

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher: Mrs. J. R. Jagtap

Class: S. Y. B. Pharm. (Sem.-III)

Subject: Pharmaceutical Organic Chemistry-II

Sr. No.	Particulars	Roll No	Name of Students
1	Slow Learner	3	Bande Aakash Bharat
		7	Pursharth bhardwaj
		13	Budhe Rupali Prakash
		15	Dighe yash dadaso
		17	Gaikwad Rutik Shivdas
		22	Jadhav Srushti Shekhar
		25	Jagtap Prakruti Devanand, 25
		26	Jagtap Shivani Sanjay
		31	Kadam Somnath Dadaso
		35	Karpe Vaibhav Gangaprasad
		38	Khaire Reva Anil
		39	Kirve Abhijith Sunil
		44	Lokhande Shubhada Vijay
		47	Memane Anuj Avinash
		50	Bhat Akib Mushtq
		56	pawar omprasad anandrao
		60	Salunke Aniket Vilas
		63	Shinde Sejal Ganesh
		64	solanke Pratiksha Gajanan
		72	Zende Pranali Ashok
2	Advanced Learner	4	Bankar Sanjana Ajitkumar
		5	Bhale Supriya Hanumant
		24	Jagtap Pradnya Navnath
		27	Jagtap Swapnil Prakash
		32	Kalane Chetan Somnath
		37	Khade Ashvini Laxman
		41	Kudale Suhas Santosh
		61	Shah Aarif Majid
		67	Tonde Amrapali Shahaji

Name and Signature of Teacher
(Mrs. J. R. Jagtap)

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22
List of Students required remedial coaching

Name of teacher: Mrs. J. R. Jagtap
Class: S. Y. B. Pharm Sem-III
Subject: Pharmaceutical Organic Chemistry-II

Roll No	Name of Students	18/01/22	19/01/22	20/01/22	24/01/22	27/01/22
3	Bande Aakash Bharat		4	7	4	4
7	Pursharth bhardwaj			5	4	4
13	Budhe Rupali Prakash	9	6	9	4	4
15	Dighe yash dadaso	6		4	4	4
17	Gaikwad Rutik Shivdas			6	4	4
22	Jadhav Srushti Shekhar				4	4
25	Jagtap Prakruti Devanand, 25	8	7	5	4	4
26	Jagtap Shivani Sanjay	8	4	7	4	4
31	Kadam Somnath Dadaso	6	6	6	4	4
35	Karpe Vaibhav Gangaprasad	7	8	7	4	4
38	. Khaire Reva Anil	5	8	5	4	4
39	Kirve Abhijith Sunil	7	8	6	4	4
44	Lokhande Shubhada Vijay	9	6	5	4	4
47	Memane Anuj Avinash		8	8	4	4
50	Bhat Akib Mushtq				4	4
56	pawar omprasad anandrao				4	4
60	Salunke Aniket Vilas			7	4	4
63	Shinde Sejal Ganesh				4	4
64	solanke Pratiksha Gajanan	10	7	7	4	4
72	Zende Pranali Ashok	9	8	8	4	4
		MCQ test (Phenols)	MCQ test (Steroids)	MCQ test (Benzene derivatives)	Assignment on Aromatic Electro. Sub.	Assignment of Stereoisomerism

Name and Signature of Teacher
(Mrs. J. R. Jagtap)

Continuous Assignment No - 3

Name:- Lokhande Shubhada Vijay

Class:- S.Y. B. Pharm (Sem - III)

Subject:- POC - II

Roll No:- 44

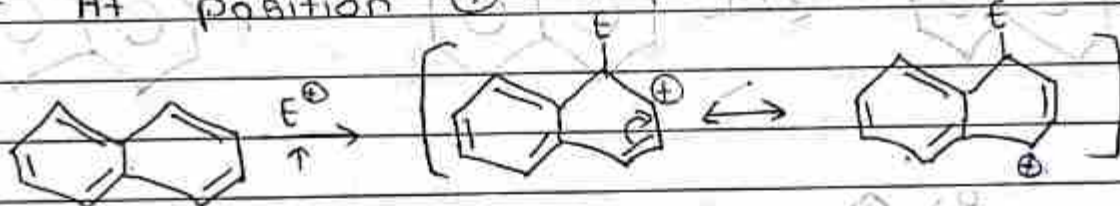
Date:- 22/11/22

Q.1 Explain a reaction mechanism of electrophilic Substitution reaction in naphthalene.

Electrophilic aromatic Substitution reactions. Naphthalene reacts more readily than benzene.

for e.g. Chlorination, bromination of naphthalene etc.

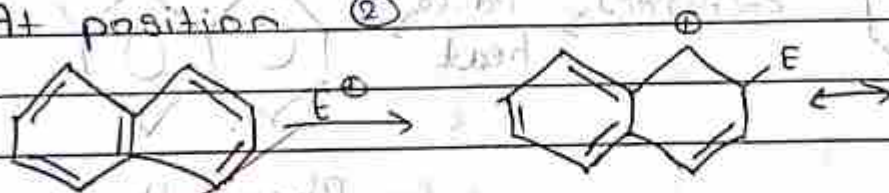
- At position ①



Naphthalene

- Carbocation intermediate stabilize by 2 resonance.

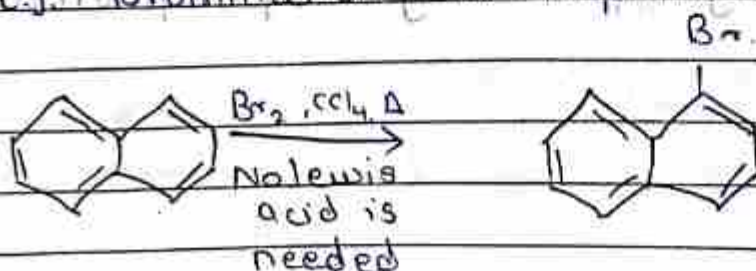
At position ②



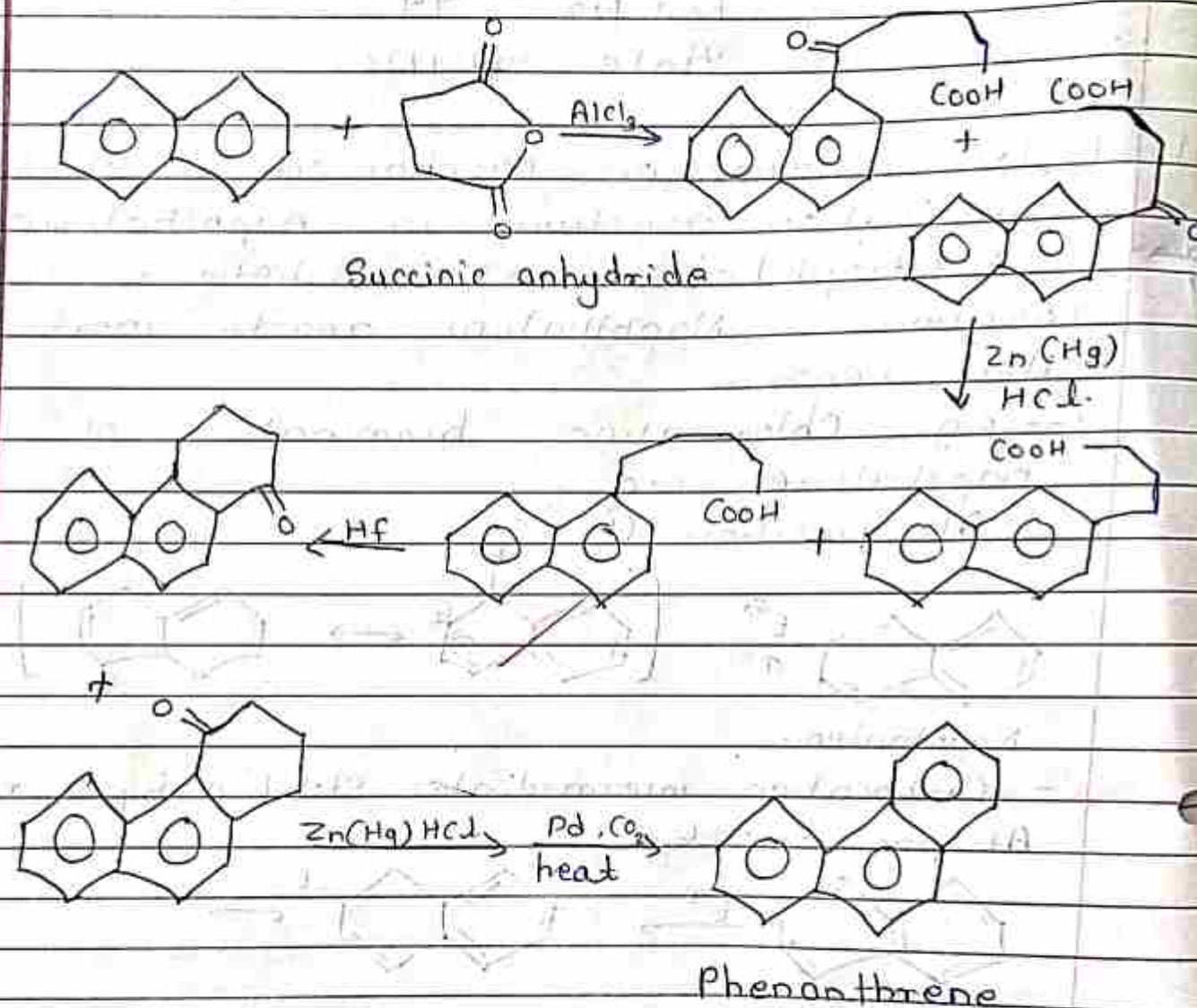
Naphthalene

- Carbocation intermediates stabilize by one resonance.

E.g. Bromination of Naphthalene



Q.2. Outline the Synthesis of phenanthrene.
 → Haworth's Synthesis of phenanthrene.



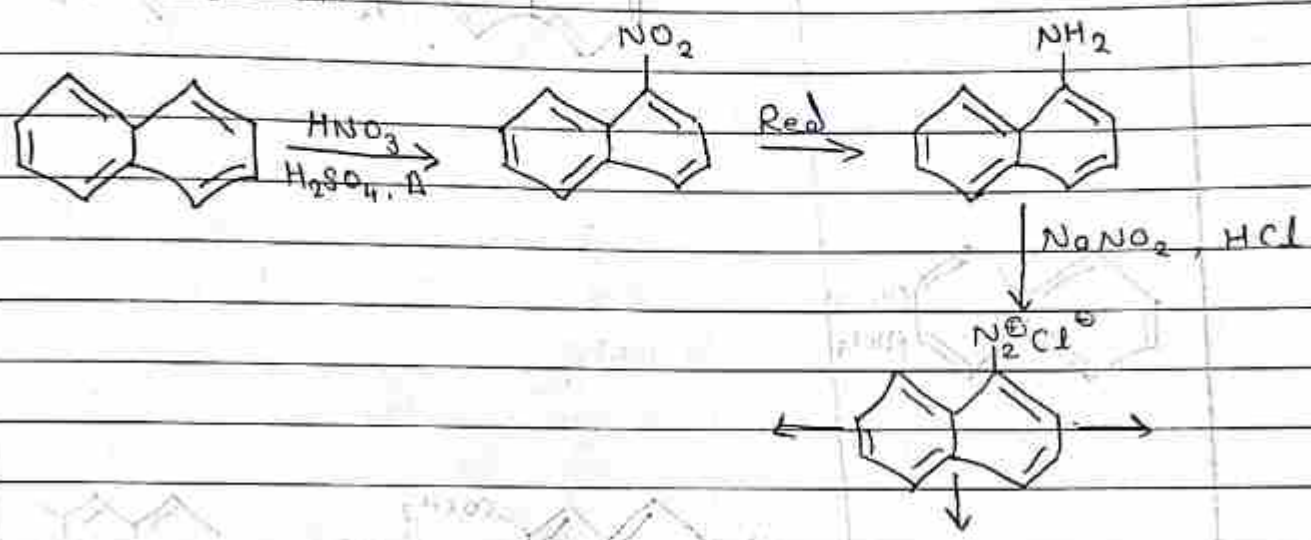
This process involves electrophilic aromatic substitution using a tethered Cyclohexanol group using diphosphorous pentoxide.



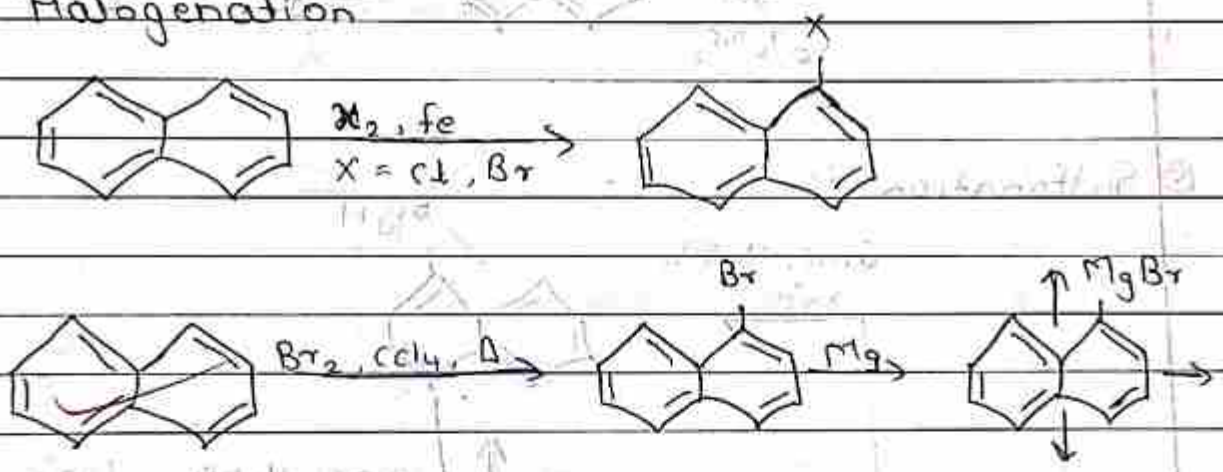
Discuss the reactions of naphthalene.

Reactions of naphthalene are as follows:-

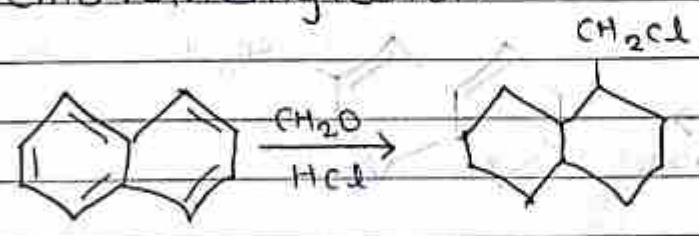
① Nitration



② Halogenation

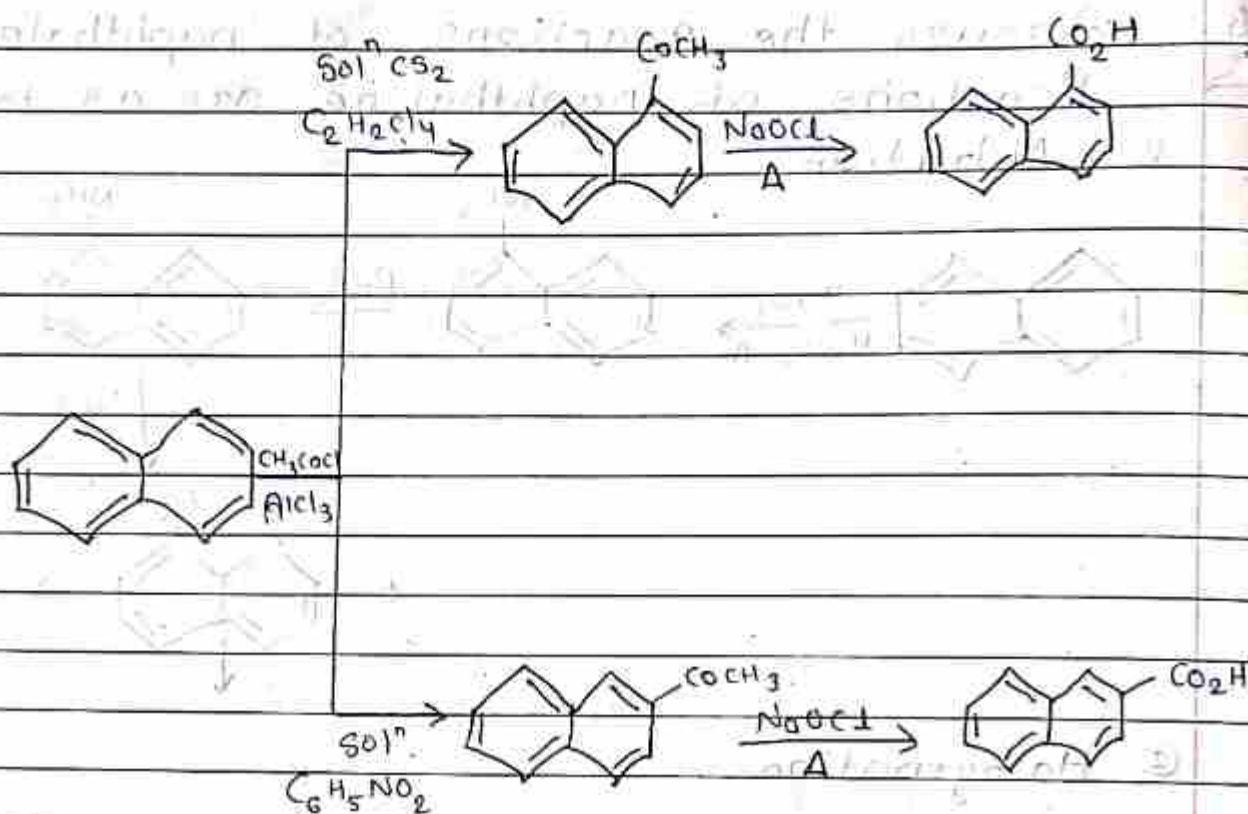


③ Chloromethylation

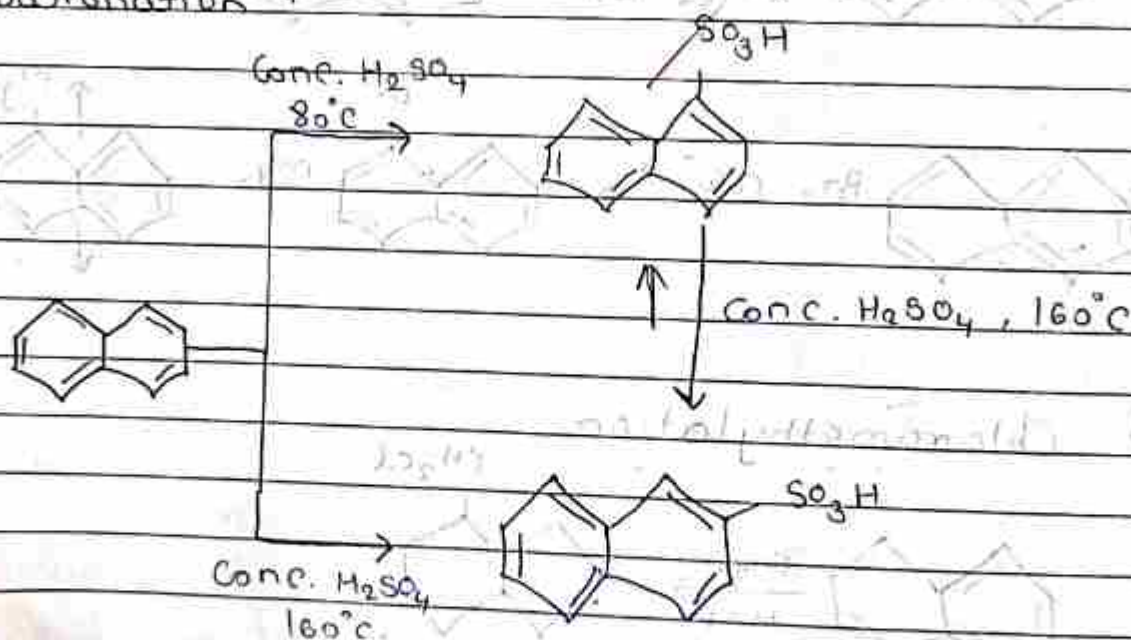


④ Friedel-Crafts reactions

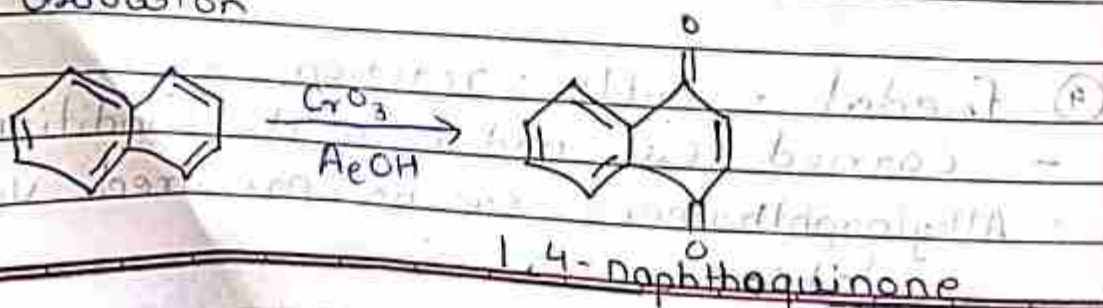
- Carried out under mild conditions.
- Alkyl naphthalenes can be prepared via acylation.



