

Note: The question paper contains three sections in all, Section A, B and C. In Section A, all questions are compulsory. From Section B student has to attempt any two questions and from Section C student has to attempt any seven questions.

SECTION-A

(10×2=20)

Short Answer (Compulsory)

1. Answer briefly:

- Classify stereoisomers.
- Differentiate between enantiomers and diastereomers.
- Define geometrical isomerism.
- Draw different conformational isomers of n-butane.
- Write down the structure and medicinal use of thiophene.
- Write down the structure and medicinal use of isoquinoline.
- Write down the structure and use of lithium aluminum hydride.
- Define heterocyclic compound. Give examples of 6 membered heterocyclic rings.
- Write down Beckmanns rearrangement reaction.
- What are meso compounds? Give an example.

Long Answer (Any Two)

- What is asymmetric synthesis? Discuss in detail partial and absolute asymmetric synthesis.
- Discuss cis & trans and EZ nomenclature of geometrical isomers. Discuss methods of determination of configuration of geometrical isomers.
- Discuss the reaction, mechanism and uses for Clemmensen reduction and Claisen-Schmidt condensation.

SECTION-C

(7×5=35)

Short Note Answer (Any Seven)

- What is resolution of racemic mixture? Explain various methods of resolution.
- Discuss elements of symmetry.
- Discuss atropisomerism with suitable examples.
- Discuss the aromaticity and reactivity of furan.
- Explain basicity of pyridine derivatives.
- Write down the synthesis and medicinal use of pyridine derivatives.
- Discuss Oppenauer-oxidation.
- Write a note on reactions and uses of NaBH_4 .
- Write down the synthesis and medicinal use of pyridine derivatives.