Subject Code: B13106/R13

I B. Pharmacy I Semester Supplementary Examinations Aug - 2015 PHARMACEUTICAL ORGANIC CHEMISTRY-I

Time: 3 hours Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B** Answering the question in **Part-A** is Compulsory, Three Questions should be answered from **Part-B**

PART-A

1. (a) What are different factors influence a reaction? Explain the electromeric effect.

- (b) Write the structural formulas and IUPAC names for all chain isomers of alkane C_5H_{12} .
- (c) How do you convert ethyl bromide into ethanol, diethyl amine and ethyl cyanide?
- (d) Classify alcohols with one example to each class.
- (e) Define the following terms (i) Specific rotation (ii) Optical activity.
- (f) Give the preparation of Grignard reagent.

[4+4+3+3+4+4]

PART-B

- 2. (a) Discuss the rearrangement in Carbocations.
 - (b) Explain inductive effect with examples.
 - (c) How free radicals formed? Explain their stability.

[6+4+6]

- 3. (a) Write a note on Bayer's strain theory.
 - (b) How will you synthesize n-Butylbromide from 1-Butene? Explain the mechanism.
 - (c) What are the products of following reaction?
 - (i) 1, 3 Butadiene with HBr
 - (ii) 2 Butyne with ozone

[4+6+6]

- 4. (a) Explain the mechanism of conversion of tert-Butyl bromide to tert- Butyl alcohol.
 - (b) Compare SN¹ and SN² reaction mechanisms.
 - (c) What are the products of following reaction? Which one is major product and why? Explain its mechanism.

CH₃-CHBr-CH₂-CH₃ alc. KOH

[6+4+6]

- 5. (a) Write the reaction of propanol with:
 - (i) Grignard reagent
- (ii) Acetyl chloride
- (b) How can you distinguish 1^0 , 2^0 and 3^0 alcohols in laboratory?
- (c) Explain the mechanism of Williamson's synthesis of ethers.
- (d) What are the products of following reaction?

$$H_3C \xrightarrow{CH_3} H_3C \xrightarrow{H_3} CH_2 - CH_2 - CH_3 \xrightarrow{H_1} CH_3$$

[4+4+4+4]

WWW.MANARESULTS.CO.IN

Subject Code: B13106/R13

- 6. (a) Define enantiomer and diastereomer. How do they differ in their properties?
 - (b) Write the geometrical isomers for following.
 - (i) 2-Bromo-2-butene (ii) 2-Phenyl-3-bromo-2-butene
 - (c) How do you assign R and S configuration?
 - (d) What are racemic mixtures? Describe any two methods to resolve racemic mixtures.

[4+4+4+4]

- 7. (a) What are characteristic reaction mechanisms of Grignard reagent?
 - (b) How methyl magnesium bromide reacts with:
 - (i) Acetaldehyde (ii) Acetone (iii) Acetonitrile
 - (c) Give the reaction of Grignard reagent with ethyleneoxide.

[5+8+3]