⑤ Sulfonation

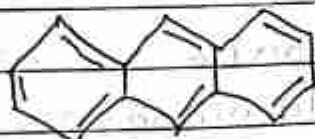


⑥ Oxidation



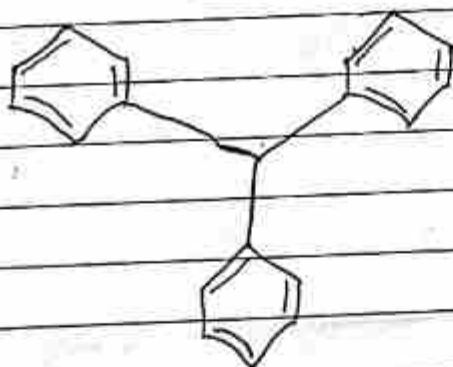
- Q.4 Give the structure and uses of:
- Anthracene
 - Triphenylmethane
 - Naphthalene
 - Diphenylmethane.

a) Anthracene



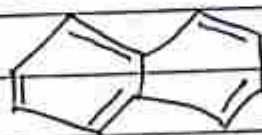
- It is used as a preservative in wood and lumber.
- It is also used as insecticides for crops.

b) Triphenylmethane



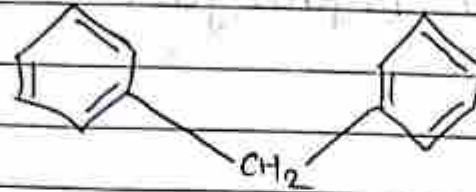
- They are used in production of dyes.
- It is used chiefly in copying papers.
- Also used in hectograph and printing inks and in textile applications.

c) Naphthalene



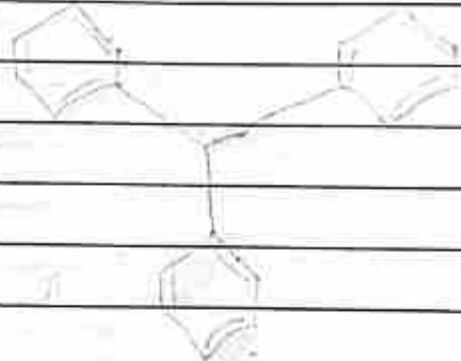
- Naphthalene is used in manufacture of plastics, resins, fuels and dyes.
- It is also used as a fumigant insecticide.

d) Diphenylmethane



- Diphenylmethane is widely used in the Synthesis of luminogens for aggregation induced emission (AIE).

- It is used in the preparation of a polymerization initiator, diphenylmethyl potassium (DPMK).



Pranali Ashok Zende (72)

POC - 2 Assignment No. 1

Q. 1) What are aromatic electrophilic substitution reactions? Explain the mechanism involved in Friedel craft acylation and sulphonation of benzene.

→ The reactions in which the replacement of hydrogen atom of the aromatic ring by an electrophile are called aromatic electrophilic substitution reactions.

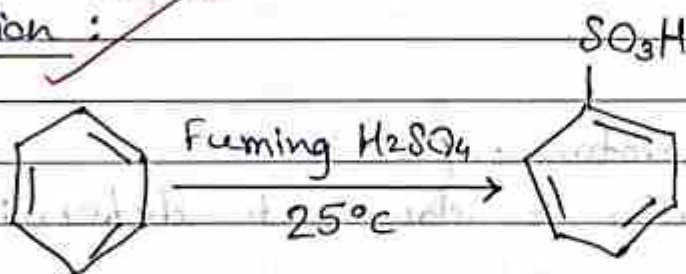
• Sulphonation -

Displacement of a hydrogen atom of an aromatic nucleus by a SO_3H group is called aromatic sulphonation reaction.

The sulphonating agents used are -

Conc. H_2SO_4 or fuming H_2SO_4 (Oleum, $\text{H}_2\text{S}_2\text{O}_7 = \text{SO}_3$ in H_2SO_4) or SO_3 in organic solvents (nitromethane, pyridine, etc) or chlorosulphonic acid in carbon tetrachloride.

Reaction :

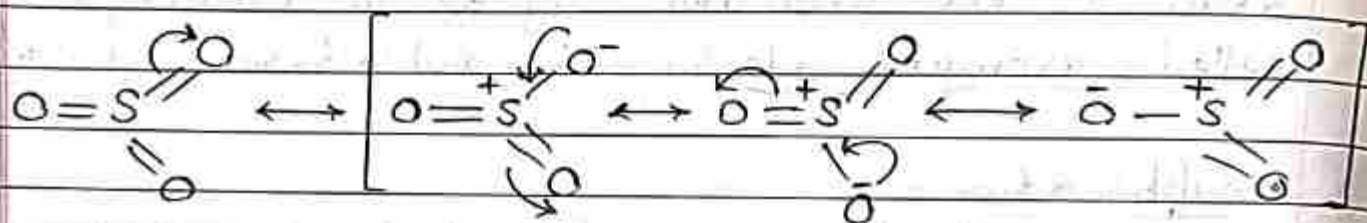
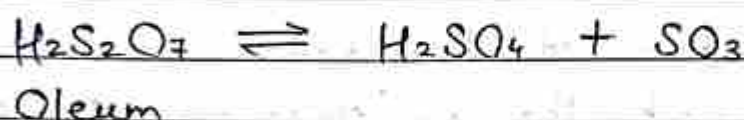
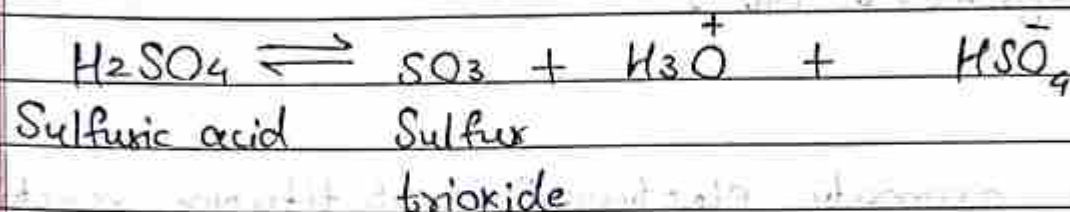


Benzene

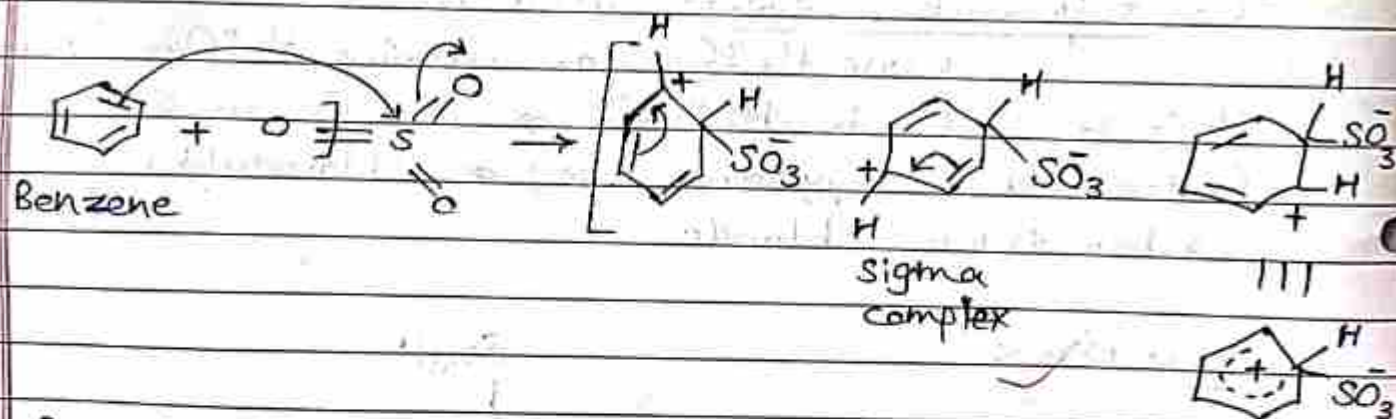
Benzene sulphonic acid

Mechanism : Aromatic sulphonation is a reversible reaction.

I] Generation of electrophile (i.e. SO_3)

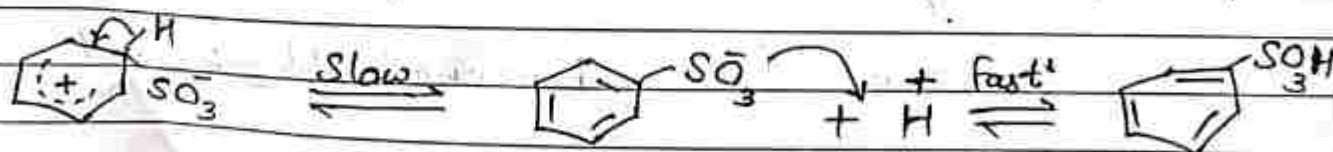


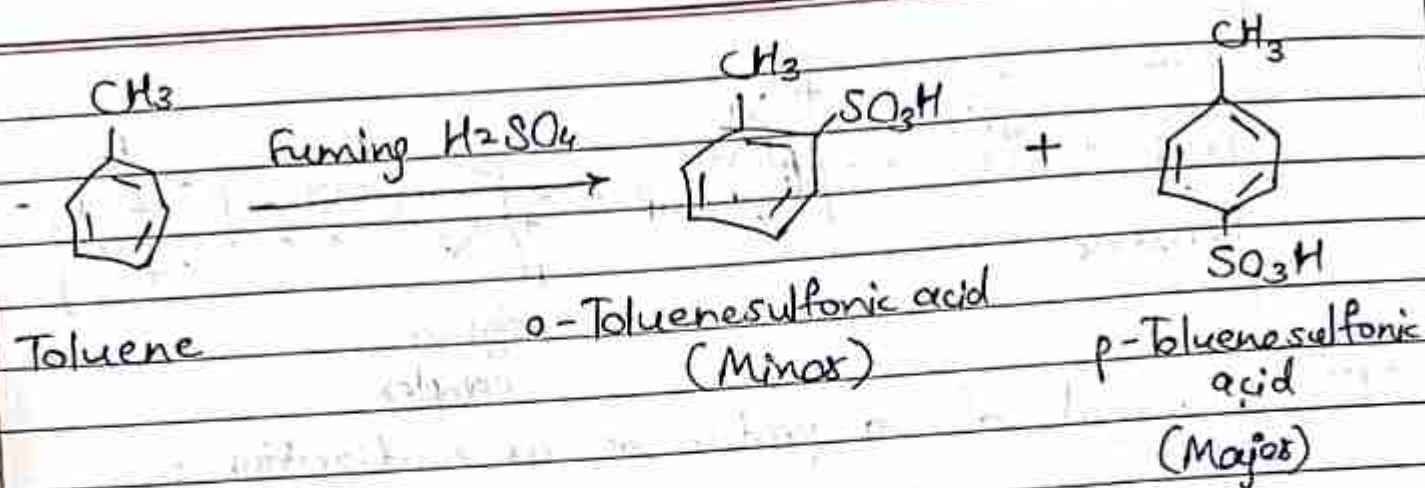
II] Formation of resonance stabilized σ -complex:



III] Removal of a proton:

Deprotonation is slow rate determining step.

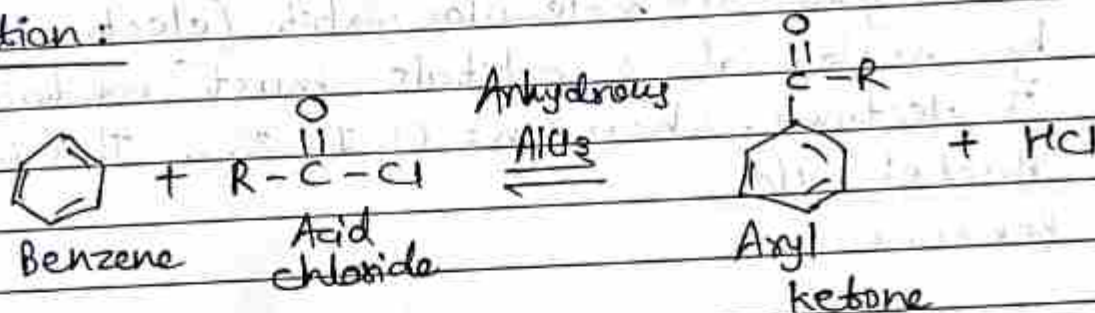




• Friedel-Craft's acylation -

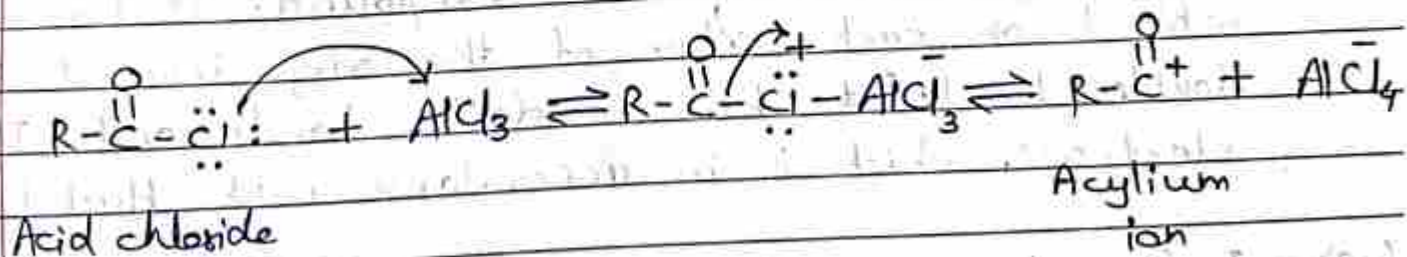
The displacement of a hydrogen atom of an aromatic nucleus by an RCO- or ArCO- group in the presence of Lewis acid catalyst

Reaction:

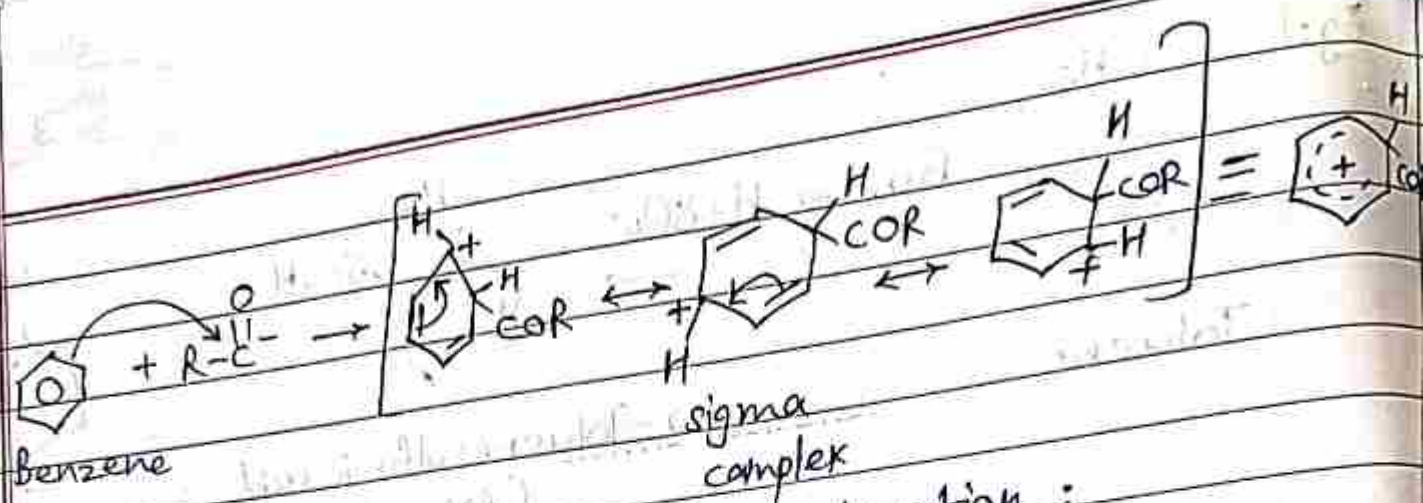


Mechanism:

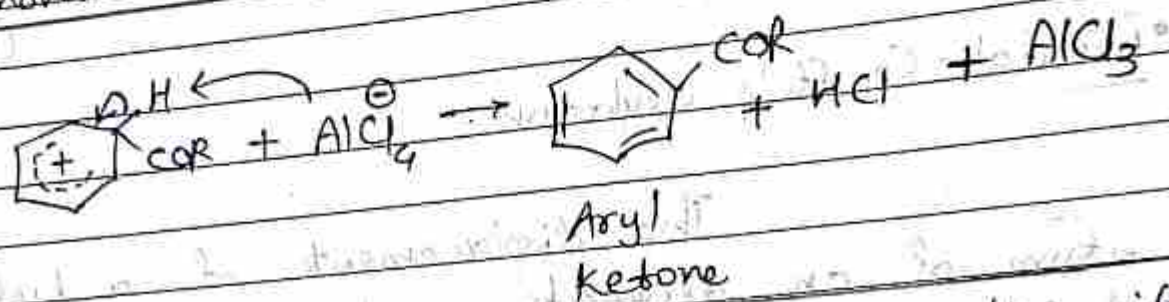
I] Generation of a electrophile which is an acylium ion:



II] formation of resonance stabilized σ -complex:



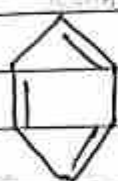
III] Removal of a proton or aromatization:



Q.2) Explain Huckels rule for aromaticity with suitable example.

