

SUBJECT - CHEMISTRY

CLASS - B.Sc (Sub./Gen) PART-11

GROUP - C

TOPIC - Preparation of benzene and its homologues

Dr Hari Mohan pd Singh

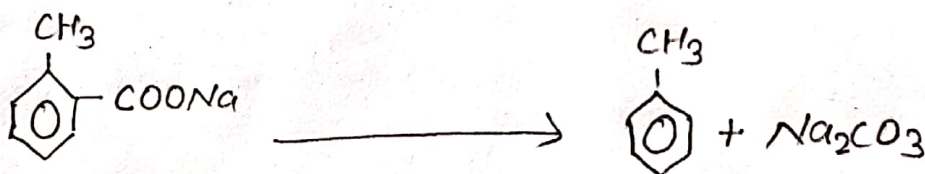
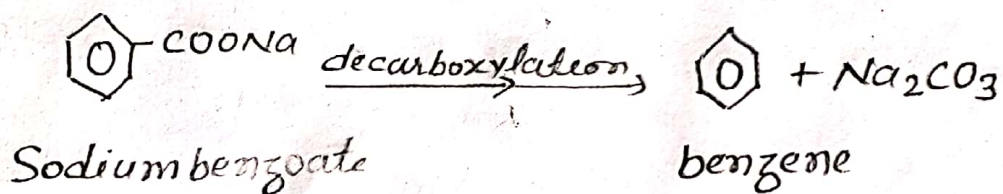
Department of Chemistry

Dr. L.K.V.D College Tazpur Samastipur

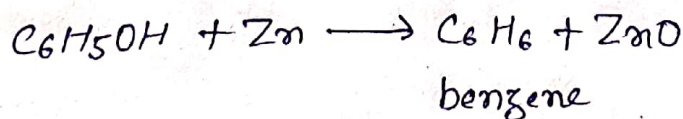
Q. Outline the different methods available for the synthesis of benzene and its homologues?

Ans Preparation of benzene and its homologues:

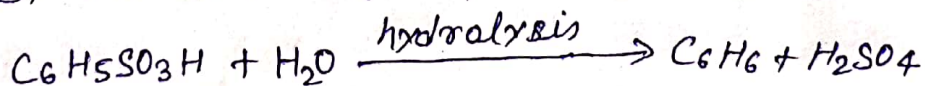
1. By heating an aromatic acid or its sodium salt with soda lime:



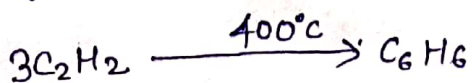
2. By passing vapours of phenol over heated Zn-dust (removal of oxygen from phenol):



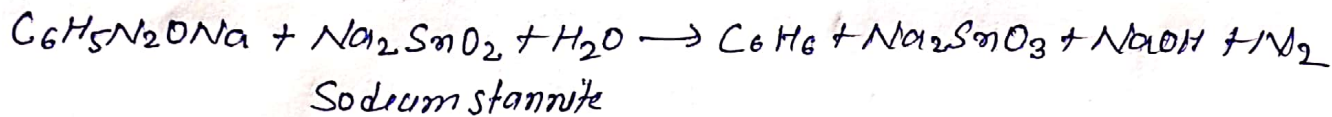
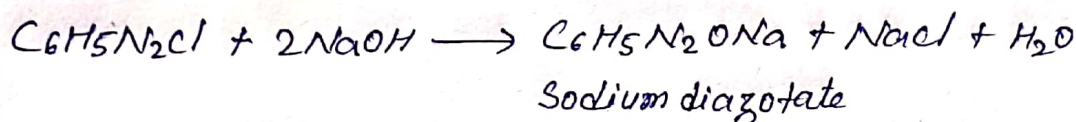
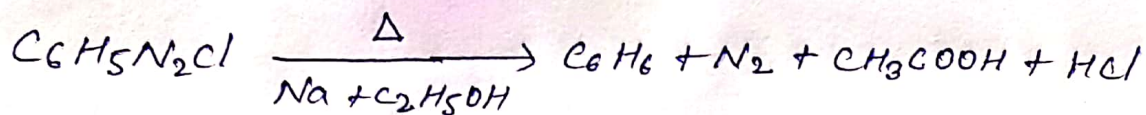
3. By the action of super heated steam on Sulphonic acid:



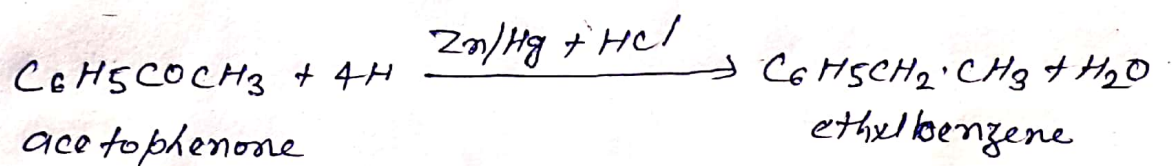
(4) By the polymerisation of ethyne and its alkyl derivatives:



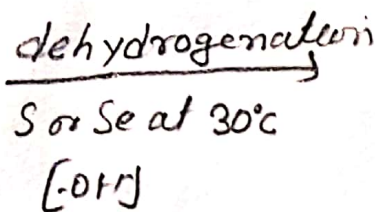
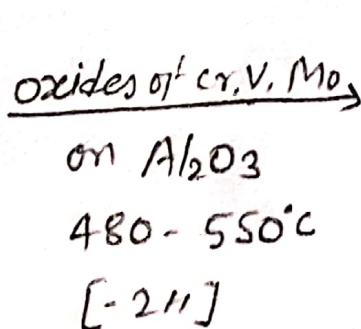
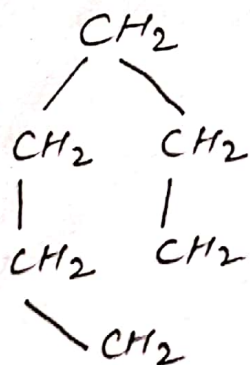
5. By the action of boiling alcohol or alkaline sodium stannite on diazo salt:



6 By Clammensen reduction of ketones with amalgamated Zn and HCl :



7 By cyclisation of open chain hydrocarbons followed by dehydrogenation Benzene can be prepared from n-hexane and toluene from n-heptane



benzene