

10. (a) Discuss the synthesis of the following from benzene.

(i) Symmetrical tribromobenzene.

(ii) 3-nitro-4-bromobenzoic acid

(iii) 1,2,3 trimethyl benzene.

(b) Explain the mechanism of SN1, SNAr and Benzyne with suitable examples.

NOVEMBER/DECEMBER 2019

MCH11 — ORGANIC CHEMISTRY – I

Time : Three hours

Maximum : 75 marks

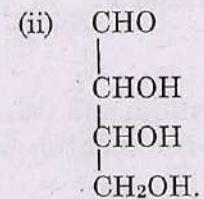
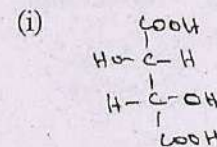
SECTION A — (5 × 6 = 30 marks)

Answer ALL questions.

(a) Briefly explain the stereochemistry of Allenes.

Or

(b) Give the Fischer projection, Sawhorse, Newnam structure of the following.



2. (a) Discuss the conformational analysis of cyclohexanone with energy profile diagram.

Or

- (b) Explain the conformation and stereochemistry of cis and trans-decalin.

3. (a) Write note on Neighbouring group participation.

Or

- (b) Give the detailed reaction and mechanism of Stork-enamine reaction.

4. (a) Using Hoffman and Saytzeff rules, explain the orientation of the double bond in elimination reaction.

Or

- (b) Discuss the mechanism of pyrolytic eliminations.

5. (a) Explain the orientation and reactivity of aromatic electrophilic substitution with examples.

Or

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- (b) Write short notes on

- (i) Ziegler alkylation
(ii) Chochibabin reaction

SECTION B — ($3 \times 15 = 45$ marks)

Answer any THREE questions.

6. Discuss the following

- (a) Stereo chemistry of spiro compounds
(b) Absolute configuration with R,S notation
(c) Cram's rule

7. Explain the detailed conformation analysis of disubstituted cyclohexane and their stereochemical features.

8. Give the reaction and mechanism of the following

- (a) Von-Braun reaction
(b) Claisen condensation
(c) Dieckmann condensation

9. How will you explain the E1, E2 and E1cB mechanisms of elimination reactions.

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