→ The cyclic π -molecular orbital (electron cloud) formed by overlap of p orbitals must contain $(4n+2)$ π electrons, where $n = 0, 1, 2, \dots$. This is known as Huckel rule.

eg. Benzene -



$n = 1 \quad (4 \times 1 + 2) \pi$
 $= 6 \pi \text{ electrons}$

It is cyclic and planar compound. It has p-orbital on each carbon of the ring involved in a double bond. It has 3 double bonds and 6 π -electrons, which is in accordance with Huckel rule.

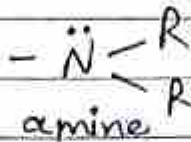
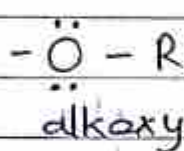
Q.3) Define terms and give 2 examples of each:

- a) Activating groups b) Deactivating groups
 c) Ortho and para directors

→ a) Activating groups -

Increase the rate of reaction in electrophilic aromatic substitution reactions.

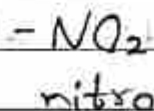
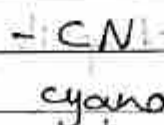
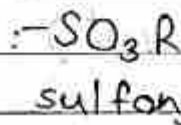
Eg:



b) Deactivating groups -

Decrease the rate of reaction in electrophilic aromatic substitution reactions.

Eg:



c) Ortho and para directors :

A group or substituent present on the benzene ring can cause the benzene derivative to react faster than benzene itself by increasing the electron density on the ring. Is called ring activating group. The ring activating groups which direct the incoming group (electrophile) towards ortho-para position are called ortho-para directing groups.

Eg:



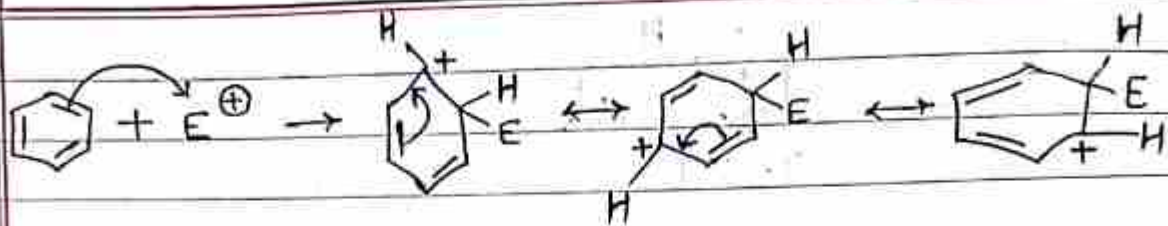
Halo

Hydroxy

(p.4) Write a note on Nitration of benzene.

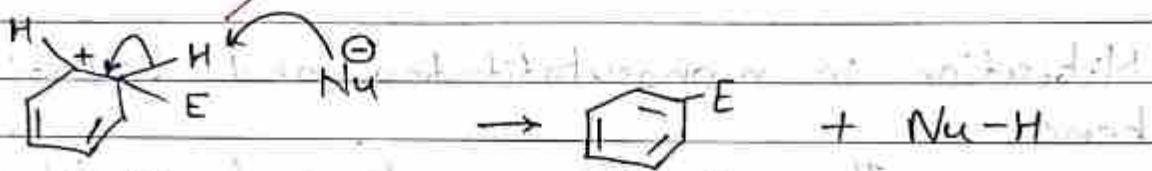
→ Displacement of a hydrogen atom of an aromatic nucleus by a nitro group is called aromatic nitration reaction.

• Nitrating agents used - conc. HNO_3 in glacial acetic acid, HNO_3 in water, conc. HNO_3 + conc. H_2SO_4



Resonance stabilised
sigma complex
(Arenium ion)

Step III - Removal of a proton or aromatization to form the stable substitution product.



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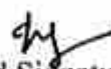
Academic Year 2021-22
Advanced Learners

Name of teacher: Mrs. J. R. Jagtap

Class: S. Y. B. Pharm Sem-III

Subject: Pharmaceutical Organic Chemistry-II

Roll No	Name of Students	24/01/22	27/01/22			
4	Bankar Sanjana Ajitkumar	✓	✓			
5	Bhale Supriya Hanumant	✓	✓			
24	Jagtap Pradnya Navnath	✓	✓			
27	Jagtap Swapnil Prakash	✓	✓			
32	Kalane Chetan Somnath	✓	✓			
37	Khade Ashvini Laxman	✓	✓			
41	Kudale Suhas Santosh	✓	✓			
61	Shah Aarif Majid	✓	✓			
67	Tonde Amrapali Shahaji	✓	✓			
		Critical thinking Problem-1	Critical thinking Problem-2			


Name and Signature of Teacher
(Mrs. J. R. Jagtap)

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

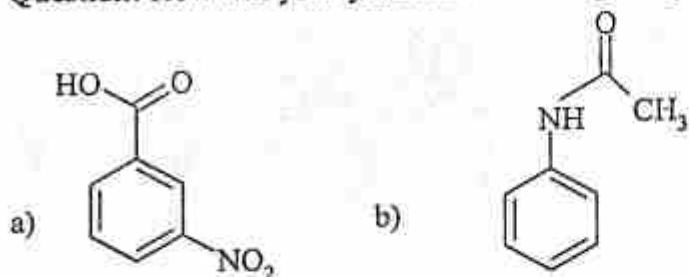
Academic Year 2021-22

Name of teacher: Mrs. J. R. Jagtap
Class: S. Y. B. Pharm. (Sem.-III)
Subject: Pharmaceutical Organic Chemistry-II
Date: 20th Jan. 2022

Critical Thinking Problems on Benzene and it's derivatives to the following Students

Roll No	Name of Students
4	Bankar Sanjana Ajitkumar
5	Bhale Supriya Hanumant
24	Jagtap Pradnya Navnath
27	Jagtap Swapnil Prakash
32	Kalane Chetan Somnath
37	Khade Ashvini Laxman
41	Kudale Suhas Santosh
61	Shah Aarif Majid
67	Tonde Amrapali Shahaji

Question: How will you synthesize following compounds from benzene



Write step by step synthesis of product a using toluene as a starting material and product b using nitrobenzene as a starting material and also show mechanism with the help of curved arrows wherever necessary.


Name and Signature of Teacher
(Mrs. J. R. Jagtap)

Academic Year 2021-22

Name of teacher: Mrs. J. R. Jagtap
Class: S. Y. B. Pharm. (Sem.-III)
Subject: Pharmaceutical Organic Chemistry-II
Date: 24th Jan. 2022

Critical Thinking Problems to the following students

Roll No	Name of Students
4	Bankar Sanjana Ajitkumar
5	Bhale Supriya Hanumant
24	Jagtap Pradnya Navnath
27	Jagtap Swapnil Prakash
32	Kalane Chetan Somnath
37	Khade Ashvini Laxman
41	Kudale Suhas Santosh
61	Shah Aarif Majid
67	Tonde Amrapali Shahaji

Question: Starting from benzene or toluene and suitable organic / inorganic reagents how will you prepare the following

1) m- chlorobenzoic acid 2) m-nitroaniline 3) p-bromoaniline 4) ethyl- p- nitrobenzoate

by
Mrs. J. R. Jagtap

Critical Thinking Problems

Name :- Kalane Chetan Somnath

Sub :- pharmaceutical organic chemistry - II

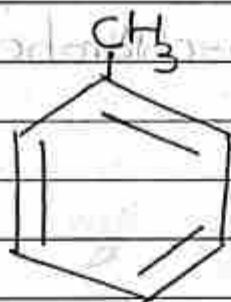
Roll No :- 32

class :- S.Y.B. Pharm (sem - III)

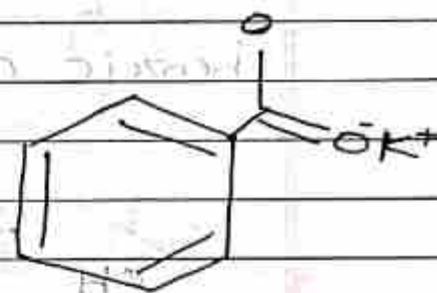
Date :- 24th Jan 2022

Question :- Starting from benzene or toluene and suitable organic/inorganic reagents how will you prepare the following.

i) m-chlorobenzoic acid



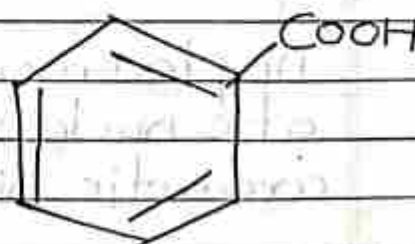
$\xrightarrow[\text{oxidation}]{\text{KMnO}_4}$



Toluene

Potassium benzoate

$\xrightarrow{\text{dil. HCl}}$



Benzoic acid

Critical Thinking Problems

Date _____

Page _____

Name :- Kalane Chetan Somnath

Sub :- pharmaceutical organic chemistry - II

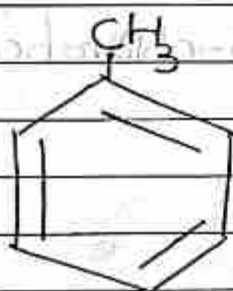
Roll No :- 32

Class :- S.Y.B. pharm (sem - III)

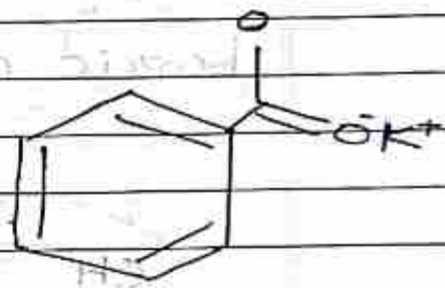
Date :- 24th Jan 2022

Question :- Starting from benzene or toluene and suitable organic/inorganic reagents how will you prepare the following.

i) m-chlorobenzoic acid



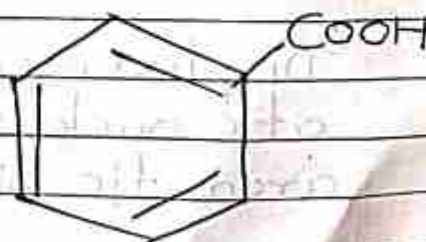
$\xrightarrow[\text{oxidation}]{\text{KMnO}_4}$



Toluene

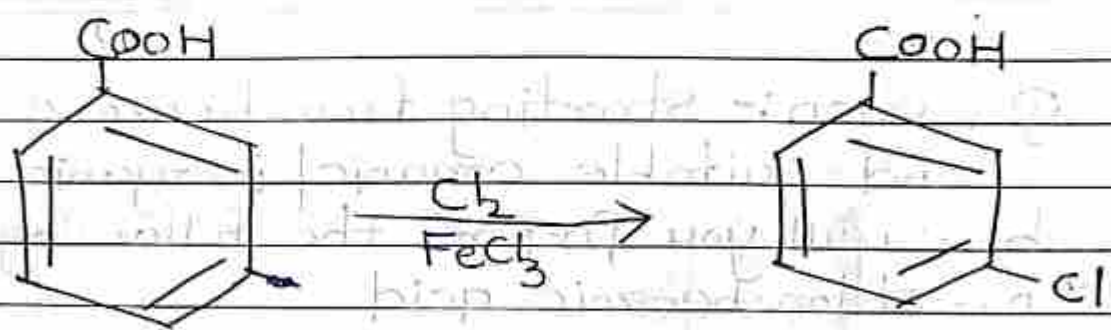
Potassium benzoate

$\xrightarrow{\text{dil. HCl}}$



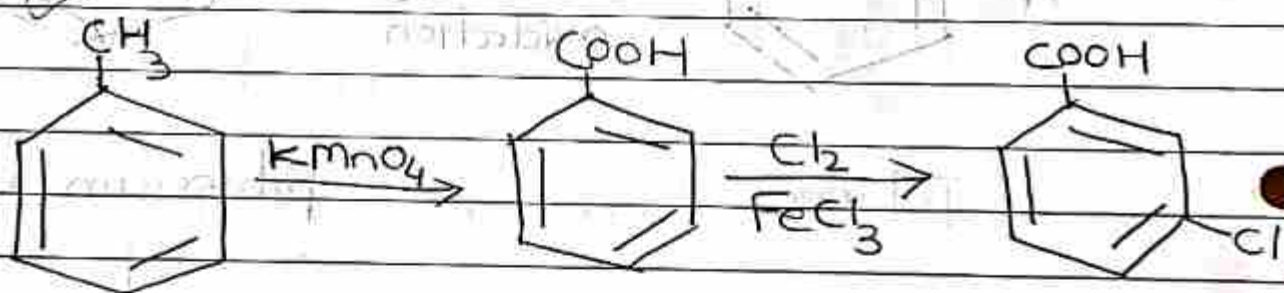
Benzoic acid

Treatment of toluene with potassium permanganate (oxidizing agent) gives benzoic acid, which is reacted with Cl_2 in the presence of FeCl_3 gives the product m-chlorobenzoic acid.



benzoic acid

m-chlorobenzoic acid



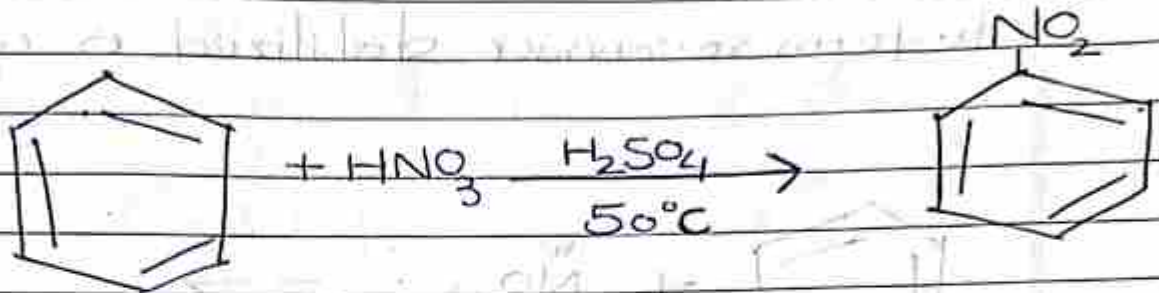
Toluene

Benzoic acid

m-chlorobenzoic acid

ii) m-nitroaniline

Displacement of hydrogen atom of an aromatic nucleus by a nitro group is called aromatic nitration reaction.

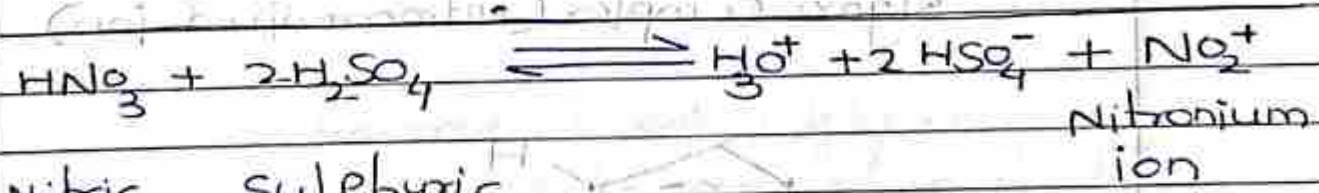
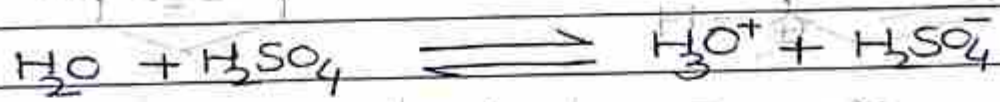
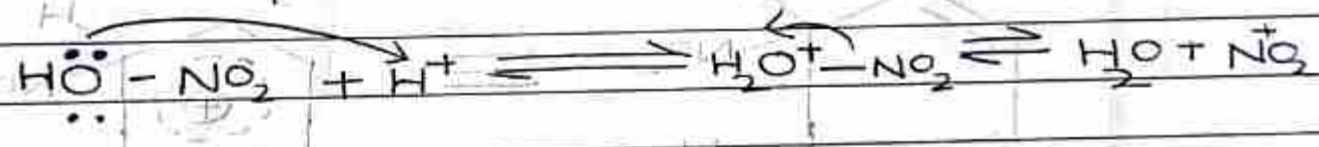
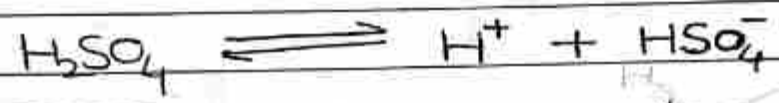


Benzene

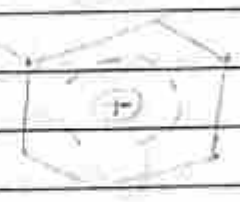
Nitrobenzene

Mechanism :-

Step-I :- Generation of electrophile (NO_2^+)



