

Roll No.

DD-456

M. Sc. (Second Semester) EXAMINATION, May/June, 2020

CHEMISTRY

Paper No. CH-8

(Reaction Mechanism)

Time : Three Hours

Maximum Marks : 80

Note : Attempt *one* question from each Unit. All questions carry equal marks.

Unit—I

- (a) Explain aromatic SN_1 and benzyne reaction mechanism.
- (b) Give mechanism and application of Von Richter reaction.

Or

Explain the following :

- (i) Aliphatic SN_1 mechanism
- (ii) Regioselectivity
- (iii) Phase transfer catalysis

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Unit—II

2. (a) Discuss the factors affecting reactivity of Aliphatic S_E reaction.
(b) Give mechanism of halogenations of carbonyl compounds.

Or

Describe orientation and reactivity effect of substituents present in benzene rings.

Unit—III

3. Discuss mechanistic and stereochemical aspects of addition reactions involving electrophiles and free radicals.

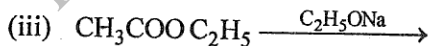
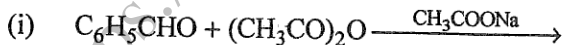
Or

Explain the following :

- (i) Hydrogenation of double and triple bonds
(ii) Hydrogenation of aromatic rings
(iii) Addition to cyclopropane rings

Unit—IV

4. Complete the following reactions and give their mechanism :



Or

Explain the following :

- (i) Reformatsky reaction
(ii) Wittig reaction
(iii) Organolithium addition to unsaturated carbonyl compounds

DD-456

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