FIRST YEAR PHARM. D : SUMMER - 2018
SUBJECT : PHARMACEUTICAL ORGANIC CHEMISTRY

Day : **Thursday** Time : **10.00 AM to 01.00 PM**
Date : **12/04/2018** Max. Marks : 70

S-2018-4022

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 both the sections should be written in **SEPARATE** answer books.

SECTION - I

Q. 1 **A)** Solve **ANY FOUR** of the following: **(08)**

i) Explain concept of dipole moment.
ii) Define and explain Diasteromers with examples.
iii) What is Lewis acid-base? Give example.
iv) What is E_1 (CB) reaction?
v) Write structure and IUPAC name of any two carboxylic acids.

B) Differentiate between dimination and substitution reaction with suitable example. **(03)**

Q. 2 Classify the Isomerism and explain in detail with suitable examples. **(12)**

Q. 3 **a)** Explain reaction, mechanism and stereochemistry of SN_2 reaction with suitable example. **(07)**

b) Differentiate between E_1 *and* E_2 reactions. **(05)**

Q. 4 Write a note on **ANY THREE** of the following: **(12)**

a) Auto – racemization
b) Free radical chain reaction
c) Racemization of SN_1 reaction.
d) Stability of free radicals

SECTION - II

Q. 5 **A)** Solve **ANY FOUR** of the following: **(08)**

i) What is Kolbe reaction?
ii) What is mean by diazotization?
iii) What is mean by hyperconjugation?
iv) Why phenols are acidic in nature?
v) Explain methyl group in toluene is o/p director.

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B) Halogens are electron withdrawing but they are o/p directors in aromatic electrophilic substitution reaction. Illustrate. **(03)**

Q. 6 What are nucleophilic aromatic substitution reactions? Explain bimolecular displacement mechanism involved in nucleophilic aromatic substitution reaction with example. **(12)**

Q. 7 **a)** Explain in detail cannizaro's reaction and crossed cannizaro's reaction with examples. **(07)**

b) Explain preparation, test for purity, assay and medicinal uses of mephenesin. **(05)**

Q. 8 Write a note on **ANY THREE** of the following: **(12)**

a) Cross aldol condensation

b) Perkin condensation

c) Michael addition

d) Williamson's synthesis

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