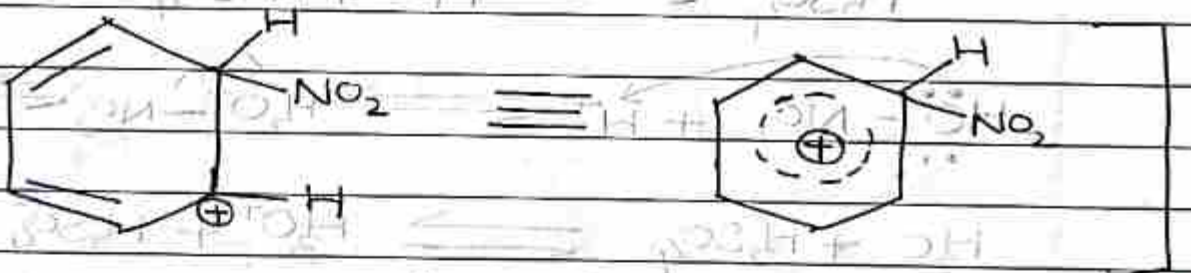
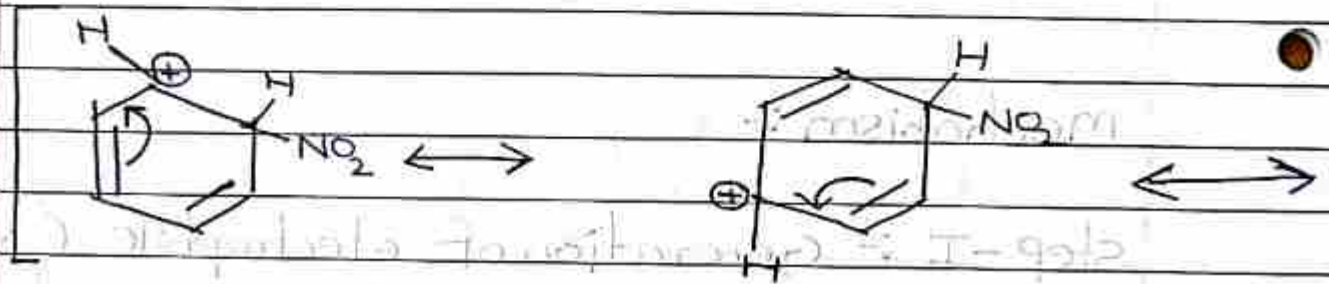
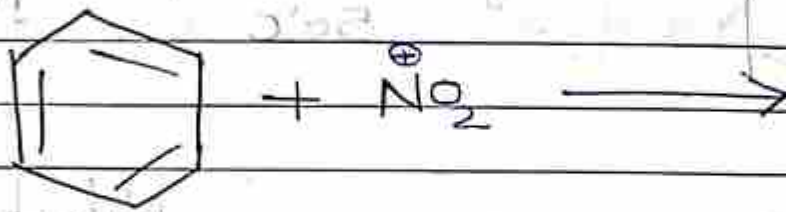
Nitric acid Sulphuric acid



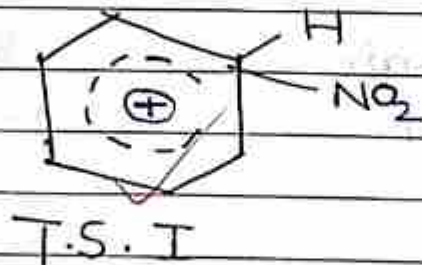
Step-II :- Formation of resonance stabilized σ -complex

Because the nitronium ion (NO_2^+) is a good electrophile, it is attacked by any carbon

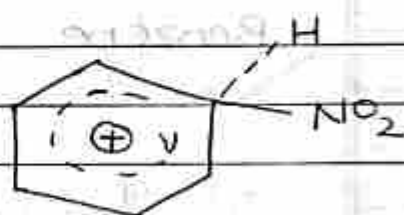
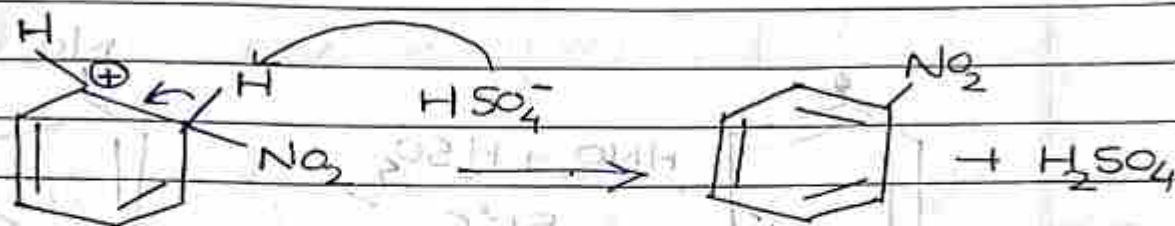
to form resonance stabilized σ -complex.



σ Complex (Nitroarenium ion)



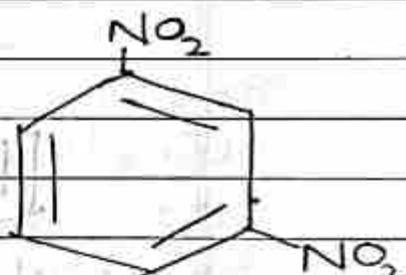
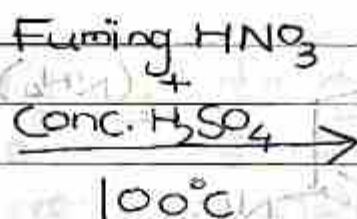
Step-III :- Removal of a proton or aromatization
The σ -complex then gives up a proton to a base and gets aromatized to a nitroarene.



T.S. II

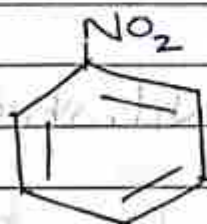


Nitrobenzene

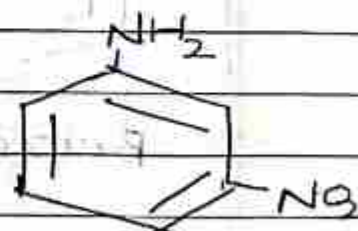


m-Dinitrobenzene

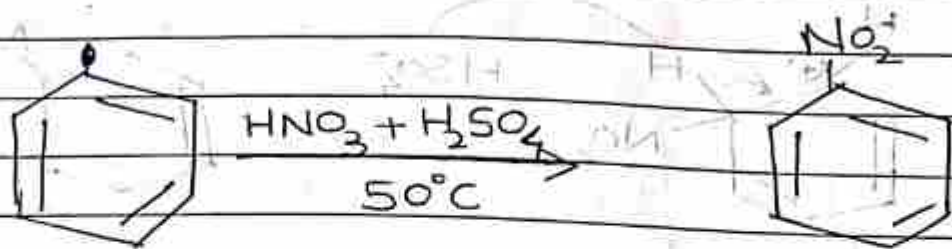
m-Dinitrobenzene is selectively reduced with ammonium sulphide to form a m-nitroaniline. In this reaction, out of 2 nitro groups, only one nitro group is reduced.



m-Dinitrobenzene

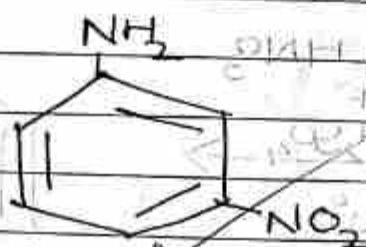
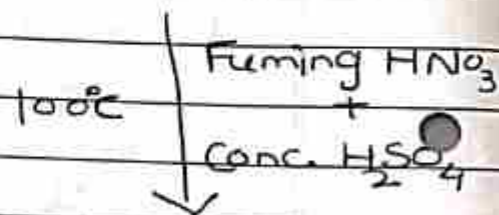


m-Nitroaniline

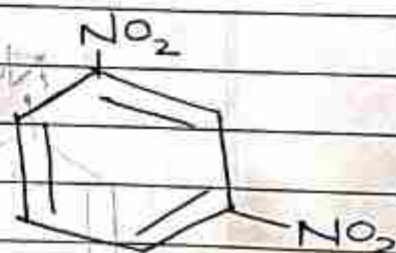
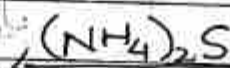


Benzene

Nitrobenzene

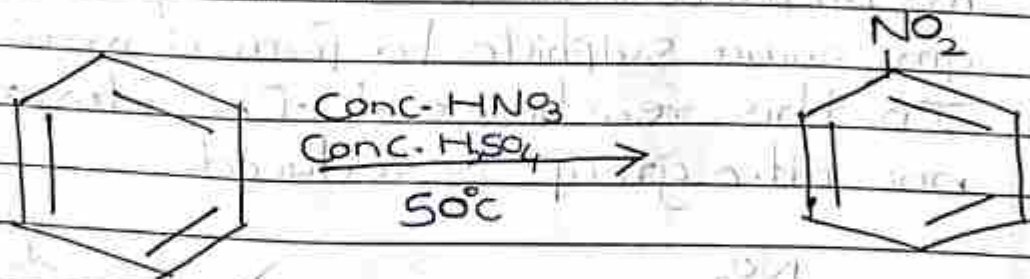


m-Nitroaniline



m-Dinitrobenzene

III] p-bromoaniline.

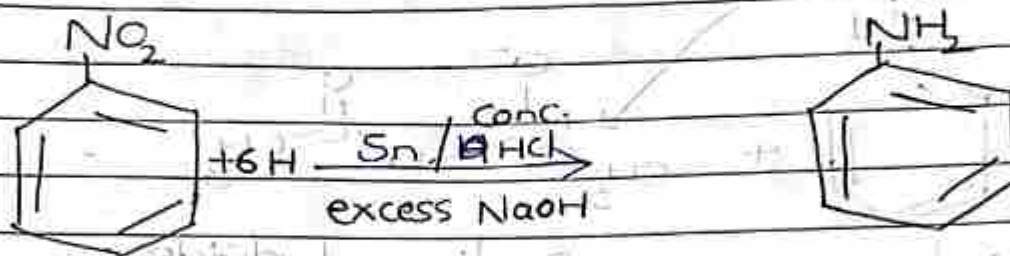


Benzene

Nitrobenzene

Displacement of hydrogen atom of aromatic ring by Nitro group in presence of

nitrating mixture gives nitrobenzene.



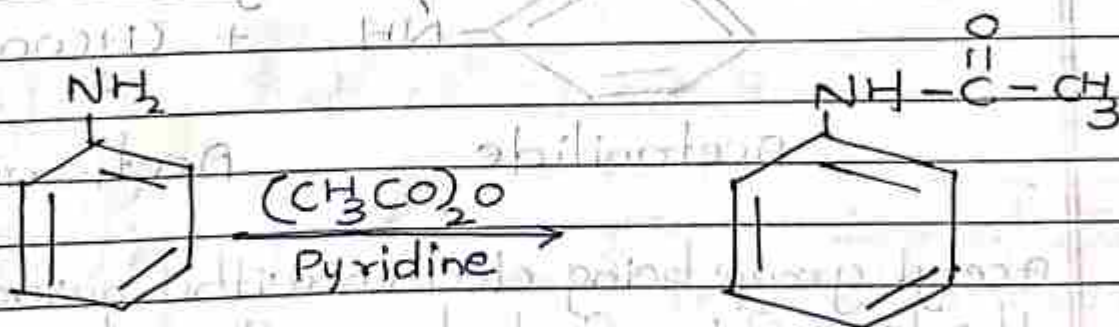
Nitrobenzene

Aniline

Nitrobenzene on reduction by tin and concentrated HCl gives aniline.

Aniline is heated with acetic anhydride to give acetanilide (N-phenylacetamide).

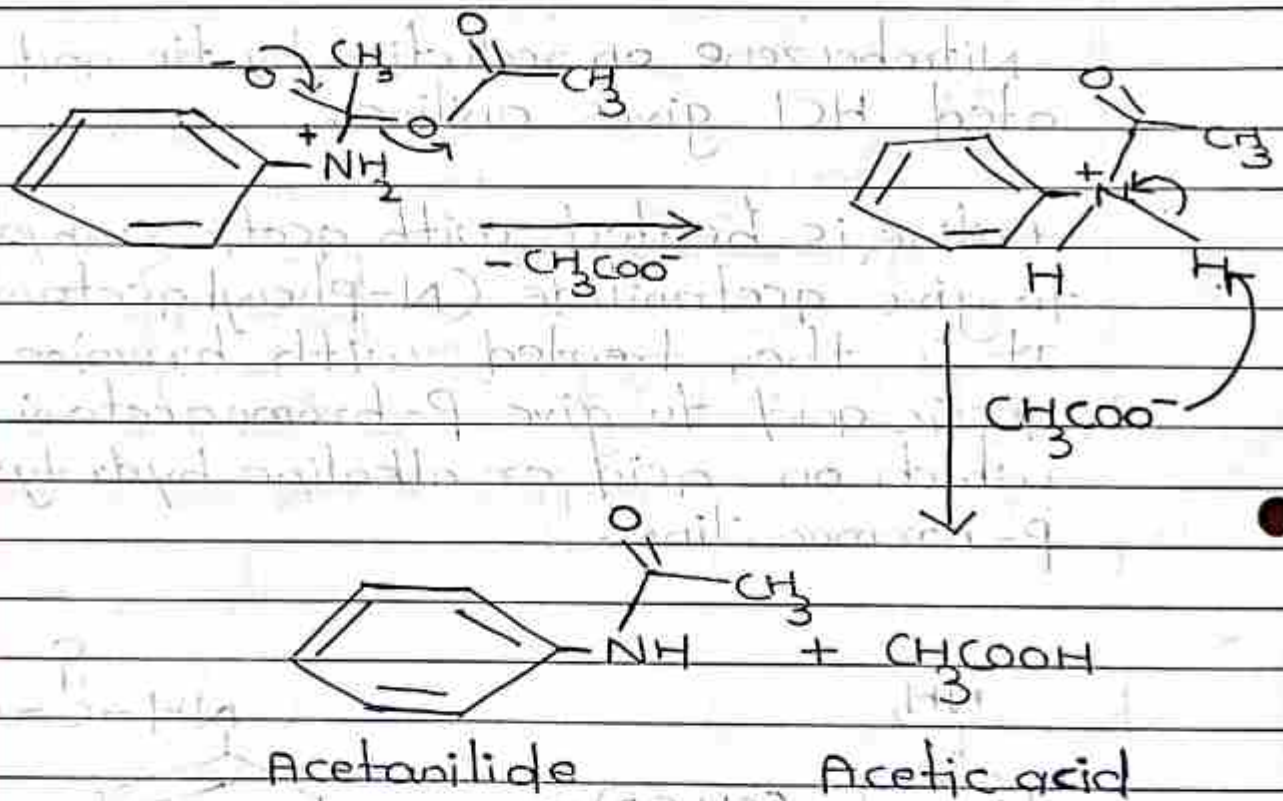
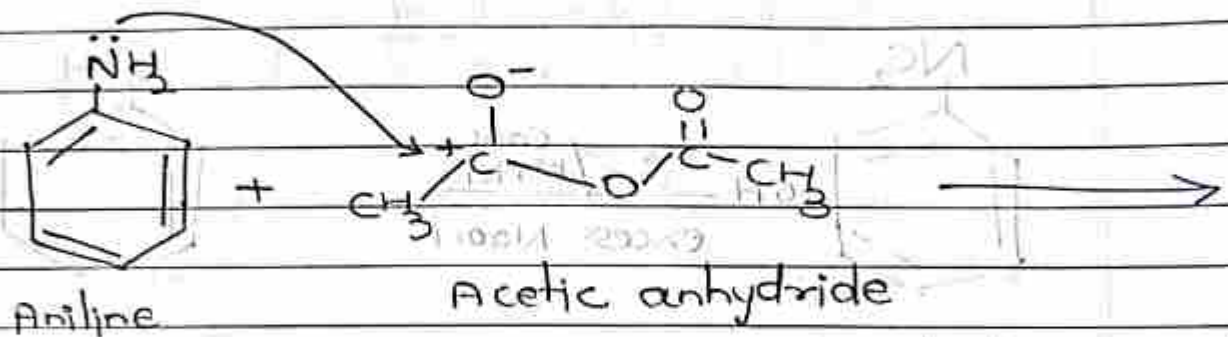
It is then treated with bromine in acetic acid to give p-bromoacetanilide which on acid or alkaline hydrolysis gives p-bromoaniline.



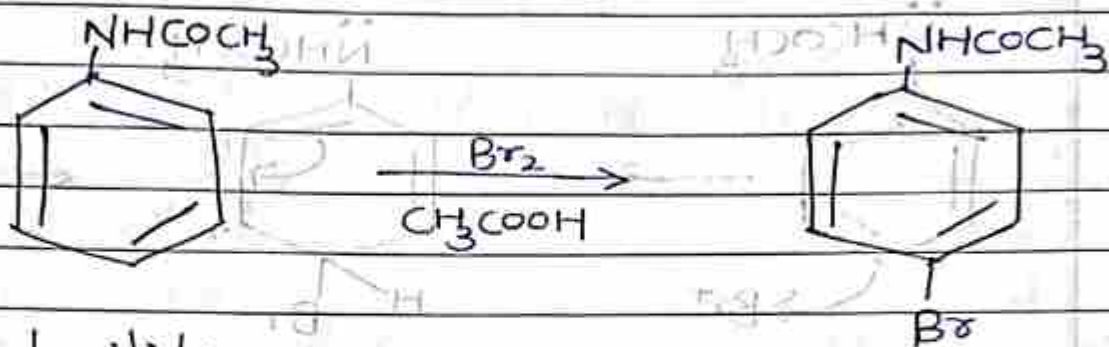
Aniline

Acetanilide

Mechanism :-



Acetyl group being electron withdrawing attracts the lone pair of electrons of N-atom towards itself and as a result the activating effect of amino group is reduced. This method is known as 'Protection of amino group by acetylation'.



Acetanilide

p-bromoacetanilide

Bromination of acetanilide at room temperature in presence of glacial acetic acid yields p-bromoacetanilide.

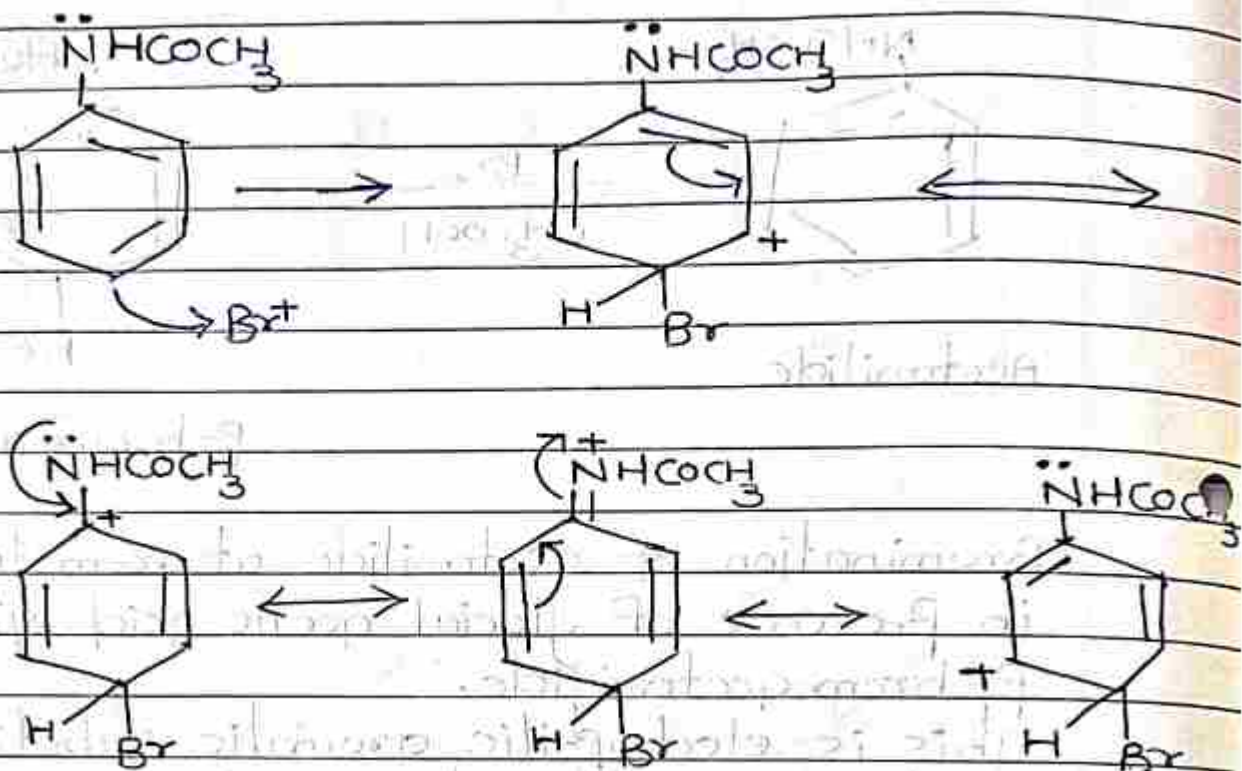
This is electrophilic aromatic substitution reaction. A carbocation is formed and ring hydrogen is removed by base.

