BS/2110

10374/NH

Paper - II
Organic Chemistry

Max. Marks : 26 Marks **Max. Time : 3 hrs**
Min. Pass Marks : 35%

Candidates are required to attempt two questions (4 marks each) selecting each from section A & B. Section C is compulsory (2 marks each question).

SECTION – A

1. Give the mechanism of
   (a) Pinacol-Pinacolone rearrangement.
   (b) Oxidative cleavage of ethylene glycol with lead tetraacetate.
2. How will you convert
   (a) Isopropyl alcohol to n-propyl alcohol.
   (b) Tert. butyl alcohol to iso-propyl alcohol.
3. Give the name and structures of the main product of the reactions, when phenol reacts with:
(i) acetic anhydride, (ii) $(CH_3)_2SO_4$, aq. NaOH, (iii) aq. Br_2 and (iv) Conc. HNO_3
4. Give the mechanism of
   (a) Gatterman synthesis
   (b) Reimer-Tiemann reaction

SECTION – B

5. How will you get benzaldehyde starting from
(a) 1,3-Dithane.
(b) Toluene.
(c) Benzene
(d) Acid halide
6. Give the mechanism of
(a) Perkin Condensation
(b) Wittig reaction
7. Discuss 1,2 and 1,4- addition to α,β-unsaturated carbonyl compounds.
8. Give the mechanism of
(a) Baeyer-Villiger oxidation of ketones
(b) Wolf-Kishner reduction

SECTION – C

9. (a) Why are lower members of alcohols soluble in water while higher members are not?
   (b) 2,4,6-Trinitrophenol is a very strong acid. Explain?
   (c) Give mechanism of wittig reaction?
   (d) Out of aldehyde and ketone, which is less reactive and why?
   (e) Differentiate between Knoevenagel and aldol condensation?