



MAO-003-047403 Seat No. _____

**B. Voc. (Pharm. Analysis & QA) (Sem. IV) (CBCS)
Examination**

March/April – 2018

BVPAQA-403 : Pharmaceutical Organic Chemistry-II

**Faculty Code : 003
Subject Code : 047403**

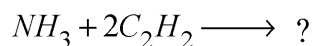
Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

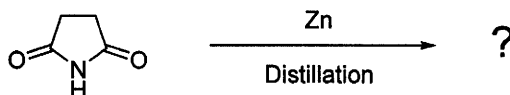
- Instructions :** (1) All questions are compulsory and carry equal marks.
(2) Draw diagram and/or scheme wherever necessary.

1 (a) Answer the, following Questions : 10

- (1) Define levorotatory substance.
(2) Complete the reaction :



- (3) Which enzyme is used to convert glucose to ethanol ?
(4) Thiophene is _____ aromatic than furan.
(more, less, non-, anti-)
(5) Complete the reaction :



- (6) Define plane polarized light.
(7) Draw the correct structure of furfural.
(8) Give preparation of Grignard reagent.
(9) Give structure of DDT.
(10) Give markonikov rule for synthesis of alkyl halide from alkene.

- (b) Answer the following questions : 20
- (1) Why pyridine is more basic than pyrrole?
 - (2) Give any 2 preparation of pyridine.
 - (3) Give any 2 reactions of thiophene.
 - (4) Discuss carbyl amine reaction of primary amines.
 - (5) Discuss Gabriel phthalamide synthesis for primary amines.
 - (6) Discuss use of chloroform.
 - (7) Pyridine is _____basic than pyrrole.
(less, more, exponentially)
Fill in the blank with correct option and justify your answer.
 - (8) Discuss E/Z nomenclature with an example.
 - (9) Discuss aromaticity of pyrrole in brief.
 - (10) Explain lucas test for identification of types of alcohol.

- 2 Answer the following questions : (any **four**) 20
- (1) Discuss conformational analysis of n-butane.
 - (2) Explain Sandmeyer reaction of aromatic amines.
 - (3) Explain synthesis of alcohols from reduction of carbonyl compounds with mechanism.
 - (4) Discuss physical properties of alcohols.
 - (5) Explain why electrophilic substitution reaction of pyridine occur at C3 ? Discuss reduction of pyridine in detail.
 - (6) Give synthesis of haloalkane and haloarene from hydrocarbon.

- 3 Answer the following Questions : (Any Four) 20
- (1) Give classification of isomers with example.
 - (2) Explain various electrophilic substitution reactions of chloro benzene.
 - (3) Give any 2 preparation and any 3 reactions of furan.
 - (4) Explain synthesis of alcohol by hydroboration-oxidation from alkene with mechanism.
 - (5) Explain with illustration: Aromaticity of five membered heterocycles.
 - (6) Explain separation of primary, secondary and tertiary amines by Hinsberg reagent.