Mechanism :-

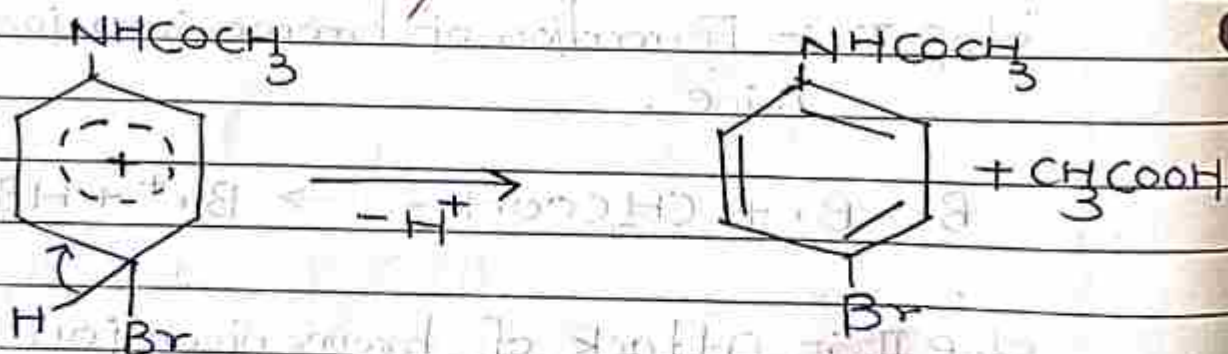
Step-I :- Formation of bromonium ion from bromine.

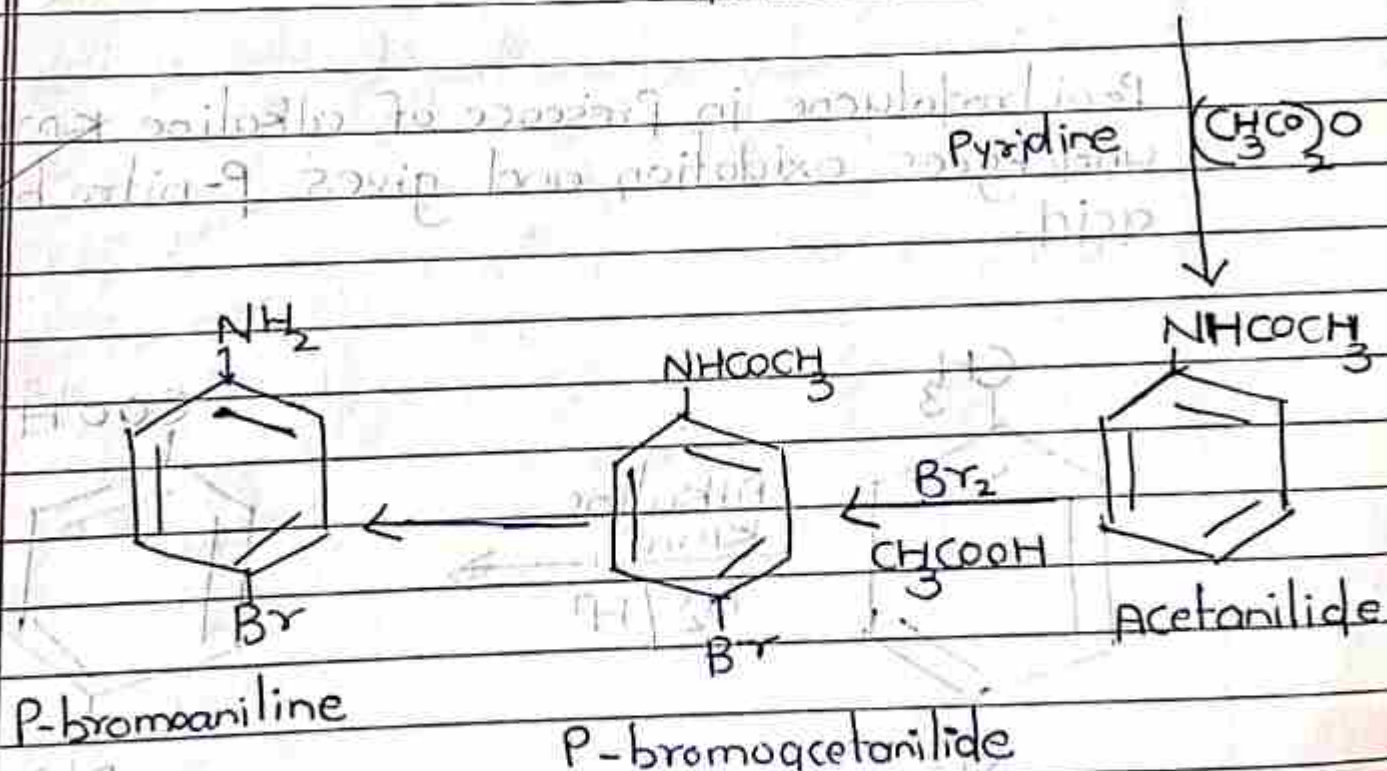
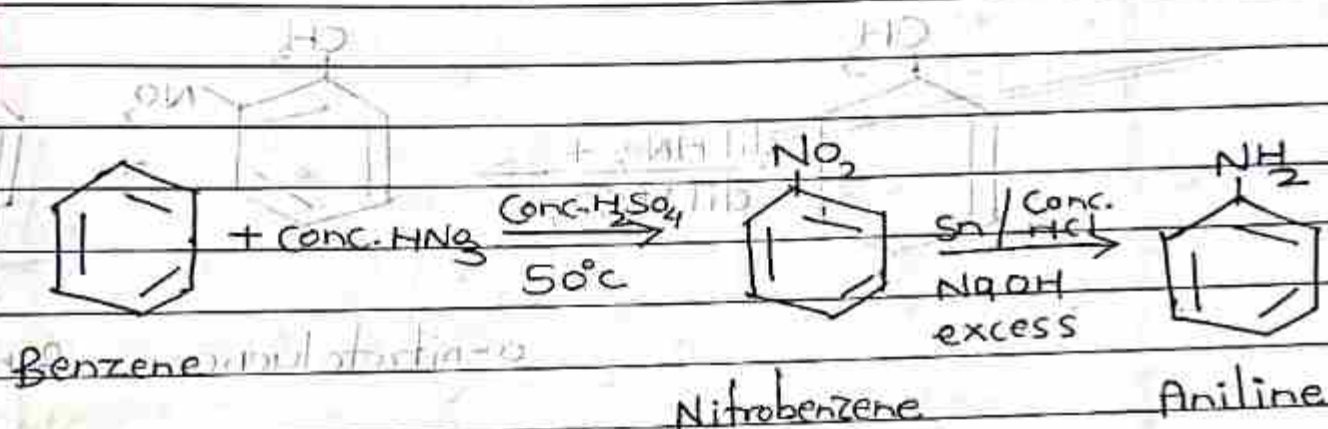
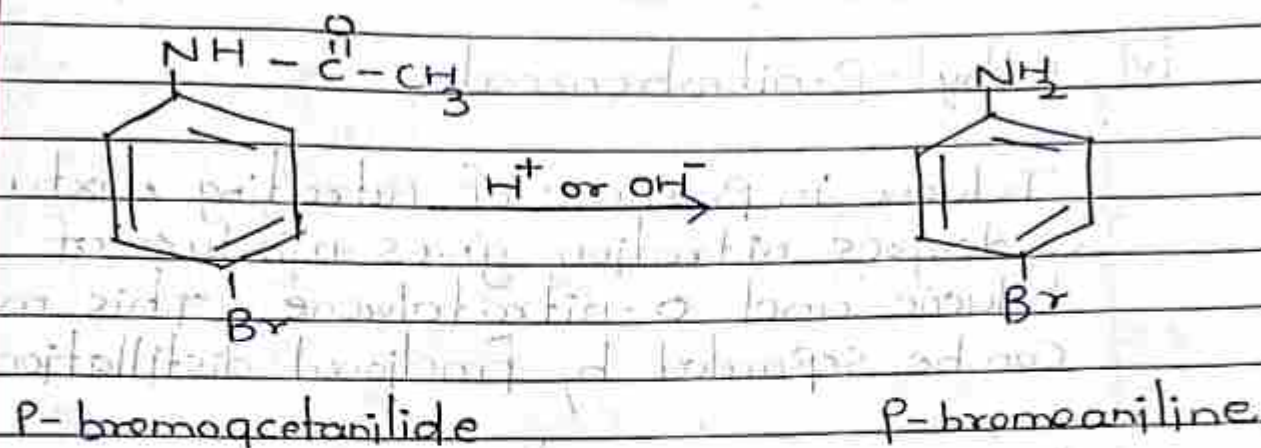


Step II :- Attack of bromonium ion at para position of acetanilide to form the intermediate carbocation.



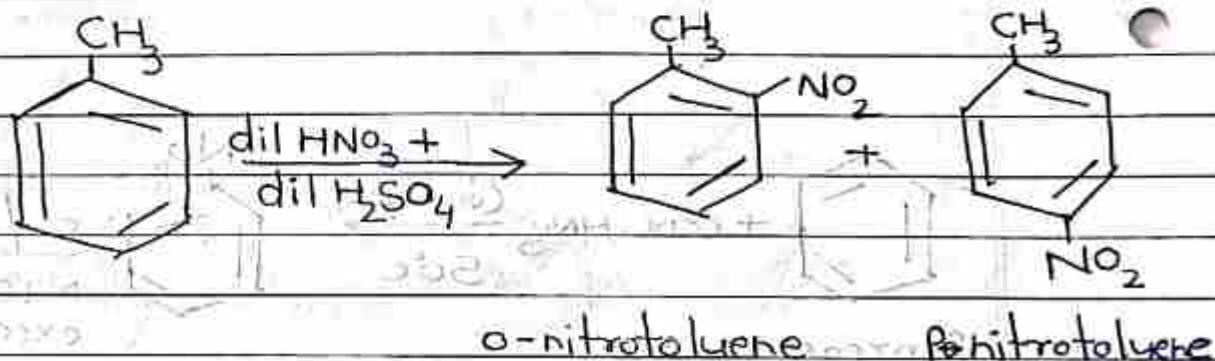
Step III :- Loss of proton to form p-bromoacetanilide



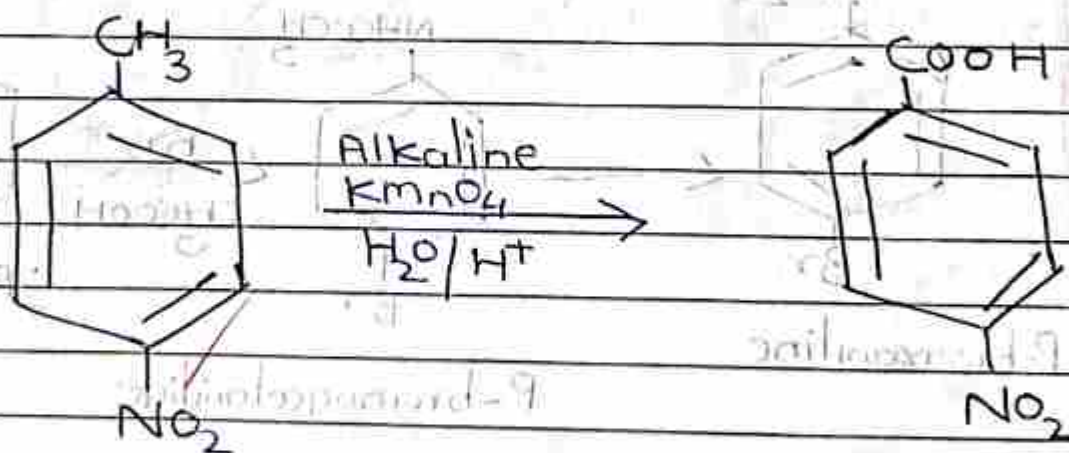


iv) ethyl-p-nitrobenzoate

Toluene in presence of nitrating mixture undergoes nitration gives mixture of p-nitrotoluene and o-nitrotoluene. This mixture can be separated by fractional distillation.



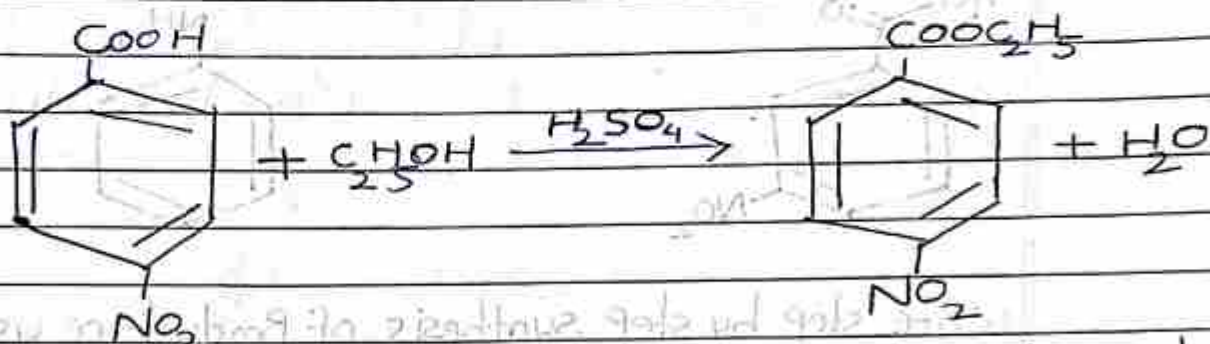
p-nitrotoluene in presence of alkaline KMnO_4 undergoes oxidation and gives p-nitrobenzoic acid.



p-nitrotoluene

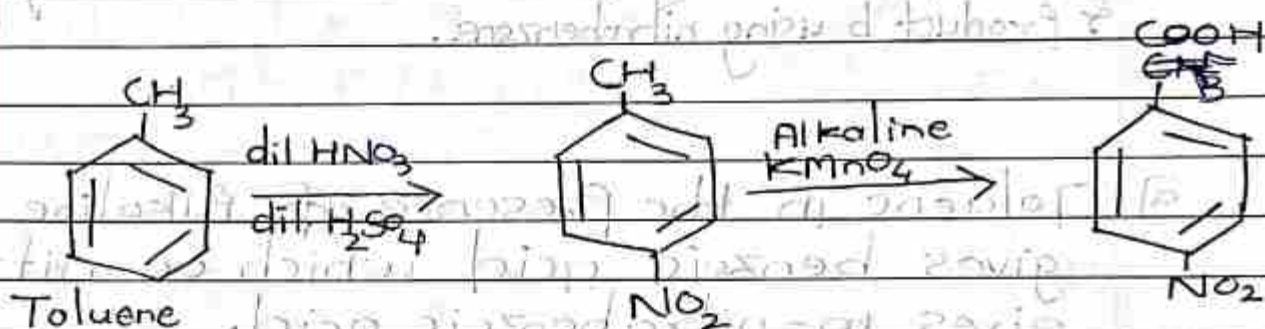
p-nitrobenzoic acid

Esters are produced when carboxylic acids are heated with alcohols in the presence of an acid catalyst.



p-nitrobenzoic acid

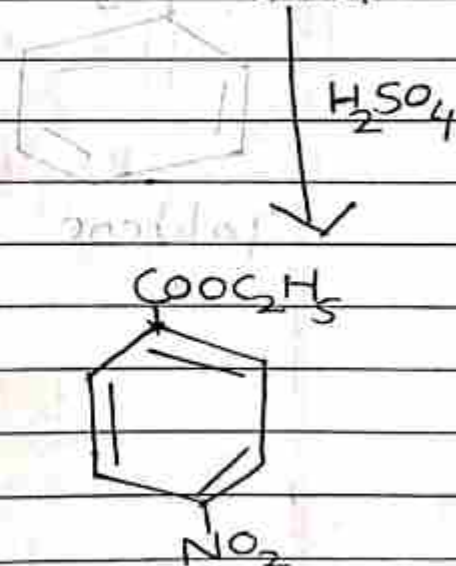
Ethyl-p-nitrobenzoate



Toluene

p-nitrotoluene

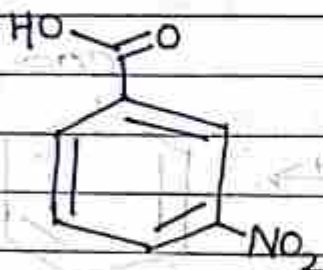
p-nitro benzoic acid



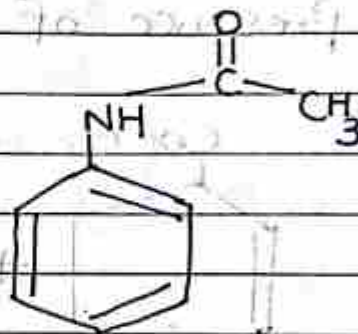
Ethyl-p-nitrobenzoate

Q.2 How will you synthesize following compounds from benzene.

a)

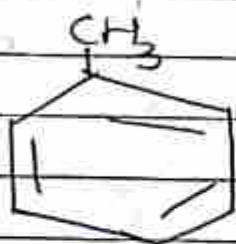


b)

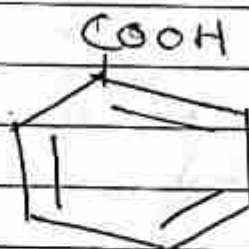
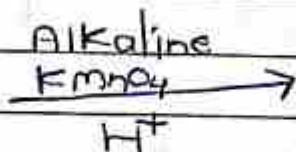


Write step by step synthesis of product a using toluene as a starting material and also show mechanism with the help of curved arrows wherever necessary. & product b using nitrobenzene.

