



JL-1612020701030200

Seat No. _____

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

August / September - 2019

Pharmaceutical Chemistry - III

(Organic Chemistry - II)

Time : 3 Hours]

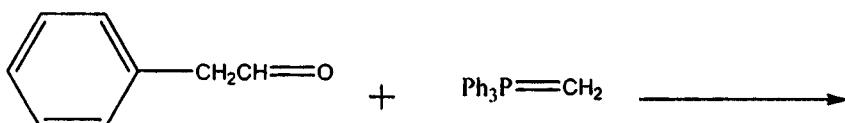
[Total Marks : 80

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, 7
Spiran and Biphenyl.
(b) Differentiate Optical isomerism and geometric 6
isomerism.

4 Answer the following :
(a) Define Racemic mixture. Discuss its resolution 7
methods.
(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 6
of cyclohexane. Comment on its stability.

7 Answer the following :
(a) How indole is synthesized ? Discuss important 7
reaction of indole.
(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 6
synthesis for benzaldehyde and benzophenone.