

NS2 - 331

B.S.C. DEGREE EXAMINATIONS :: OCTOBER, 2022

CHEMISTRY

I YEAR II SEMESTER

(New Regulation 2020-21)

Paper-II : Organic and General Chemistry
(New Regulations 20-21)

Time : 3 Hours

Max. Marks: 75

SECTION - A

Answer any FIVE of the following questions.

(5 x 5 = 25 marks)

1. Write any two preparative methods of Alkanes
2. Corey House Synthesis
3. Saytzeff elimination with one example
4. Huckel's rule with examples
5. Hardy - Schulze rule
6. Apply VSEPR theory to ClF_3
7. Define optical and specific rotations
8. Write examples for Chiral Compound, and Racemic mixture

SECTION - B

Answer ALL the questions
Each carries 10 marks

9. a) Explain free radical substitution reactions with suitable examples (5 x 10 = 50 marks)
(Or)
- b) Explain stability of cyclo alkanes by Baeyer strain theory

10. a) Write the following

- i) Anti Markownikoff's addition
- ii) Hoffmann elimination

(Or)

- b) Write the following

- i) Diels Alder reaction
- ii) 1,2 and 1,4 addition reaction

11. a)

- Write the following electrophilic aromatic substitution reactions i) Nitration
ii) Friedel - Crafts Alkylation

- b)

- Explain Ortho and Meta directing groups

(Or)

12. a) Explain Langmuir Adsorption Isotherm

Adsorption Isotherm

(Or)

- b)

- Construct MO diagram for O_2 and Co and write their bond order and Magnetic Property

13. a)

Write the following

- i) Draw the R and S isomer of Alanine, Glyceraldehyde
- ii) Write E and Z isomers with suitable examples

(Or)

- b) What is Racemic Mixture? Explain any two techniques for resolution of racemic mixture