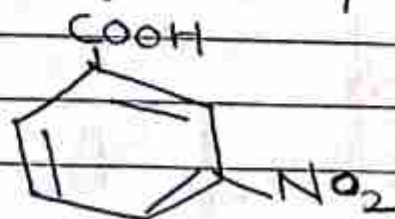
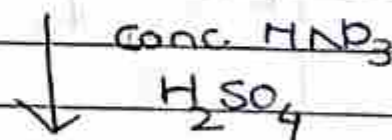
a) Toluene in the presence of Alkaline KMnO_4 gives benzoic acid which on nitration gives m-nitrobenzoic acid.



Toluene

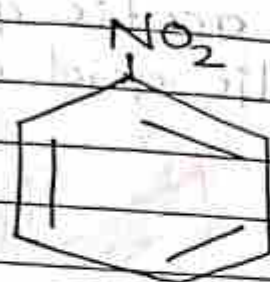


Benzoic acid

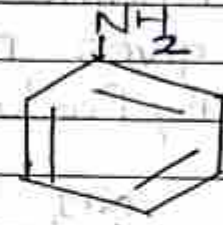
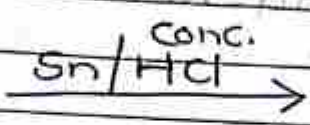


m-Nitrobenzoic acid

b)

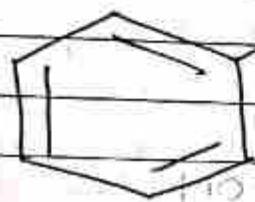


Nitrobenzene

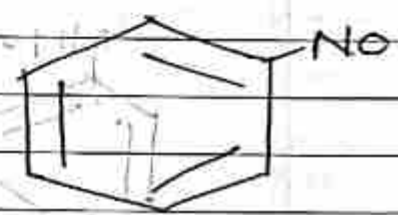
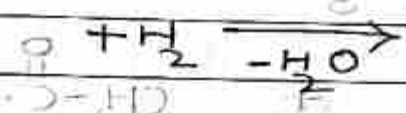


Aniline

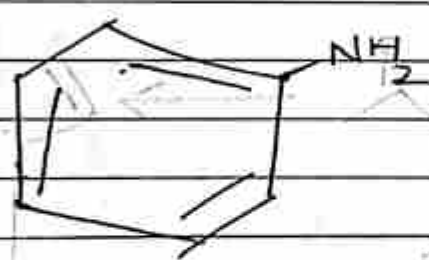
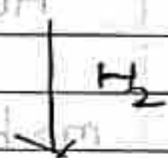
* mechanism :-



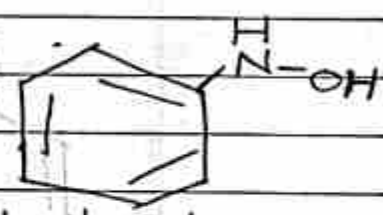
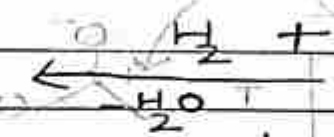
Nitrobenzene



Nitrosobenzene

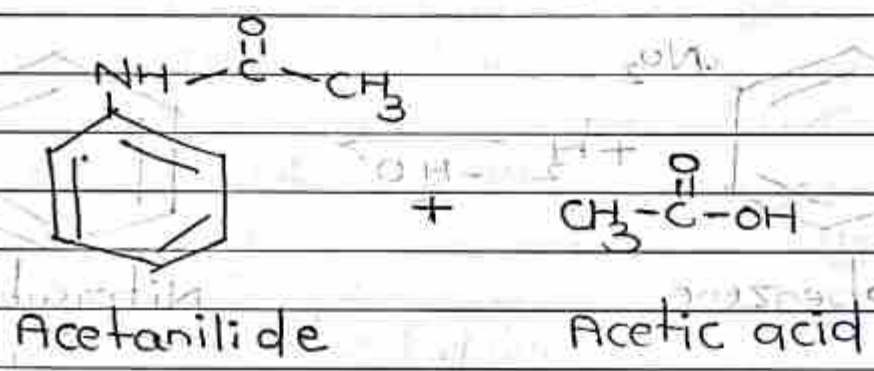
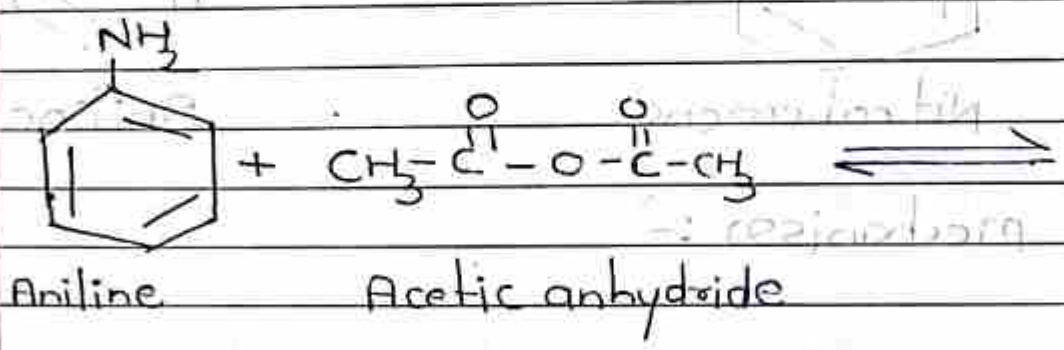


Aniline

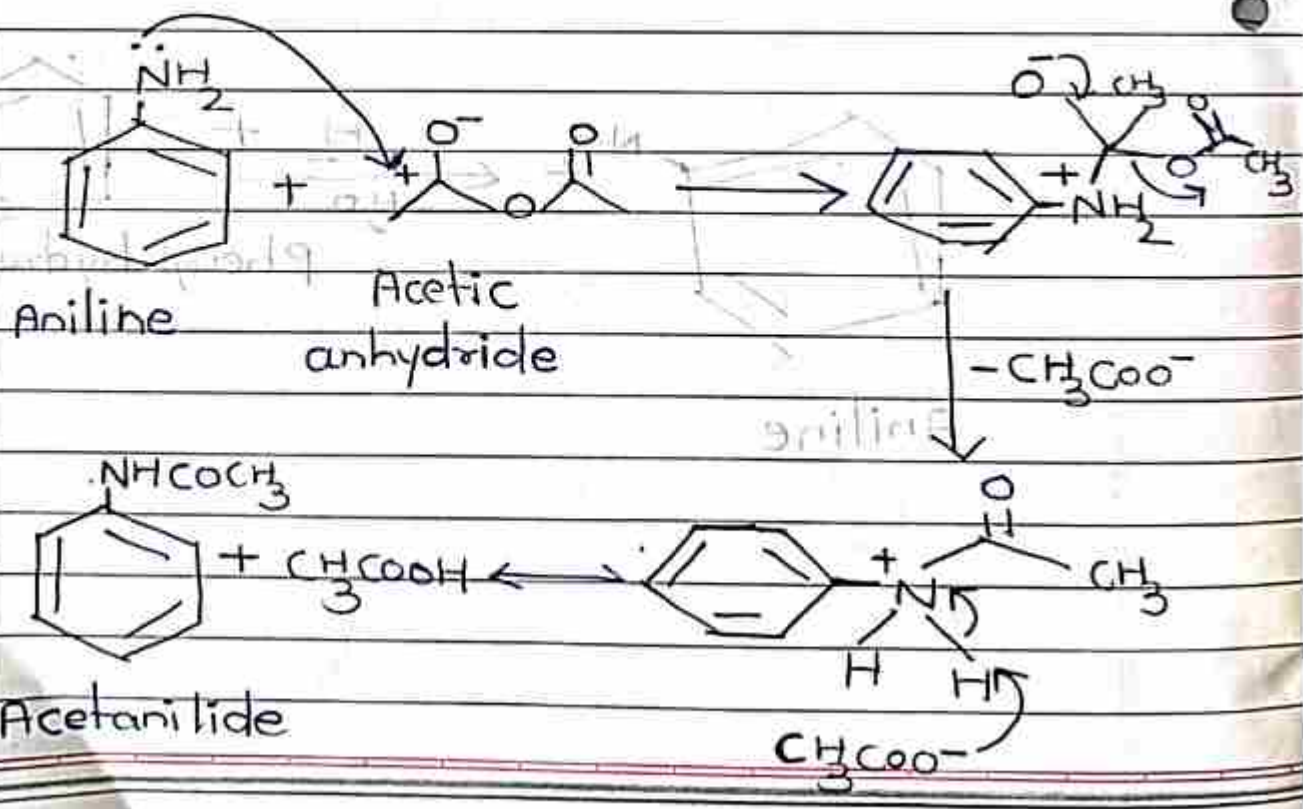


phenyl hydroxyl amine

Aniline in the presence of acetic anhydride gives Acetanilide and acetic acid as a by product.



★ Mechanism :-



Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher: Mrs. J. R. Jagtap
Class: S. Y. B. Pharm. (Sem.-III)
Subject: Pharmaceutical Organic Chemistry-II

Topic: Assignment on Stereoisomerism

Date: 25/01/2022

Upload PDF of Assignment on or before 27th Jan. 2022

Roll No	Name of Students	Remarks
3	Bande Aakash Bharat	
7	Pursharth bhardwaj	
13	Budhe Rupali Prakash	Submitted
15	Dighe yash dadaso	
17	Gaikwad Rutik Shivdas	
22	Jadhav Srushti Shekhar	
25	Jagtap Prakruti Devanand, 25	
26	Jagtap Shivani Sanjay	Submitted
31	Kadam Somnath Dadaso	
35	Karpe Vaibhav Gangaprasad	
38	Khaire Reva Anil	Submitted
39	Kirve Abhijith Sunil	Submitted
44	Lokhande Shubhada Vijay	Submitted
47	Memane Anuj Avinash	
50	Bhat Akib Mushtq	Submitted
56	pawar omprasad anandrao	
60	Salunke Aniket Vilas	submitted
63	Shinde Sejal Ganesh	
64	solanke Pratiksha Gajanan	Submitted
72	Zende Pranali Ashok	
	Bhoite Adarsh	submitted
	Navale Chanchal	Submitted
	Zende Pranali	Submitted


Name and Signature of Teacher
(Mrs. J. R. Jagtap)

Name : Budhe Rupali Prakash

class : S.Y.B Pharm

Roll No : 13

Sub : Pharmaceutical organic chemistry - II

Assignment No. 2

Q 1 Explain the following terms with examples -

i) Stereoisomers :-

Compounds with the same molecular formula and same bonding connectivity (constitution) but differing only in spatial arrangement of constituent atoms are called stereoisomers and the phenomenon of their existence is known as stereoisomerism.

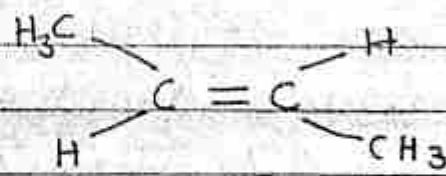
E.g - 2-butene (mol. formula C_4H_8) exist in nature in two forms : cis-2-butene and trans-2-butene

i) cis-2-butene in which two CH_3 groups are on the same side of the carbon-carbon double bond

ii) trans-2-butene in which two CH_3 groups are on the opposite of the carbon carbon double bond



cis - 2-Butene



trans 2- Butene.

Stereoisomerisms is of following different types

1) Configurational isomerism

a) optical isomerism.

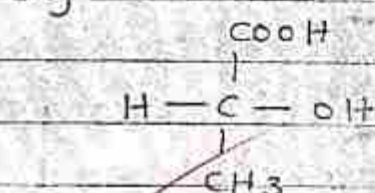
b) Geometrical isomerism

ii) Optical Isomers :-

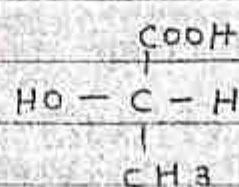
The compound having the same molecular and structural formula and differing only in their action towards plane polarized light or their optical activity are known as optical isomer and the phenomenon of their existence is known as optical isomerism.

It is a type of stereoisomerism in which the isomers rotate the plane polarized light to same extent but the direction is opposite in the two isomers.

E.g



d-lactic acid

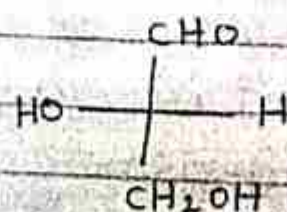
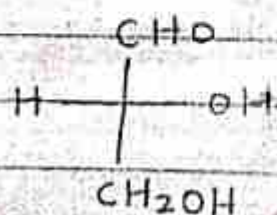


l-lactic acid

iii) Enantiomers :-

When the stereoisomers which bear non-superimposable mirror image relationship rotate PPL equally but in opposite directions then such isomers are called as enantiomorphs or enantiomers and the phenomenon is called as enantiomerism. Thus, optical isomerism is also referred to as enantiomerism.

E.g - D(+)-glyceraldehyde and L(-)-glyceraldehyde

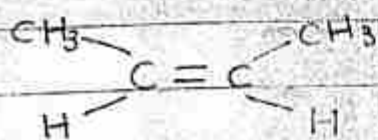


Geometrical isomers

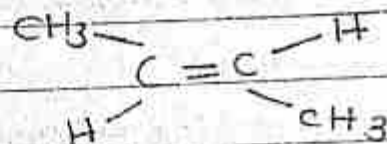
The structural isomers that result from a restriction in rotation about double bond or about single bonds in cyclic compound are called geometrical isomer and the phenomenon is termed as Geometrical isomerism.

Geometrical isomerism can occur in compound containing double bond and cyclic compounds.

E.g.



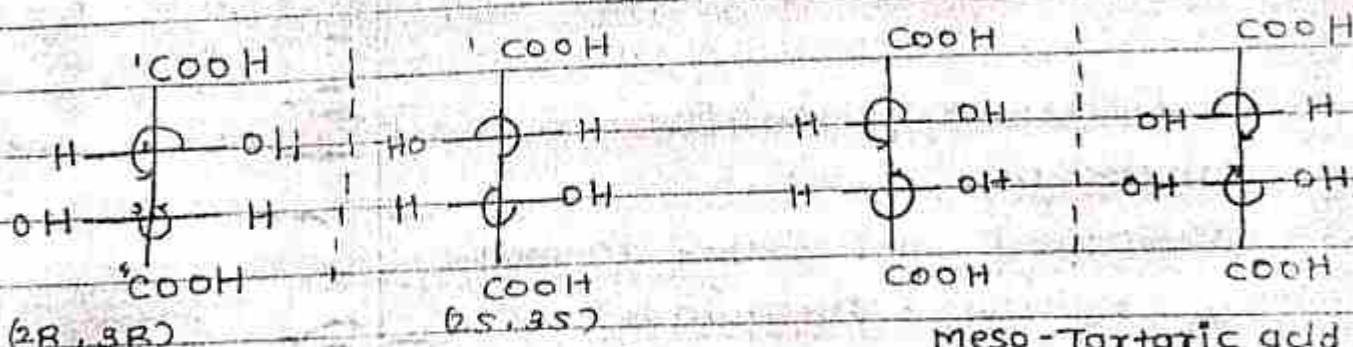
cis-2-Butene



trans-2-Butene.

Meso Compound

The compound containing two or more asymmetric carbon atoms but which possess plane of symmetry is called meso compound



L-Tartaric acid

D(-)-Tartaric acid

Meso-Tartaric acid

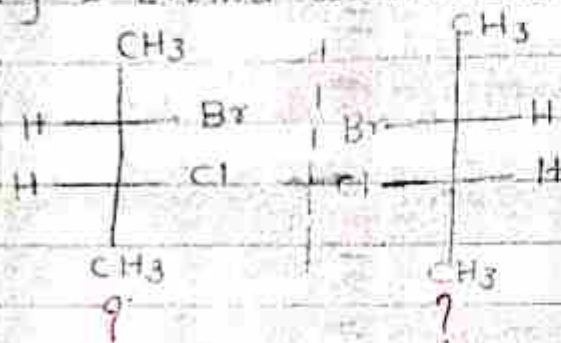
Enantiomers
optically active

optically
Inactive

Vii) Distereoisomers

Stereoisomer that are not related as an object and mirror image are known as Distereoisomer.

eg 2-bromo-3-chlorobutane.



vii) Conformational isomers

Conformational isomers are the Stereo isomers that have different Spatial arrangement of its atom and group that arise due to rotation of a part of the molecule about a single bond. The phenomenon of existence of these isomer is known as conformational isomerism.

These are non isolable and are easily interconvertible. They get converted even at room temp.

Molecular representation of Conformation isomer is done by

- i) Dotted line wedge formula.
- ii) Saw-horse formula.
- iii) Newman projection formula.

Conformational isomer are classified as -

- i) Staggered
- ii) Gauche
- iii) Eclipsed
- iv) Partial eclipsed

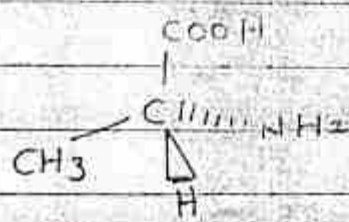
vii) Configurational isomers -

It arises due to different configuration at one or more stereocenter. The isomers are known as configurational isomers. These are non-interconvertible by rotation around single bond. They can be interconverted only by breaking and making of bond.

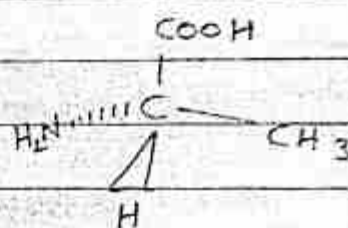
Configurational isomerism is classified into

- Optical isomerism (Enantiomerism)
- Geometrical isomerism

E.g



R-2-aminopropanoic acid



S-2-aminopropanoic acid

ix) Racemic Mixture

An equimolar mixture of a pair of enantiomers is called as racemate or racemic mixture.

It is denoted by dl or (+-).

Example :- (+-) butan-2-ol

Draw structures

By

Pharmaceutical Organic Chemistry-II (2019 Pattern)

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Quiz (MCQ)

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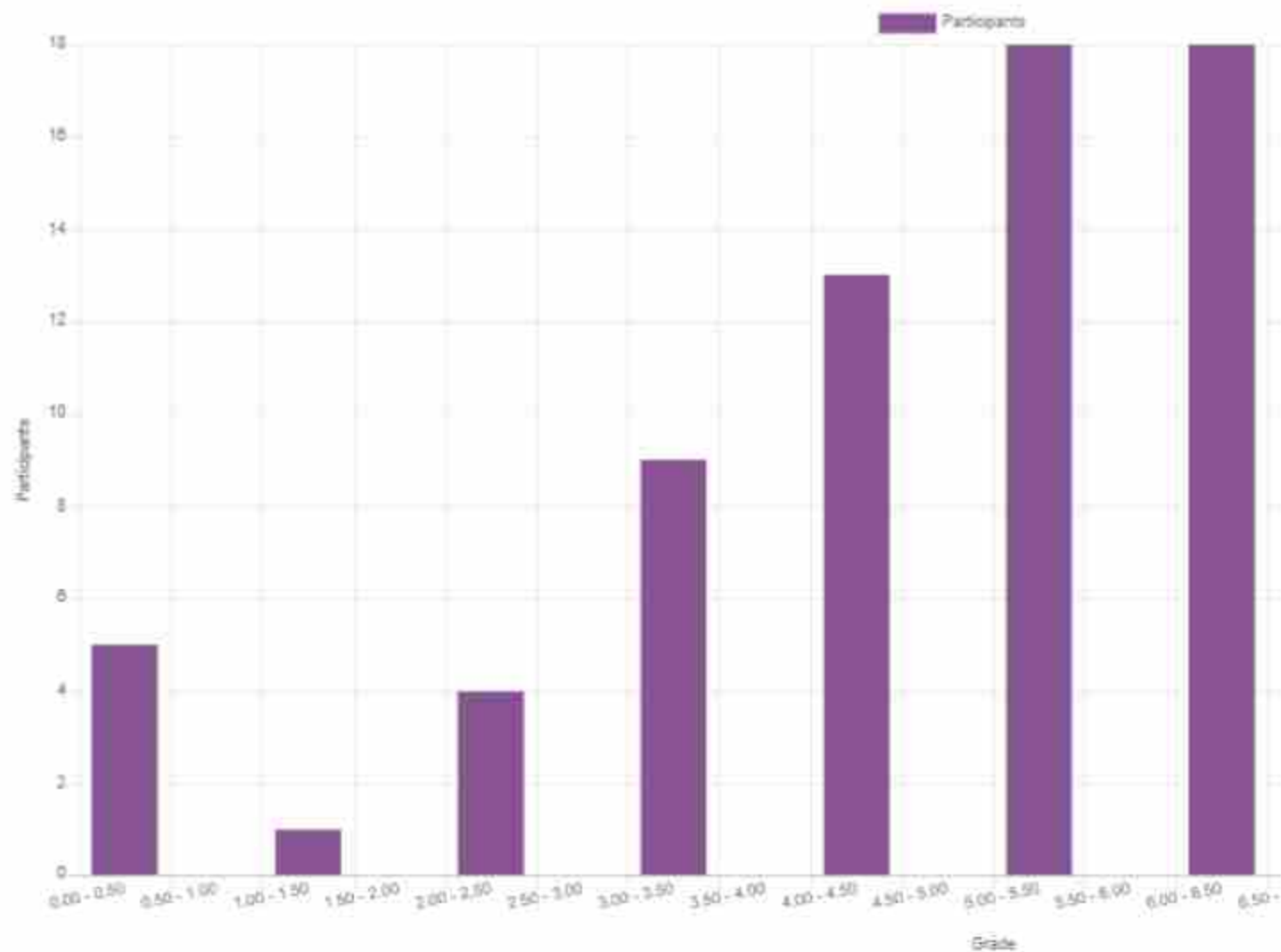
☐	First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q.1 /1.00	Q.2 /1.00	Q.3 /1.00
☐	Dummy Student Review attempt	pociandiii@gmail.com	Finished	10 July 2020 10:21 PM	10 July 2020 10:22 PM	58 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00

		First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐		Shreyas Gorule Review attempt	rashmigorule98@gmail.com	Finished	18 September 2021 9:45 AM	18 September 2021 10:00 AM	14 mins 47 secs	8.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Subas Kudale Review attempt	subaskudale2002@gmail.com	Finished	18 September 2021 9:45 AM	18 September 2021 9:59 AM	13 mins 41 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Sudarshan Gaikwad Review attempt	gaikwadsudarshan77@gmail.com	Finished	18 September 2021 9:45 AM	18 September 2021 9:58 AM	13 mins 8 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Yash Dighe Review attempt	digheyash041@gmail.com	Finished	18 September 2021 9:45 AM	18 September 2021 10:00 AM	15 mins 1 sec	7.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Deepraj Shevate Review attempt	deeprajs9167@gmail.com	Finished	18 September 2021 9:45 AM	18 September 2021 9:55 AM	9 mins 21 secs	7.00	✗ 0.00	✗ 0.00	✗ 0.00
☐		Supriya Bhale Review attempt	Supriyabhale2792@gmail.com	Finished	18 September 2021 9:45 AM	18 September 2021 10:00 AM	15 mins 1 sec	8.00	✓ 1.00	✗ 0.00	✗ 0.00
☐		Chetan Kalane Review attempt	chetankalane4@gmail.com	Finished	18 September 2021 9:45 AM	18 September 2021 10:00 AM	15 mins	6.00	✓ 1.00	✗ 0.00	✗ 0.00
☐		Aditi Jogdand Review attempt	aditijogdand143@gmail.com	Finished	18 September 2021 9:46 AM	18 September 2021 10:01 AM	15 mins 1 sec	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Ankur Pawar Review attempt	ankurpawar3317@gmail.com	Finished	18 September 2021 9:46 AM	18 September 2021 9:57 AM	11 mins 28 secs	5.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Shweta Pawar Review attempt	pawarsd2002@gmail.com	Finished	18 September 2021 9:46 AM	18 September 2021 9:57 AM	10 mins 48 secs	7.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Namrata Nevse Review attempt	namratanevse30@gmail.com	Finished	18 September 2021 9:46 AM	18 September 2021 10:00 AM	14 mins 37 secs	7.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Aarti Mokashi Review attempt	aartimokashi29@gmail.com	Finished	18 September 2021 9:46 AM	18 September 2021 10:01 AM	15 mins 1 sec	6.00	✓ 1.00	✗ 0.00	✗ 0.00

	First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐	Nikita Raskar Review attempt	nikitaraskar95@gmail.com	Finished	18 September 2021 9:46 AM	18 September 2021 10:01 AM	15 mins 1 sec	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	Riya Kumari Review attempt	riyakumari9729@gmail.com	Finished	18 September 2021 9:47 AM	18 September 2021 9:55 AM	8 mins 24 secs	7.00	✓ 1.00	✗ 0.00	✗ 0.00
☐	Sejal Shinde Review attempt	sejalshinde347@gmail.com	Finished	18 September 2021 9:47 AM	18 September 2021 9:58 AM	11 mins 34 secs	6.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	Geetanjali Kad Review attempt	kadgeetanjali@gmail.com	Finished	18 September 2021 9:47 AM	18 September 2021 10:02 AM	15 mins 1 sec	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	Swapnil Jagtap Review attempt	swapniljagtap862@gmail.com	Finished	18 September 2021 9:47 AM	18 September 2021 10:01 AM	13 mins 42 secs	6.00	✓ 1.00	✗ 0.00	✗ 0.00
☐	Viraj Taware Review attempt	virajtaware10@gmail.com	Finished	18 September 2021 9:48 AM	18 September 2021 10:01 AM	13 mins 14 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	Pranali Zende Review attempt	pranalizende03@gmail.com	Finished	18 September 2021 9:48 AM	18 September 2021 9:57 AM	9 mins 5 secs	6.00	✗ 0.00	✗ 0.00	✓ 1.00
☐	Rutuja Sanjay Botre Review attempt	rutujabotre2@gmail.com	Finished	18 September 2021 9:48 AM	18 September 2021 10:01 AM	13 mins 5 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	Shubhada Lokhande Review attempt	shubhada1okhande24@gmail.com	Finished	18 September 2021 9:49 AM	18 September 2021 10:04 AM	14 mins 59 secs	5.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	Rupali Budhe Review attempt	rupalibudhe3005@gmail.com	Finished	18 September 2021 9:50 AM	18 September 2021 10:05 AM	15 mins 1 sec	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	prajwala lonkar Review attempt	prajwalaionkar2002@gmail.com	Finished	18 September 2021 9:50 AM	18 September 2021 10:01 AM	11 mins 9 secs	5.00	✗ 0.00	✗ 0.00	✗ 0.00
☐	Aniket Salunke Review attempt	aniketsalunke2603@gmail.com	Finished	18 September 2021 9:51 AM	18 September 2021 10:02 AM	10 mins 34 secs	9.00	✓ 1.00	✗ 0.00	✓ 1.00

	First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐	Adarsh Bhoite Review attempt	adarshbhoite03@gmail.com	Finished	18 September 2021 9:52 AM	18 September 2021 10:05 AM	13 mins 1 sec	4.00	✗ 0.00	✗ 0.00	✗ 0.00
☐	Yash Kamthe Review attempt	yashkamthe330@gmail.com	Finished	18 September 2021 9:52 AM	18 September 2021 10:00 AM	8 mins 45 secs	5.00	✗ 0.00	✗ 0.00	✗ 0.00
☐	Rutika Bhoite Review attempt	rutikabhoite@gmail.com	Finished	18 September 2021 9:52 AM	18 September 2021 10:07 AM	15 mins 2 secs	6.00	✗ 0.00	✗ 0.00	✗ 0.00
☐	Pradnya Jagtap Review attempt	pradnya.jagtap1901@gmail.com	Finished	18 September 2021 9:52 AM	18 September 2021 10:02 AM	9 mins 40 secs	4.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	Rutuja Konde Review attempt	koniderutuja2@gmail.com	Finished	18 September 2021 9:52 AM	18 September 2021 10:07 AM	14 mins 50 secs	4.00	✗ 0.00	✗ 0.00	✗ 0.00
☐	Om Lohar Review attempt	loharom50@gmail.com	Finished	18 September 2021 9:52 AM	18 September 2021 9:58 AM	5 mins 27 secs	6.00	✗ 0.00	✗ 0.00	✗ 0.00
☐	Pratik Inamke Review attempt	pratiknamke3635@gmail.com	Finished	18 September 2021 9:53 AM	18 September 2021 10:06 AM	13 mins 42 secs	6.00	✗ 0.00	✗ 0.00	✗ 0.00
☐	Ashvini Khade Review attempt	khadeashvin4@gmail.com	Finished	18 September 2021 10:04 AM	18 September 2021 10:13 AM	8 mins 56 secs	7.00	✓ 1.00	✗ 0.00	✓ 1.00
	Overall average						6.67 (33)	0.61 (33)	0.03 (33)	0.61 (33)

Overall number of students achieving grade ranges

[Show chart data](#)

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POC-II

Pharmaceutical Organic Chemistry-II (2019 Pattern)

[Dashboard](#) / [Courses](#) / [POC-II](#) / [UNIT-I: Benzene and its derivatives](#) / [Class test-1 \(Benzene and its derivatives\)](#) / [Results](#) / [Grades](#)

Class test-1 (Benzene and its derivatives)

Visible groups: All participants

Attempts: 54

[Collapse all](#)[What to include in the report](#)

Attempts from

Attempts that are

☒ In progress ☒ Overdue ☒ Finished ☒ Never submitted

Show only attempts

☐ that have been regraded / are marked as needing regrading
[Display options](#)

Page size

Marks for each question

Only one attempt per user allowed on this quiz.

[Reset table preferences](#)First name: Surname:

Download table data as

	First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐	Avinash Magare Review attempt	avimagare2000@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:08 PM	8 mins 41 secs	7.00	✗ 0.00	✗ 0.00	✓ 1.00

	First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐	 Pradnya Jagtap Review attempt	pradnyajagtap1901@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:14 PM	14 mins 30 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐	 Aarti Mokashi Review attempt	aartimokashi29@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:06 PM	6 mins 16 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐	 Nandini Bhujbal Review attempt	nbhujbal177@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:15 PM	14 mins 47 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	 Namrata Nevse Review attempt	namratanevse30@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:04 PM	4 mins 4 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐	 prajwala lonkar Review attempt	prajwalalonkar2002@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:05 PM	5 mins 16 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐	 Prashant Newase Review attempt	newaseprashant31@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:02 PM	2 mins 36 secs	7.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	 Nikita Raskar Review attempt	nikitaraskar95@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:07 PM	7 mins 11 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐	 Chetan Kalane Review attempt	chetankalane4@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:15 PM	14 mins 54 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐	 Aakash Bande Review attempt	bandeaakash3@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:11 PM	11 mins 13 secs	5.00	✓ 1.00	✗ 0.00	✗ 0.00
☐	 Yash Dighe Review attempt	digheyash041@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:07 PM	7 mins 14 secs	7.00	✓ 1.00	✓ 1.00	✓ 1.00
☐	 Om Lohar Review attempt	loharom50@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:04 PM	4 mins 15 secs	7.00	✗ 0.00	✗ 0.00	✓ 1.00
☐	 Pranali Zende Review attempt	pranalizende03@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:03 PM	2 mins 40 secs	7.00	✗ 0.00	✗ 0.00	✓ 1.00

		First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐		Ankur Pawar Review attempt	ankurpawar3317@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:09 PM	9 mins 28 secs	7.00	 1.00	 0.00	 1.00
☐		Rutuja Konde Review attempt	konderutuja2@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:14 PM	14 mins 16 secs	8.00	 1.00	 0.00	 1.00
☐		Rutuja Sanjay Botre Review attempt	rutujabotre2@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:14 PM	13 mins 43 secs	8.00	 1.00	 0.00	 1.00
☐		Pratik Inamke Review attempt	pratiknamke3635@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:12 PM	12 mins 1 sec	6.00	 0.00	 0.00	 0.00
☐		Namrata Kamble Review attempt	namratakamble105@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:11 PM	10 mins 25 secs	7.00	 1.00	 0.00	 0.00
☐		Sanjana Bankar Review attempt	Bankarsanjana24@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:13 PM	12 mins 47 secs	8.00	 1.00	 0.00	 1.00
☐		Shrinath Wadhane Review attempt	shrinathwadthane@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:14 PM	13 mins 42 secs	6.00	 1.00	 0.00	 0.00
☐		Suhaskudale Review attempt	suhaskudale2002@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:14 PM	13 mins 31 secs	7.00	 1.00	 0.00	 1.00
☐		Prasad Wagh Review attempt	waghprasad104@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:12 PM	11 mins 28 secs	8.00	 1.00	 1.00	 1.00
☐		Shubhada Lokhande Review attempt	shubhadalokhande24@gmail.com	Finished	18 September 2021 3:00 PM	18 September 2021 3:09 PM	8 mins 33 secs	6.00	 1.00	 0.00	 1.00
☐		Omprasad Pawar Review attempt	ompawar5001@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:11 PM	10 mins 49 secs	6.00	 1.00	 0.00	 1.00
☐		Supriya Bhale Review attempt	Supriyabhale2792@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:15 PM	13 mins 57 secs	8.00	 1.00	 0.00	 1.00

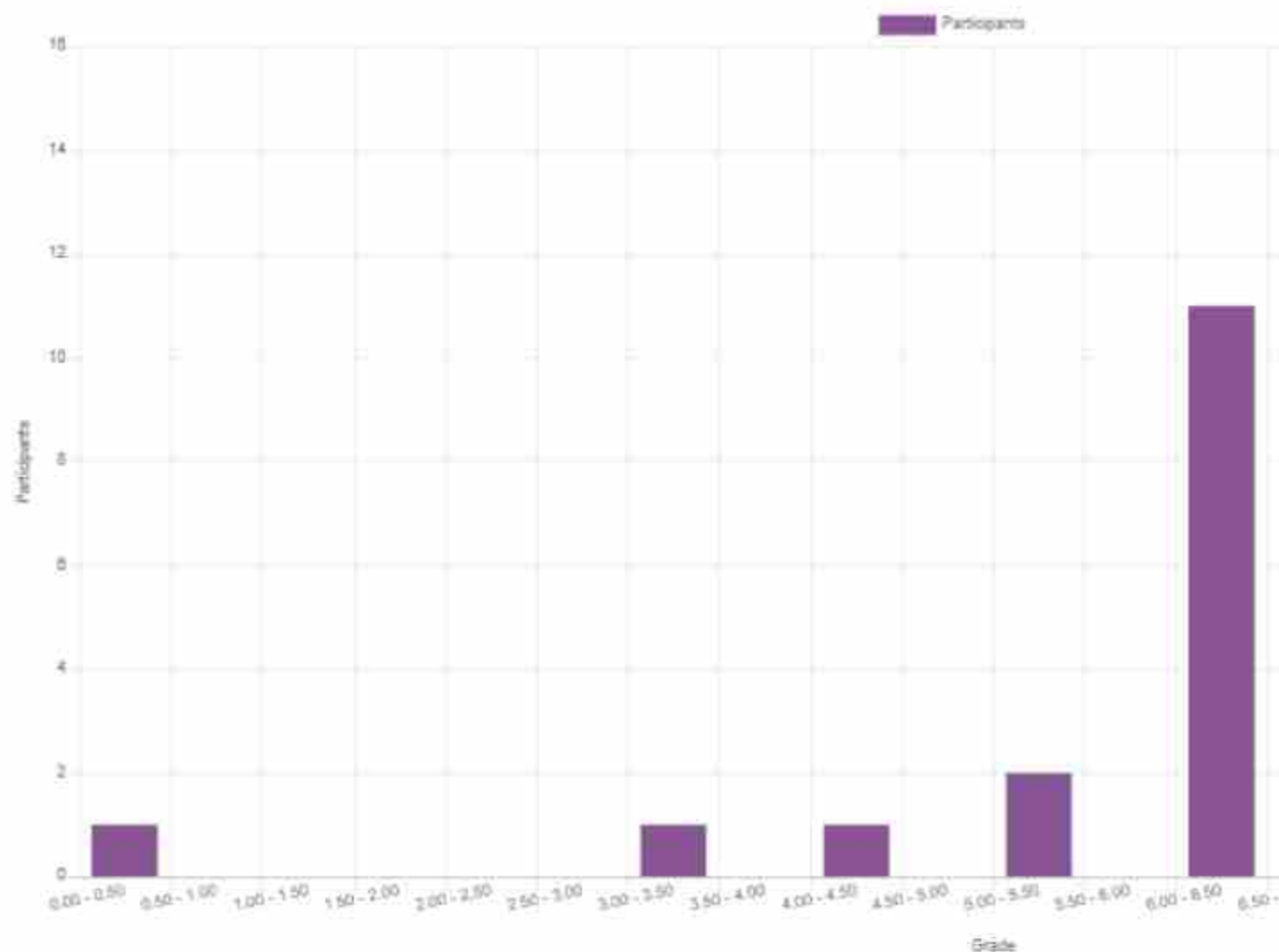
		First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐		Abhijith Kirve Review attempt	abhijithkirve1234@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:14 PM	13 mins 17 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Somnath Kadam Review attempt	Kadamsonnath987@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:11 PM	9 mins 55 secs	6.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Pratiksha Solanke Review attempt	pratikshasolanke66@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:04 PM	2 mins 54 secs	7.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		PRAKRUTI JAGTAP Review attempt	prakruti Jagtap@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:15 PM	13 mins 41 secs	7.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Adarsh Bhoite Review attempt	adarshbhoite03@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:09 PM	7 mins 38 secs	6.00	✓ 1.00	✗ 0.00	✗ 0.00
☐		Sejal Shinde Review attempt	sejalshinde347@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:09 PM	8 mins 9 secs	7.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Riya Kumari Review attempt	riyakumari9729@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:06 PM	4 mins 58 secs	5.00	✗ 0.00	✗ 0.00	✗ 0.00
☐		Washim Akram Review attempt	washimlucky19691421@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:09 PM	8 mins 12 secs	6.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Reva Khair Review attempt	revakhair.64@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:15 PM	13 mins 19 secs	4.00	✗ 0.00	✗ 0.00	✗ 0.00
☐		Rutika Bhoite Review attempt	rutikabhoite@gmail.com	Finished	18 September 2021 3:01 PM	18 September 2021 3:15 PM	13 mins 10 secs	6.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		deepinder kaur Review attempt	deepoipan2003@gmail.com	Finished	18 September 2021 3:02 PM	18 September 2021 3:08 PM	6 mins 27 secs	7.00	✓ 1.00	✗ 0.00	✗ 0.00
☐		Geetanjali Kad Review attempt	kadgeetanjali@gmail.com	Finished	18 September 2021 3:02 PM	18 September 2021 3:12 PM	10 mins	7.00	✓ 1.00	✗ 0.00	✓ 1.00

