Code: 15R00104

R15

B.Pharm I Year I Semester (R15) Supplementary Examinations May/June 2018

PHARMACEUTICAL ORGANIC CHEMISTRY – I

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Write short note on Mesomeric effect.

(b) Write the reaction of 3, 3-dimethyl-1-butene with: (i) HI. (ii) HBr in the presence of peroxide.

(c) Why 1-butyne is more acidic than 2-butyne?

(d) How can you say a SN^2 Reaction proceeds with Stereo chemical Inversion of Configuration?

(e) Write a short note on Reformatsky reaction.

(f) "Aldehydes are oxidized easily to carboxylic acid but ketones are not" –Comment.

(g) Predict the major products obtained on dehydrohalogenation of the following:

CH_3-CH_2-CH_2-CH_2Cl

(h) Write short note on Oppenauer oxidation.

(i) What is Sashes-Mohr theory? Write its merits.

(j) Write the reaction of 1-Chloro and 2-Chloro butanes with KOH. What is the difference between the two reactions?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 Write short notes on:

(a) Hybridization.

(b) Impact of a structure on surface tension and solubility.

OR

3 Explain the following:

(a) Inductive effect.

(b) Types of organic reactions.

UNIT – II

4 What are the products obtained in each of the following reactions give a detailed mechanism:

(i) CH_3-CH=CH_2+HBr ⟶

(ii) CH_3-$C(CH_3)$=CH_2+HI ⟶

OR

5 (a) Predict the products formed on mono chlorination of n-butane. Give reasons for the variation in proportion of each product formed.

(b) Outline the Bayer's strain theory.

UNIT – III

6 (a) Explain with suitable example and mechanism, why conjugated alkadienes undergo more of 1, 4-addition than 1, 2-addition

(b) Write the reaction of 1-butene with: (i) Br_2 in CCl_4. (ii) HCl. (iii) H_2SO_4

OR

7 (a) Write the products of reaction between HCl and 2, 4-hexadiene. Which is the major product at lower temperature? Which is the major product at higher temperature?

(b) Write a note on Anti Markovnikov rule.

Contd. in page 2

UNIT – IV

8 (a) How do you effect the following conversion? Account for the formation of the product:

$CH \equiv CH \longrightarrow H_3C\text{-}CHO$

(b) Discus the factors that play role in SN^1 and SN^2.

OR

9 (a) What is Walden inversion? Primary alkyl halides undergo SN^2 reaction more easily than tertiary alkyl halides. Why?

(b) Discus any two important methods of preparation of alkyl halides.

UNIT – V

10 (a) Write any two important methods of preparation of ketones.

(b) Write a shot note on Aldol condensation.

OR

11 (a) Write the product formed in the following reaction:

$CH_3\text{-}CHO + 2Ag(NH_3)_2OH \longrightarrow$

(b) How do you distinguish acetophenone and benzophenone?

*****