,3-dimethyl butane
  - Methane to ethane
  - Butanoic acid to propanoic acid
  - Propyne to propanone.
  - Benzene to BHC.
- An alkene X on ozonolysis gives propanal as the only product. Deduce the structure of alkene X.
- What will be the IUPAC name of the product formed by ozonolysis of the following compounds:
  - Propyne
  - 2-methyl 3-phenyl hex-2-ene.
- Complete the following reactions :
  - But-2-yne undergoes hydration in presence of  $H_2SO_4$  and  $HgSO_4$ .
  - Addition of  $HBr$  in presence of  $H_2O_2$  to pent-2-ene.
  - Addition on of water in presence of acid to hex-2-ene.
- Give example of following named reactions:
  - Wurtz reaction
  - Kolbe electrolysis
  - Dehydration reaction.
  - Friedel craft acylation
  - Beta elimination
  - Hydrogenation.
- Explain the following giving one example of each:
  - Saytzeff's rule
  - Kharasch effect
  - Directive influence of groups on benzene ring.
- State 4 main difference between alkanes and alkenes.
- Explain mesomeric effect in phenol.
- Explain the types of reactions in each of the cases:
  - Nitration of benzene.
  - Chlorination of ethane
  - Addition of hydrogen cyanide to propanal.
  - Addion of bromine.
- Give reasons for the following:
  - Methane doesnot react with chlorine in dark.
  - Alkynes doesnot show geometrical isomerism.
  - Unsaturated compounds undergo addition eactions.
  - The boiling point of hydrocarbons decreases with increase in branching.
  - All the four C-H bonds in methane are identical.
- How are
  - Alkene prepared from alcohol by acidic dehydration
  - Alkyne prepared by Kolbe's method.
- How will you distinguish between ethylene and methane using a chemical test?