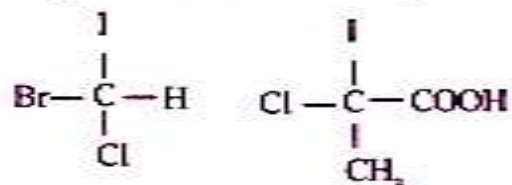


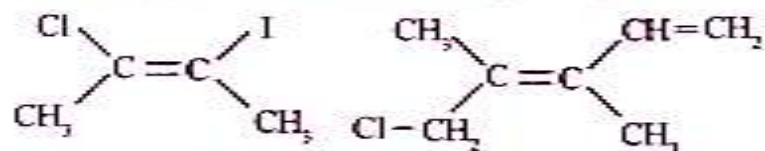
5. (a) (i) Explain resolution of racemic mixture.

(ii) Assign R-S to the following :



Or

(b) Assign E-Z to the following and Explain.



6. (a) Explain Nucleophilic substitution in allylic, vinylic and aliphatic carbon.

Or

(b) Differentiate S_N2 , S_N1 reactions.

2019

(January)

Time : 3 hours

Full Marks : 80

Answer from both the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(BASIC ORGANIC CHEMISTRY - I)

SECTION – A

1. Answer any four of the following : 4 × 4

(a) Explain aromaticity in 18, 23, 14 annulenes.

(b) Explain stability and formation of free radicals.

(c) Explain about reaction constants.

(d) Explain Hammond's postulate.

(2)

- (e) Explain about asymmetric synthesis.
(f) Explain about SET mechanism.

Or

2. Answer all questions :

- (a) Explain aromaticity of



- (b) What is pseudo aromaticity ?
(c) Explain HSAB.
(d) Explain conditions for Kinetic product.
(e) Explain chirality of allenes.
(f) Explain optical purity.
(g) Explain solvent effect on S_N1 , S_N2 reactions.
(h) Explain S_N1 mechanism.

SECTION – B

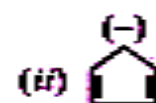
Answer all the following questions : 16 \longrightarrow 4

(3)

3. (a) What are catenanes and Rotaxenes ?
Explain their synthesis and applications.

Or

(b) Explain aromaticity of following :



4. (a) (i) Explain the categorization of hard acids and Hard acids and Hard bases according to HSAB.
(ii) Explain Isotope effect.

Or

- (b) (i) Explain Taft equation in detail giving effect of electron withdrawing groups.
(ii) Explain Curtin-Hammett principle.