



**I. Answer in brief (2/3 marks)**

1. Write short notes on (a) Resonance (b) Hyperconjugation
2. What are electrophiles and nucleophiles? Give suitable examples for each.
3. Show the heterolysis of covalent bond by using curved arrow notation and complete the following equations.

Identify the nucleophile in each case.



**II. Answer in a paragraph (5 marks)**

1. Explain inductive effect with suitable example.
2. Explain electromeric effect.
3. Give examples for the following types of organic reactions
  - (i)  $\beta$  - elimination
  - (ii) electrophilic substitution.

