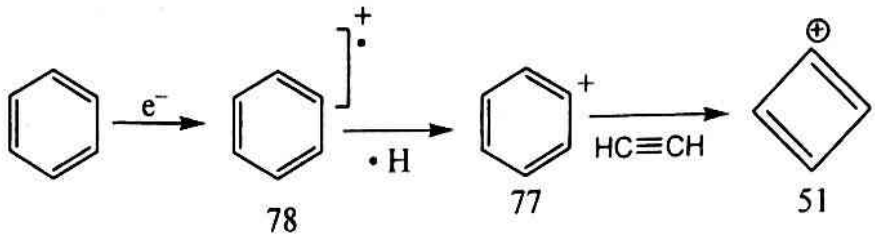
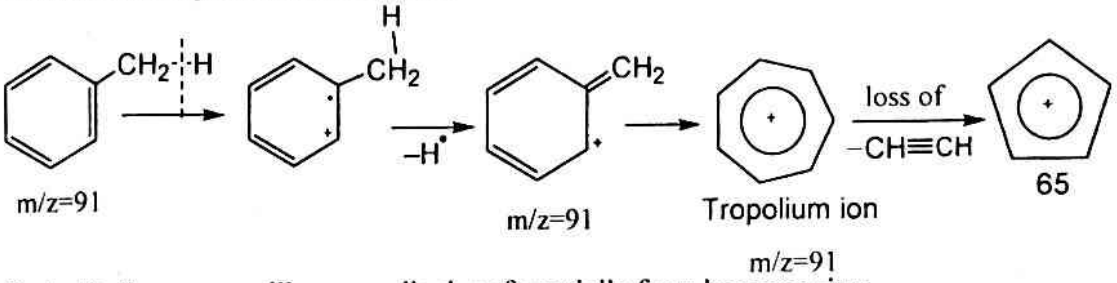
FRAGMENTATION OF BENZENE:

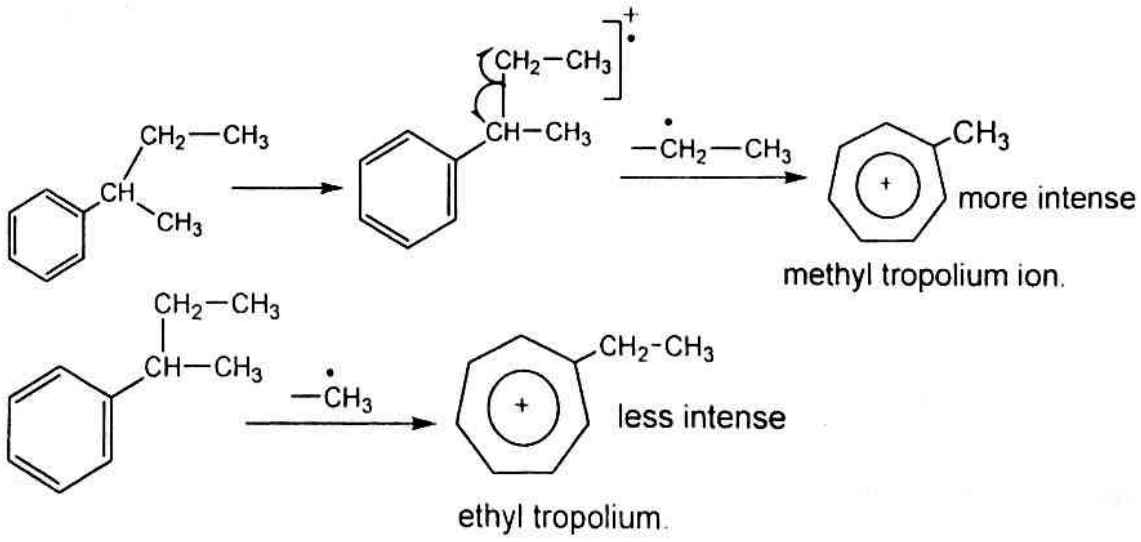


Fragmentation of alkyl Benzene

(a) **Benzylic Fission :** All alkyl Benzene without γ – H gives the base peak by Benzylic fission. The fission is similar to the allylic fission of alkene.

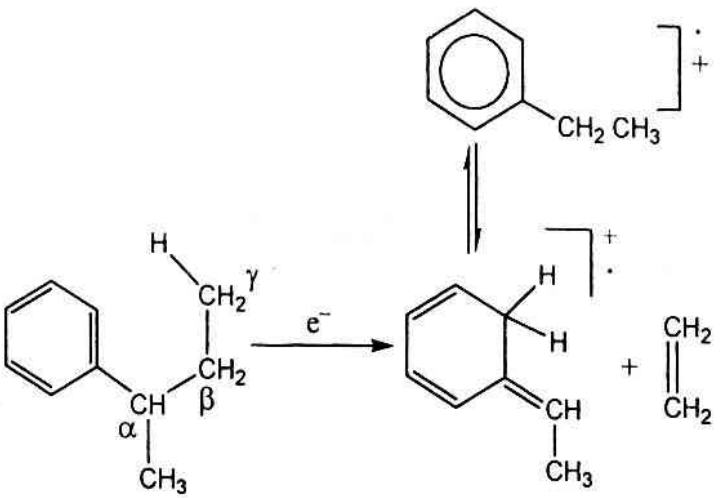


Note: Bulky group will go as radical preferentially from benzene ring.

