

FIRST YEAR PHARM. D.: Winter-2021
SUBJECT: PHARMACEUTICAL ORGANIC CHEMISTRY

Day: **Thursday**
Date: **09-12-2021**

Time: **10:00AM TO 1:00PM**
Max. Marks: 70

W-2021-5727

N.B.:

- 1) **Q. No.1 and Q. No.5 are COMPULSORUY.**
- 2) Out of the remaining solve **ANY TWO** questions from each section.
- 3) Both sections should be written on **SEPARATE** answer books.

SECTION-I

- Q.1 A) Solve ANY FOUR of the following: (08)**
- i) Write structure and IUPAC name of any two ketones.
 - ii) Define the term with example: i) Free radical ii) Electrophile
 - iii) Draw well labeled schematic diagram of Polarimeter.
 - iv) Write structure and IUPAC name of any two amides.
 - v) What is Lowry-Bronsted acid base theory?
- B) Explain in short geometrical isomerism. (03)**
- Q.2 Explain reaction, mechanism, stereochemistry and factors affecting rate of reaction for E1 reaction. (12)**
- Q.3 a) Differentiate between SN1 and SN2 reactions. (07)**
b) Explain termination reaction mechanism for free radical chain reaction. (05)
- Q.4 Write a note on (ANY THREE): (12)**
- a) Bayer strain theory
 - b) Saytzeff rule
 - c) Substitution reaction in alkenes
 - d) Conformations of cyclohexane and their stability

SECTION-II

- Q.5 A) Solve ANY FOUR of the following: (08)**
- i) Explain resonance stabilization of phenoxide ion.
 - ii) Define the term with example: i) Reduction ii) Hyperconjugation.
 - iii) How will you convert carboxylic acid to its corresponding amide? Give example.
 - iv) Give medicinal use of Chlorbutol and Mephensin.
 - v) What is vinylic cation? Explain with example.
- B) What is Reformatski reaction? (03)**
- Q.6 What are electrophilic aromatic substitution reactions? Explain any two reactions in detail. (12)**
- Q.7 a) What is aldol condensation? Explain the related reactions and mechanism in detail. (07)**
b) Explain in brief oxidation reduction reaction. (05)
- Q.8 Write a note on (ANY THREE): (12)**
- a) Assay and medicinal uses: Lactic acid
 - b) Assay and medicinal uses: Urea
 - c) Kolbe reaction
 - d) Sandmeyer reaction

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