

CHE-552
Synthetic Organic Chemistry

M.Sc. CHEMISTRY (MSCCH - 12/13/16/17)

Second Year, Examination-2019

Time: 3 Hours

Max. Marks: 80

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Note:- This paper is of Eighty (80) marks divided into two (02) Section A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

Section-A

(Long Answer Type Question)

Note:- Section - A contains five (05) long answer-type questions of fifteen (15) marks each. Learners are required to answer any three (03) questions only. (3×15=45)

1. Discuss protection and deprotection of following functional groups in organic synthesis :
 - (a) Alcohol group
 - (b) Carbonyl group

2. Write notes on following terms of disconnection approach of organic synthesis :
 - (a) Synthons
 - (b) FGI
 - (c) Retrosynthetic analysis
3. Write explanatory notes on followings:
 - (a) Knoevenagel condensation
 - (b) Robinson annulation reaction
 - (c) Wilkinson catalyst
4. Write detailed notes on followings :
 - (a) Enantiomers
 - (b) Cram rule to predict configuration
 - (c) Homotopic Ligands
5. Write retrosynthesis of followings:
 - (a) β – Phenyl ethylamine
 - (b) Disparlure

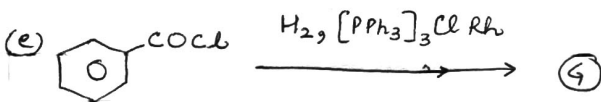
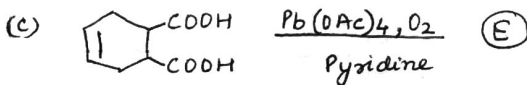
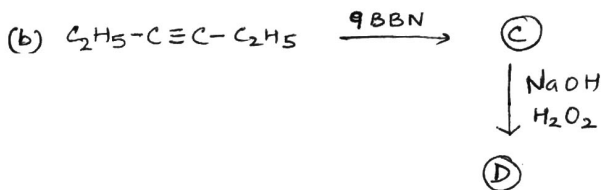
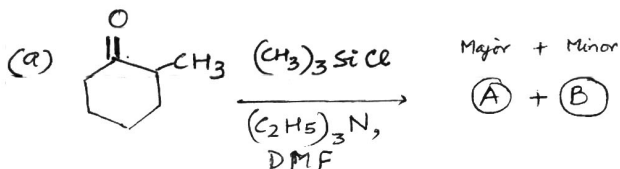
Section-B

(Short Answer Type Question)

Note:- Section-B contains eight (08) short answer type questions of seven (07) marks each. Learners are required to answer any five (05) questions only. (5×7=35)

1. What happens when alkene is heated with iodine in presence of silver acetate under anhydrous and hydrous conditions?
2. Write note on witting reaction.
3. Discuss pyrolysis of carboxylic ester, xanthates and amine oxides.
4. Write explanatory notes on followings :
 - (a) Enantiotopic faces
 - (b) Homomorphich ligands
5. Write detailed note on applications of organosilanes.
6. Giving suitable examples discuss Diels Alder reaction and retro diels alder reaction.

7. Complete the following reactions and identify A to G



8. Write detailed note on one group C - X disconnection.