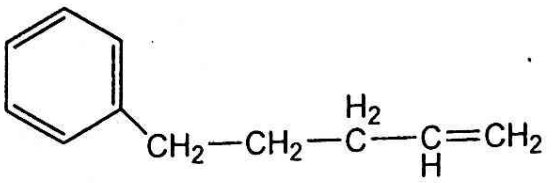


(b) **MR fragmentation :** Alkyl benzene having γ – H shows base peak by Mc Lafferty rearrangement.

Note: If ortho position is filled by any other group then MR is not possible.



Problem: How fragmentation occur in this molecules :

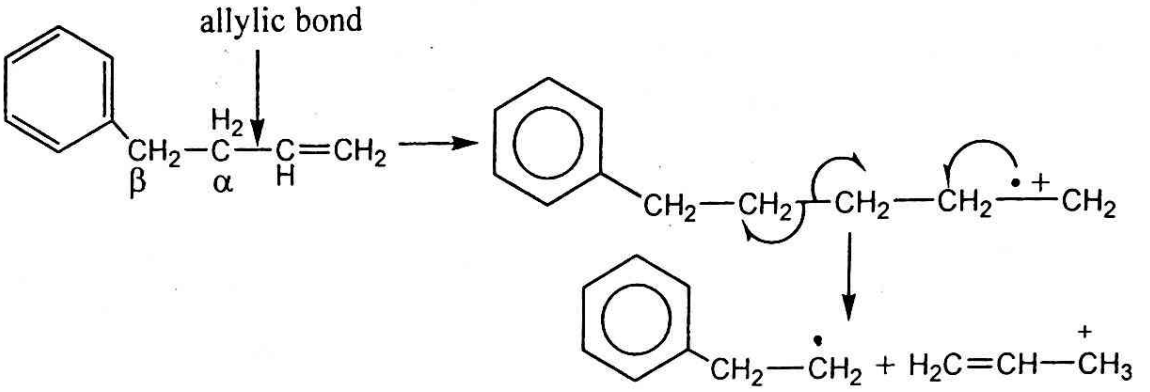


having (1) Alkyl benzene (2) Alkene part

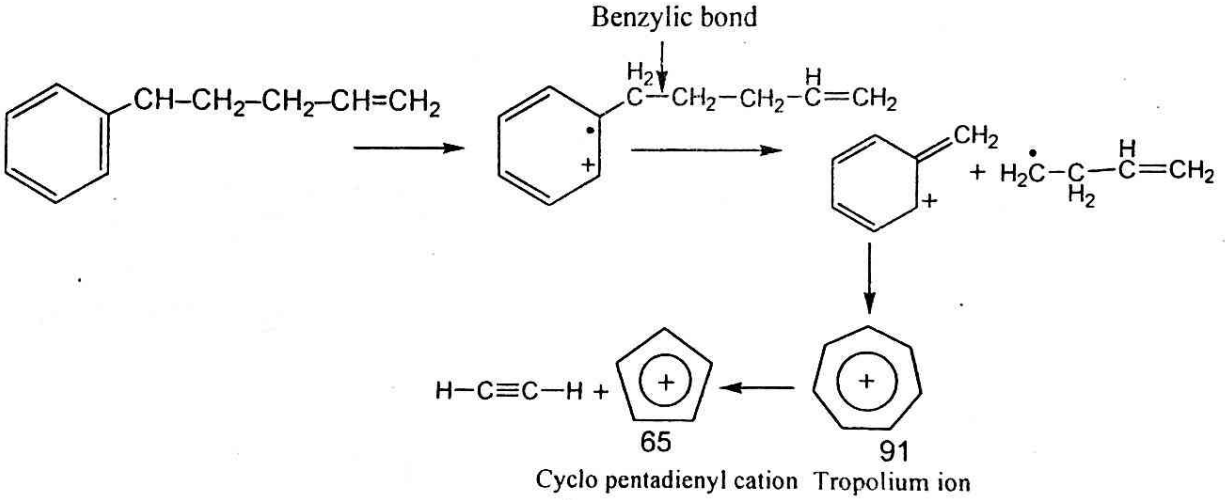
Fragmentation through

1. Allylic fission
2. Benzylic fission
3. MR of alkyl-benzene
4. MR of alkene

1. Allylic Fission :



Benzylic fission :



MR of alkyl Benzene: