S-464

Total Pages : 3 Roll No. .....

MSCCH-507

Organic Chemistry-II

M.Sc. Chemistry (MSCCH)

2nd Semester Examination, 2022 (Dec.)

Time : 2 Hours] **Max. Marks : 70**

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A
(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Explain electrocyclic reaction of 4n and 4n+2 by FMO and correlation diagram.

2. Write notes on the following :

(a) Cope rearrangement.

(b) Hunsdieker reaction.

3. Write notes on the following :

(a) Neighbouring group participation.

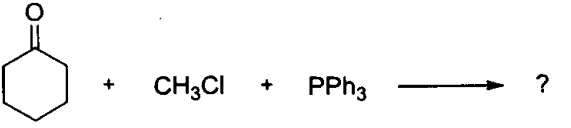
(b) Mannich reaction.

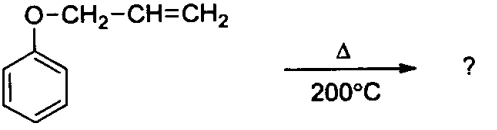
4. Write notes on the following :

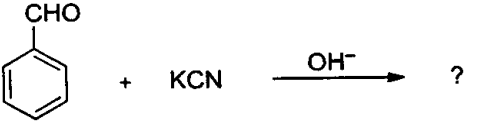
(a) Ene reaction.

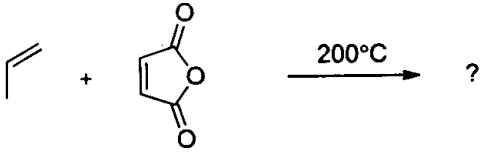
(b) Claisen rearrangement.

5. Complete the following reactions with the Mechanism :

(a) 

(b) 

(c) 

(d) 

SECTION–B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. Discuss nucleophilic substitution reactions of alkyl halides.

2. Explain benzyne mechanism with suitable examples.

3. Explain the mechanism of S_E1 & S_E2 reactions.

4. Draw the molecular orbital diagrams of 1,3-butadiene and allyl system.

5. Write down the mechanism of diazonium coupling of aniline.

6. What do you understand by orientation of the double bond in elimination reactions? Explain.

7. What are the reactions of carbonyl compounds with Grignard reagent.

8. Write notes on the following :

(a) Saytzeff and Hoffman elimination.

(b) Hydrogenation of double bond.