

**First Year Pharm. D : SUMMER - 2019**  
**SUBJECT : PHARMACEUTICAL ORGANIC CHEMISTRY**

Day : Monday  
Date : 15/04/2019

S-2019-4501

Time : 10.00 A.M. TO 01.00 P.M.  
Max. Marks : 70

**N.B.:**

- 1) **Q. No. 1 and Q. No. 5** are **COMPULSORY**. Out of remaining solve **ANY TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to the both sections should be written in **SEPARATE** answer books.

**SECTION – I**

- Q.1 A** Solve **ANY FOUR** of the following: (08)
- a) Write structure and IUPAC name of any two ketones.
  - b) Draw diagram of polarimeter and explain working.
  - c) Explain Lewis acid and base with example.
  - d) Write structure and IUPAC name of any two ethers.
  - e) What is enantiomerism?
- B** Write a short note on geometrical isomerism. (03)
- Q.2** Explain reaction mechanism, stereochemistry and factors affecting reaction for SN1 reaction. (12)
- Q.3 a)** Differentiate between E1 and E2 reactions. (07)
- b)** Explain addition of hydrogen halide to alkenes in different reactions with mechanisms (05)
- Q.4** Write a note on **ANY THREE** of the following: (12)
- a) Configurational and conformational isomerism
  - b) Stability of alkenes
  - c) Melting point of ionic compounds is higher than non-ionic compounds
  - d) Substitution reaction in alkenes

**SECTION – II**

- Q.5 A** Solve **ANY FOUR** of the following: (08)
- a) Define the term with example: (i) Nucleophile (ii) Oxidation
  - b) Explain the effect of substituents on acidity of phenols.
  - c) Give medicinal use of mephensin and dimercaprol.
  - d) How will you convert carboxylic acid to its corresponding ester? Give reaction.
  - e) Why chloroacetic acid is stronger acid than acetic acid?
- B** Compare 1,4- and 1,2- electrophilic addition reactions in conjugated dienes. (03)
- Q.6** Explain in detail with suitable examples: (i) Aliphatic v/s aromatic nucleophilic substitution reaction (ii) Resonance stabilization of benzyl and allyl radicals. (12)
- Q.7 a)** Explain mechanism of halogenation and sulphonation reaction in benzene with respect to electrophilic substitution reaction. (07)
- b)** Halogens are o/p- directors but deactivators in electrophilic substitution reaction. Explain. (05)
- Q.8** Write a note on **ANY THREE** of the following: (12)
- a) Claisen condensation
  - b) Knoevenagel reaction
  - c) Hoffmann rearrangement
  - d) Reformatsky reaction

\* \* \* \*