22/6/22

Roll Number ---------- **(Total Number of Questions 13)** **(Total number of Printed Pages 01)**

Programme	B. Pharmacy
Semester	2nd
Subject	Pharmaceutical Organic Chemistry-I
Subject Code	BP202T
Paper ID	74968
Time	3Hours
Maximum Marks	75

Instructions to Candidates: *No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.*
Section A consists of Ten parts of 2 marks each; Attempt **ALL.*
***Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO**.*
**** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section A (10 X2 = 20)

1. Give very short answers to the followings (2 marks each):

i.	What is the Full form of IUPAC?
ii.	Define Saytzeffs orientation in elimination reaction.
iii.	Write a note on Inductive effect.
iv.	Explain stability of conjugated dienes.
v.	Give the structure and uses of 5-Bromo-4-methyl-hex-3-en-2-one.
vi.	Write one method for the preparation of alcohol.
vii.	Write any two qualitative tests for amines.
viii.	Write the structure and uses of Chloral hydrate.
ix.	Write the structure and IUPAC name of a) tert- Butyl chloride b) Formamide.
x.	Enlist evidences for E1 reaction.

Section B (2 X 10 = 20)

2.	Give the reaction and mechanism of elimination reaction with suitable examples.
3.	Discuss the reaction mechanism of Perkin condensation and Aldol condensation.
4.	Explain kinetics, mechanism, stereochemistry and reactivity of SN1 reaction.

Section C (7 X 5 = 35)

5.	Define hybridization. Write a note on SP^3 hybridization in alkanes.
6.	What is Isomerism? Discuss structural isomerism with examples.
7.	Explain the reaction and mechanism of Cannizzaro reaction.
8.	Give any four qualitative tests for alcohol.
9.	Explain the basicity of aliphatic amines with special emphasis on effect of substituent on their basicity.
10.	Differentiate between SN1 and SN2 reactions of alkyl halides.
11.	Define and classify carbocations. Write a note on stability of carbocations.
12.	Give the structure of following:- a) 2-chloropentane b) Hexenal c) tertiary-butyl chloride d) o-pentyl bromide e) 3- chloro hex-1-yne.
13.	Write the uses and chemical structure of Vaniline and Cinnamaldehyde.

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Section A (10 X2 = 20)

1. Give very short answers to the followings (2 marks each):

i.	Define Inductive effect?
ii.	Explain effect of substituent on acidity and basicity?
iii.	What is Electromeric effect?
iv.	Explain sp^3 hybridization of alkanes?
v.	What is full form of IUPAC?
vi.	Give any two qualitative tests for alcohol.
vii.	Compare stability of alkene and conjugated dienes.
viii.	Write structure and uses of vanillin.
ix.	How will you differentiate 1°, 2°, 3°amines?
x.	Write structure and medicinal uses of Cinnamaldehyde.

Section B (2 X 10 = 20)

2.	Explain Aldol condensation and cross aldol condensation with mechanism.
3.	Explain E1 and E2 reactions with mechanism. Also explain factors affecting E1 and E2 reactions.
4.	Explain SN1 and SN2 reactions with mechanism and factors.

Section C (7 X 5 = 35)

5.	Give a detail note on isomerism with examples.
6.	Discuss about markownikoff's and anti markownikoff's rule.
7.	Write a detail note on qualitative tests for carbonyl compounds.
8.	Explain halogenation of alkanes with mechanism?
9.	Explain method of preparation and synthesis of aliphatic amines.
10.	Differentiate electrophilic and nucleophilic reactions with examples.
11.	Discuss Ozonolysis and Allylic rearrangement.
12.	Describe free radical reaction of conjugated dienes.
13.	Explain mechanism of Cannizzaro reaction.

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21 DEC 2020

Roll No. | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 22

B.Pharma (2017 & Onwards) (Sem.-2)

PHARMACEUTICAL ORGANIC CHEMISTRY-I

Subject Code : BP-202T

M.Code : 74968

Time : 3 Hrs. Max. Marks : 75

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains THREE questions carrying TEN marks each and student has to attempt any TWO questions.
3. SECTION-C contains NINE questions carrying FIVE marks each and student has to attempt any SEVEN questions.

SECTION-A

Briefly write about the following :

1. Write the structure and uses of Hexamine and Chloral Hydrate.
2. Define diastereomers and meso compounds.
3. Differentiate between configuration and conformation.
4. SP^2 hybridization in alkenes.
5. Write structure of Amphetamine.
6. Structure and uses of glycerol.
7. Give qualitative test for chlorobutanol.
8. What happens when amides are heated with sodium hydroxide?
9. Saytzeffs orientation in elimination reactions.
10. Give structure and medicinal uses of Acetyl salicylic acid.

SECTION-B

11. Discuss the following :
    i) Ozonolysis
    ii) Allylic rearrangement.
12. i) Explain the mechanism of Cannizzaro and crossed Cannizzaro reactions.
    ii) Explain Anti Markownikoff's rule with suitable example.
13. Discuss the mechanism of SN^1 and SN^2 reactions of alkyl halides

SECTION-C

14. Discuss the qualitative tests of esters.
15. Write the differences between E_1 and E_2 reactions.
16. Discuss about acidity of carboxylic acids and effects of substituent on it.
17. Explain D/L and d/l notations giving examples.
18. Explain the mechanism of Perkin condensation reaction.
19. How will you differentiate between 1°, 2° and 3° amines qualitatively?
20. What do you understand by *R* and *S* notations in optically active compounds?
21. Describe electrophilic addition reactions of conjugated dienes.
22. Discuss the order of reactivity of alkyl halides in elimination reactions.

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05 MAY 2019

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SECTION-A

Q1 Briefly write about the following :

a) Define metamers. Give example.

b) Draw the structure of 3-bromo-l-chloro cyclohexene.

c) What is walden inversion?

d) What are the uses of hexamine?

e) Define Saytzeffs rule.

f) Give the product of addition of HC1 to 1,3-butadiene.

g) Comment upon the uses of benzylbenzoate.

h) Give chemical test to distinguish between propanal and propanone.

i) Write the chemical equation when ethyl chloride reacts with aqueous KOH.

j) Give the structure and use of cetosteryl alcohol.

SECTION-B

Q2. Comment upon following :

a) Perkin condensation

b) Crossed Cannizaro reaction

Q3. Give the detailed comparison of SN1 and SN2 reactions with respect to their kinetics, reactivity and stereochemistry involved in various types of alkyl halides.

Q4. Comment upon the hybridisation and geometry of alkanes and alkenes. Discuss in detail various reactions of alkenes.

SECTION-C

Q5. Classify organic compounds. Give examples of each class.

Q6. Explain allylic rearrangement.

Q7. Give the mechanism of halogenation of alkanes.

Q8. How can we distinguish between various types of amines via qualitative tests?

Q9. Comment upon various factors affecting El and E2 reactions.

Q10. Give structure and uses of chloral hydrate and vanillin.

Q11. Enumerate various qualitative tests carried for the identification of amides and esters.

Q12. Explain the effect of inductive effect on acidity of carboxylic acids.

Q13. Differentiate between electromeric and inductive effect?

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