



NCE-003-047403 Seat No. _____

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

April / May - 2017

**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 & carry equal marks.
(2) Draw diagram and/or scheme wherever necessary.

1 (A) Answer the following Questions : 10

- (1) Give composition of PCC reagent.
(2) Give markonikov rule for synthesis of alkyl halide from alkene.



Complete the reaction:

- (4) Define levorotatory isomer.
(5) Which enzyme is used to convert glucose to ethanol?
(6) Give preparation of Grignard reagent.
(7) Give structure of DDT.
(8) Draw the correct structure of furfural.
(9) Define plane polarized light.
(10) Pyridine can be obtained from _____.
(Coal tar, hemoglobin, sea water)

(B) Answer the following Questions : 20

- (1) Boiling point of pyrrole is higher than furan and thiophene. Justify briefly.
(2) Give Fittig and Wurtz-fittg reaction.

- (3) Discuss E/Z nomenclature with an example.
- (4) Discuss carbyl amine reaction of primary amines.
- (5) Discuss use of chloroform.
- (6) Pyridine is _____ basic than pyrrole. (less, more, exponentially) Fill in the blank with correct option and justify your answer.
- (7) Give any two preparation of pyridine.
- (8) Discuss Gabriel phthalamide synthesis for primary amines.
- (9) Nitrogen atom in the Pyrrole is _____ hybridized; while Nitrogen atom in the Pyridine is _____ hybridized.
- (10) Explain lucas test for identification of types of alcohol.

2 Answer the following Questions : (Any **Four**) **20**

- (1) Explain Sandmeyer reaction of aromatic amines.
- (2) Discuss physical properties of alcohols.
- (3) Why thiophene is more aromatic than furan and pyrrole?
- (4) Explain synthesis of alcohols from reduction of carbonyl compounds with mechanism.
- (5) Give synthesis of haloalkane and haloarene from hydrocarbon.
- (6) Discuss conformational analysis of n-butane.

3 Answer the following Questions : (Any **Four**) **20**

- (1) Explain synthesis of alcohol by hydroboration-oxidation from alkene with mechanism.
- (2) Explain separation of primary, secondary and tertiary amines by Hinsberg reagent.
- (3) Describe various electrophilic substitution reactions of chloro benzene.
- (4) Explain any three methods of preparation of phenol.
- (5) Discuss classification of isomers with example.
- (6) Give any two preparation and any three reactions of furan.