



JL-1612020701030200

Seat No. _____

M. P. M. (Sem. III) (CBCS) (External) Examination

August / September - 2019

Pharmaceutical Chemistry - III

(Organic Chemistry - II)

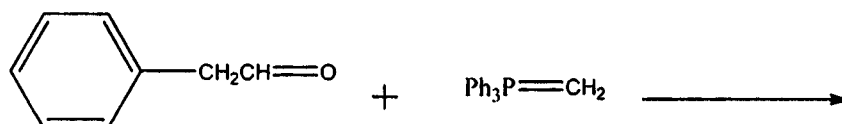
Time : 3 Hours]

[Total Marks : 80

- Instructions :**
- (1) Answer and tie up both the sections separately.
 - (2) Figure to the right indicates marks.
 - (3) Answer any three (3) questions from each section.
 - (4) Question One (1) and Question Five (5) are compulsory.
 - (5) Draw neat and clean diagrams as required.

SECTION - I

- 1 Answer the following : (any seven) 14
- (a) Give brief on nomenclature of geometrical isomers.
 - (b) What is the importance of nanochemistry ? Give in brief.
 - (c) Which heterocyclic ring is produced with following reaction :
 - a. Acetylene is reacted with ammonia.
 - (d) Dichloroacetic acid is more acidic than chloroacetic acid.
 - (e) Draw the conformational isomer of n-butane.
 - (f) Spiran do not contain any chiral carbon though it is optically active. Comment.
 - (g) Enlist resolution methods.
 - (h) Define heterocyclic compounds. Give one example of natural substance which containing heterocyclic ring.
 - (i) Impurities of Thiophene are removed from benzene by using concentrated sulphuric acid. Comment.
 - (j) Complete the following reaction :



- 2 Answer the following :
- (a) Draw the structure of the following : 7
 - (a) Isoquinoline
 - (b) Pyrimidine
 - (c) Thiophene
 - (d) Imidazole
 - (e) Thiazole
 - (f) Furan
 - (g) Indole
 - (b) Write a brief short note on Green Chemistry. 6

- 3 Answer the following :
- (a) Write a detail note on stereochemistry of Allen, Spiran and Biphenyl. 7
- (b) Differentiate Optical isomerism and geometric isomerism. 6
- 4 Answer the following :
- (a) Define Racemic mixture. Discuss its resolution methods. 7
- (b) Define the following terms : 6
- (1) Chiral center (2) Mesomer
 (3) Optical activity (4) Configuration
 (5) Specific Rotation (6) Enantiomer

SECTION - II

- 5 Answer the following : (any two) 14
- (a) Explain Riemer-Tiemann and cannizaro reaction in detail.
- (b) Write a note on nucleophilic aromatic substitution reaction.
- (c) Enlist the carboxylic acid derivatives. Mention the preparation of Carboxylic acid.
- 6 Answer the following :
- (a) Write an informative note on : 7
- (a) Fischer Indole Synthesis
 (b) Skraup Quinoline Synthesis
- (b) Define conformation. Discuss different conformations of cyclohexane. Comment on its stability. 6
- 7 Answer the following :
- (a) How indole is synthesized ? Discuss important reaction of indole. 7
- (b) Write an informative note on microwave synthesis. 6
- 8 Answer the following :
- (a) Write short note on : 7
- (a) Wittig reaction
 (b) Aldol condensation
- (b) Define Carbonyl compounds. Outline three different synthesis for benzaldehyde and benzophenone. 6