

JS-250

Roll No. 633
2000 120/10/40

July 2014

M. Sc. IInd Semester Examination

CHEMISTRY

Paper VII (II) : Organic Chemistry - II (MCH 407)

Time 3 Hours]

[Max. Marks : Regular 85 / Private 100 / Old ATRT 85

Note : This question paper is meant for all Regular, Private and Old ATRT students. Answer all five questions. All questions carry equal marks. The blind candidates will be given 60 minutes extra time.

1. (a) Describe and write arenium ion mechanism.
(b) Describe Vilsmeier reaction and diazonium coupling.

OR

- (a) What is dramatic nucleophilic substitution ($SNAr$) ? Write mechanism of $ArSH_1$ reactions.
(b) Describe aromatic nucleophilic substitution.

2. Write short notes on any four from the following :

- (a) Oxidation of aldehydes to carboxylic acid.
(b) Hunsdiecker's reaction.
(c) Free radical rearrangements.
(d) Neighbouring group assistance.
(e) Auto-oxidation.

3. (a) Describe addition to cyclopropane ring.
(b) Write Hydrogenation of double and triple bond.

OR

Write note on :

- (a) Hydroboration
(b) Michael's Addition.

4. Describe the Nucleophilic addition reactions of carbonyl compounds with :

- (a) Grignard's Reagent
(b) Organolithium Compounds
(c) Organozinc Compounds.

OR

Write the mechanism and orientation in pyrolytic elimination.

5. Describe the pericyclic reactions with types of pericyclic reactions.

OR

Write notes on any two of the following :

- (a) Cope's Rearrangement
(b) Claisen Rearrangement
(c) Ene Reaction.