		First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐		Amrapali Tonde Review attempt	amrapalitonde@gmail.com	Finished	18 September 2021 3:02 PM	18 September 2021 3:09 PM	6 mins 55 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Shreyas Gorule Review attempt	rashmigorule98@gmail.com	Finished	18 September 2021 3:02 PM	18 September 2021 3:15 PM	12 mins 41 secs	7.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Rohan Bhandari Review attempt	rohanbhandari495@gmail.com	Finished	18 September 2021 3:02 PM	18 September 2021 3:09 PM	6 mins 56 secs	6.00	✓ 1.00	✗ 0.00	✗ 0.00
☐		Shivani Jagtap Review attempt	shivanijagtap561@gmail.com	Finished	18 September 2021 3:02 PM	18 September 2021 3:09 PM	6 mins 37 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐		Pooja Ghatole Review attempt	poojaghatole9214@gmail.com	Finished	18 September 2021 3:03 PM	18 September 2021 3:11 PM	8 mins 30 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Janhavi Zagade Review attempt	akshayzagade4177@gmail.com	Finished	18 September 2021 3:03 PM	18 September 2021 3:14 PM	11 mins 37 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐		Swapnil Jagtap Review attempt	swapniljagtap862@gmail.com	Finished	18 September 2021 3:03 PM	18 September 2021 3:10 PM	7 mins 9 secs	9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐		Aditi Jogdand Review attempt	aditijogdand143@gmail.com	Finished	18 September 2021 3:03 PM	18 September 2021 3:14 PM	11 mins 5 secs	7.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Rutuja Raut Review attempt	rutujaraut746@gmail.com	Finished	18 September 2021 3:03 PM	18 September 2021 3:15 PM	11 mins 20 secs	6.00	✗ 0.00	✗ 0.00	✓ 1.00
☐		Vaibhav Karpe Review attempt	vaibhavkarpe10@gmail.com	Finished	18 September 2021 3:03 PM	18 September 2021 3:13 PM	10 mins 1 sec	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Rupali Budhe Review attempt	rupalibudhe3005@gmail.com	Finished	18 September 2021 3:03 PM	18 September 2021 3:15 PM	11 mins 2 secs	8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Chanchal Nawale Review attempt	chanchalnawale2003@gmail.com	Finished	18 September 2021 3:04 PM	18 September 2021 3:15 PM	10 mins 39 secs	6.00	✓ 1.00	✓ 1.00	✗ 0.00

First name / Surname		Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /1.00	Q. 2 /1.00	Q. 3 /1.00
☐		Rahul Zagade Review attempt	Zagrahul2162@gmail.com	Finished	18 September 2021 3:06 PM	18 September 2021 3:14 PM	8 mins 20 secs 9.00	✓ 1.00	✓ 1.00	✓ 1.00
☐		Aniket Pathare Review attempt	Pathareaniket0739@gmail.com	Finished	18 September 2021 3:07 PM	18 September 2021 3:14 PM	7 mins 39 secs 3.00	✗ 0.00	✗ 0.00	✗ 0.00
☐		Sudarshan Gaikwad Review attempt	gaikwadsudarshan77@gmail.com	Finished	18 September 2021 3:07 PM	18 September 2021 3:09 PM	1 min 52 secs 8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Aniket Salunke Review attempt	aniketsalunke2603@gmail.com	Finished	18 September 2021 3:08 PM	18 September 2021 3:09 PM	1 min 11 secs 8.00	✓ 1.00	✗ 0.00	✓ 1.00
☐		Om Dande Review attempt	omdande3355@gmail.com	Finished	18 September 2021 3:11 PM	18 September 2021 3:15 PM	3 mins 12 secs 0.00	✗ 0.00	✗ 0.00	✗ 0.00
Overall average							7.06 (54)	0.74 (54)	0.22 (54)	0.76 (54)

[Regrade selected attempts](#)
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Overall number of students achieving grade ranges

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POC-II

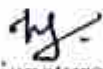
Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Class: S. Y. B. Pharm. (Sem.-IV)

Subject: Pharmaceutical Organic Chemistry-III

Sr. No.	Particulars	Roll No	Name of Students
1	Slow Learner	1	Badhe Pranav Rajendra
		2	Bande Aakash Bharat
		6	Bhoite Adarsh Jalindar
		13	Dighe Yash Dadaso
		14	Gaikwad Omkar Deepak
		15	Gaikwad Rutik Shivdas
		17	Ghatole Pooja Sunil
		18	Gorule Shreyas Nitin
		20	Jadhav Srushti Shekhar
		23	Jagtap Prakruti Devanand
		24	Jagtap Shivani Sanjay
		26	Jogdand Aditi Rajaram
		27	Kad Geetanjali Ramdas
		31	Kamthe Yash Ramchandra
		35	Khaire Reva Anil
		36	Kirve Abhijith Sunil
		43	Md Washim Akram
		44	Memane Anuj Avinash
		52	Pathare Aniket Kanifnath
		54	Pawar Omprasad Anandrao
		56	Pursharth Bhardwaj
		59	Salunke Aniket Vilas
		64	Sonawane Shubham Raju
		65	Taware Viraj Dipak
		67	Wadhane Shrinath Sachin
		68	Wagh Prasad Eknath
		69	Zagade Janhavi Devidas
		70	Zagade Rahul Rohidas
		73	Bhoite Aniket Rajendra
		78	Kapil Sanjay Jalshette
2	Advanced Learner	3	Bankar Sanjana Ajitkumar
		4	Bhale Supriya Hanumant
		22	Jagtap Pradnya Navnath
		34	Khade Ashvini Laxman
		48	Nawale Chanchal Sanjay
		49	Nevse Namrata Rajendra
		66	Tonde Amrapali Shahaji
		76	Kadam Madhura Ramdas


 Name and Signature of Teacher
 (Mrs. J. R. Jagtap)

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

List of Students required remedial coaching

Class: S. Y. B. Pharm Sem-IV

Subject: Pharmaceutical Organic Chemistry-III

Roll No.	Name of Students	21/03/22	29/04/22	14/06/22				
1	Badhe Pranav Rajendra	P	P	P				
2	Bande Aakash Bharat	P	P	P				
6	Bhoite Adarsh Jalindar	P	P	P				
13	Dighe Yash Dadaso	P	P	A				
14	Gaikwad Omkar Deepak	P	P	P				
15	Gaikwad Rutik Shivdas	P	P	P				
17	Ghatole Pooja Sunil	A	P	P				
18	Gorule Shreyas Nitin	P	P	P				
20	Jadhav Srushti Shekhar	P	P	P				
23	Jagtap Prakruti Devanand	P	P	P				
24	Jagtap Shivani Sanjay	P	P	P				
26	Jogdand Aditi Rajaram	P	P	P				
27	Kad Geetanjali Ramdas	P	P	P				
31	Kamthe Yash Ramchandra	P	A	P				
35	Khaire Reva Anil	P	P	P				
36	Kirve Abhijith Sunil	P	P	P				
43	Md Washim Akram	P	P	A				
44	Memane Anuj Avinash	P	P	P				
52	Pathare Aniket Kanifnath	P	P	P				
54	Pawar Omprasad Anandrao	P	P	P				
56	Pursharth Bhardwaj	P	P	P				
59	Salunke Aniket Vilas	P	P	P				
64	Sonawane Shubham Raju	P	P	P				
65	Taware Viraj Dipak	P	P	P				
67	Wadhane Shrinath Sachin	P	P	P				
68	Wagh Prasad Eknath	P	P	P				
69	Zagade Janhavi Devidas	P	P	P				
70	Zagade Rahul Rohidas	P	P	P				
73	Bhoite Aniket Rajendra	P	P	P				
78	Kapil Sanjay Jalshette	P	P	P				
		Practice test	Revision on Stereochemistry & Chem test	Conformation & Examples				

Name and Signature of Subject Teacher
(Mrs. J. R. Jagtap)

POC-III Class test-1 (21/03/2022)

1. Which compound is not an isomer of the other three?

1 point

- ☐ 2,2- Dimethyl propane
- ☐ 2- Methyl butane
- ☐ n-pentane
- ☐ 2, 3- Dimethyl butane

2. Cis-trans isomers are:

1 point

- ☐ Diastereomers
- ☐ Enantiomers
- ☐ Diastereomers
- ☐ Geometric isomers

3. (2R,4S) -2,4-Dichloropentane and (2S,4R)-2,4-dichloropentane are:

1 point

- ☐ Enantiomers
- ☐ Diastereomers
- ☐ Identical
- ☐ Conformational isomers

4. Which is a meso compound?

1 point

- ☐ (2R,3R)-2,3-Dibromobutane
- ☐ (2R,3S)-2,3-Dibromopentane
- ☐ (2R,4R)-2,4-Dibromopentane
- ☐ (2R,4S)-2,4-Dibromopentane

5. Following are types of optical isomers except

1 point

Time remaining: 00:03

- ☐ Enantiomers
- ☐ Diastereomers
- ☐ Conformers
- ☐ Meso compounds

1 point

6. Which of the following is true of any (S)-enantiomer?

- ☐ It rotates plane-polarized light to the right.
- ☐ It rotates plane-polarized light to the left.
- ☐ It is a racemic form.
- ☐ It is the mirror image of the corresponding (R)-enantiomer.

1 point

7. Which instrument is used to measure angle of rotation?

- ☐ Polarimeter
- ☐ IR spectrometer
- ☐ UV spectrometer
- ☐ Conductometer

1 point

8. Which statement is not true for a meso compound?

- ☐ There are one or more planes of symmetry.
- ☐ The specific rotation is 0° .
- ☐ More than one stereogenic center must be present.
- ☐ The stereo chemical labels, (R) and (S), must be identical for each stereogenic centre.

9. Absolute configuration of stereoisomers is denoted by----

1 point

- ☐ R and S isomers
- ☐ D and L isomers
- ☐ d and l isomers

Time remaining: 00:03

☐ cis and trans isomers

10. For the compound to be optically active, it should not possess following characteristics: 1 point

- ☐ Plane of symmetry
- ☐ Center of symmetry
- ☐ Alternating axis of symmetry
- ☐ All of the mentioned

Time remaining: 00:03

PDEA's Seth Govind Raghunath Sable College of Pharmacy Saswad

Class Test-1

Platform: Online (Testmoz)

Class: S. Y. B. Pharm. (Sem.-IV)

Subject: Pharmaceutical Organic Chemistry-III

Roll no.	Name	Start Datetime	End Datetime	Time	Percent	Points Earned
1	01 Badhe pranav rajendra	2022-03-21 09:41:04+05:30	2022-03-21 09:51:09+	0:09:58	90	9
2	Bande Aakash bharat	2022-03-21 09:42:51+05:30	2022-03-21 09:48:51+	0:04:02	40	4
3	03 Bankar sanjana ajitkumar	2022-03-21 09:39:07+05:30	2022-03-21 09:48:45+	0:09:32	70	7
4	Roll no.-05 Bhale Supriya Hanuman	2022-03-21 09:39:58+05:30	2022-03-21 09:49:35+	0:09:31	60	6
5	05_Bhandari Rohan Sanjaykumar	2022-03-21 09:39:51+05:30	2022-03-21 09:49:06+	0:09:05	60	6
6	06-Bhoite Adarsh Jalindar	2022-03-21 09:39:51+05:30	2022-03-21 09:49:22+	0:09:24	80	8
7	7-Bhoite Rutika rajendra	2022-03-21 09:40:59+05:30	2022-03-21 09:51:02+	0:09:35	60	6
9	09-Bhujbal Nandini shirang	2022-03-21 09:39:03+05:30	2022-03-21 09:47:38+	0:08:29	80	8
10	10- Botre Rutuja Sanjay	2022-03-21 09:38:53+05:30	2022-03-21 09:48:51+	0:09:52	80	8
11	13-Budhe Rupali Prakash	2022-03-21 09:40:31+05:30	2022-03-21 09:50:33+	0:09:56	60	6
12	12.DANDE OM SANTOSH	2022-03-21 09:38:57+05:30	2022-03-21 09:48:54+	0:06:13	80	8
13	13 dighe yash dadaso	2022-03-21 09:41:16+05:30	2022-03-21 09:48:51+	0:07:32	70	7
14	14 Gaikwad omkar deepak	2022-03-21 09:43:33+05:30	2022-03-21 09:48:15+	0:04:40	70	7
15	15 Gaikwad Rutik Shivdas	2022-03-21 09:39:06+05:30	2022-03-21 09:48:55+	0:09:34	80	8
16	16 Gaikwad Sudarshan Macchindra	2022-03-21 09:39:48+05:30	2022-03-21 09:48:37+	0:08:45	70	7
17	17, Ghatole Pooja Sunil	2022-03-21 09:40:59+05:30	2022-03-21 09:50:10+	0:09:05	70	7
20	Jadhav srushti Shekhar	2022-03-21 09:39:06+05:30	2022-03-21 09:48:26+	0:08:40	80	8
21	21 jagtap gaurav sambhaji	2022-03-21 09:41:00+05:30	2022-03-21 09:51:03+	0:09:55	80	8
22	22 - Jagtap Pradnya Navnath	2022-03-21 09:39:24+05:30	2022-03-21 09:49:27+	0:09:54	60	6
23	Jagtap Prakruti Devanand	2022-03-21 09:39:07+05:30	2022-03-21 09:48:44+	0:09:33	80	8
24	24 Jagtap Shivani Sanjay	2022-03-21 09:55:16+05:30	2022-03-21 09:56:01+	0:00:44	80	8
25	25 jagtap Swapnil Prakash	2022-03-21 09:39:13+05:30	2022-03-21 09:47:18+	0:07:47	70	7
26	Jogdand Aditi Rajaram	2022-03-21 09:38:58+05:30	2022-03-21 09:49:27+	0:07:06	70	7
27	27- kad Geetanjali Ramdas	2022-03-21 09:39:17+05:30	2022-03-21 09:48:14+	0:08:52	80	8
28	Roll no -28 kadam Somnath Dadasa	2022-03-21 09:39:20+05:30	2022-03-21 09:49:03+	0:09:34	80	8
29	29-Kalane Chetan Somnath	2022-03-21 09:41:04+05:30	2022-03-21 09:50:10+	0:08:48	70	7
30	30-kamble Namrata vijay	2022-03-21 09:39:06+05:30	2022-03-21 09:49:02+	0:09:47	80	8
31	31 Kamthe yash ramchandra	2022-03-21 09:43:05+05:30	2022-03-21 09:49:56+	0:06:48	80	8
32	32_Karpe Valbhav Gangaprasad	2022-03-21 09:40:01+05:30	2022-03-21 09:48:51+	0:08:40	60	6
33	33 kaur deepinder jasbir singh	2022-03-21 09:39:13+05:30	2022-03-21 09:47:21+	0:08:01	90	9
34	34-Ichade Ashvini laxman	2022-03-21 09:42:59+05:30	2022-03-21 09:48:58+	0:05:56	80	8
35	35. Khairi Reva Anil	2022-03-21 09:39:07+05:30	2022-03-21 09:48:59+	0:09:46	80	8
36	36-KIRVE ABHJITH SUNIL	2022-03-21 09:40:02+05:30	2022-03-21 09:49:03+	0:07:49	90	9
37	37-Konde Rutuja Dipak	2022-03-21 09:40:41+05:30	2022-03-21 09:49:10+	0:08:17	80	8
38	38- Kudale Suhas Santosh	2022-03-21 09:39:13+05:30	2022-03-21 09:48:52+	0:09:34	90	9
39	39 Lohar Om Ganesh	2022-03-21 09:39:42+05:30	2022-03-21 09:48:50+	0:09:02	60	6
40	40 Lokhande Shubhada Vijay	2022-03-21 09:39:13+05:30	2022-03-21 09:48:34+	0:03:18	70	7
42	42 - Magare Avinash Rajnikant	2022-03-21 09:38:40+05:30	2022-03-21 09:48:31+	0:09:47	60	6
43	43- Md Washim Akram	2022-03-21 09:39:40+05:30	2022-03-21 09:49:11+	0:09:23	60	6
44	44 Memane Anuj Avinash	2022-03-21 09:40:00+05:30	2022-03-21 09:48:53+	0:08:31	80	8
45	45 Memane pratik Navnath	2022-03-21 09:40:47+05:30	2022-03-21 09:49:05+	0:08:12	70	7
46	46 - Mokashi Aarti Manesh	2022-03-21 09:41:32+05:30	2022-03-21 09:48:50+	0:07:11	60	6
47	47.BHAT AKIB MUSHTAQ	2022-03-21 09:39:58+05:30	2022-03-21 09:48:43+	0:08:39	70	7
48	48- Nawale Chanchal Sanjay.	2022-03-21 09:38:59+05:30	2022-03-21 09:49:01+	0:09:54	60	6
50	50 Newase Prashant Kailas	2022-03-21 09:39:23+05:30	2022-03-21 09:48:34+	0:08:58	80	8
51	51-Raskar Nikita Rohidas	2022-03-21 09:39:29+05:30	2022-03-21 09:48:48+	0:09:12	80	8
52	52 Pathare Aniket Kanfnath	2022-03-21 09:41:18+05:30	2022-03-21 09:48:56+	0:07:34	90	9
53	53 Pawar Ankur Nitin	2022-03-21 09:40:08+05:30	2022-03-21 09:49:36+	0:09:23	80	8
54	54 pawar omprasad anandrao	2022-03-21 09:40:28+05:30	2022-03-21 09:49:01+	0:08:26	80	8
55	55- Pawar Shweta Digambar	2022-03-21 09:39:05+05:30	2022-03-21 09:47:39+	0:08:25	50	5

56	PURSHARTH BHARDWAJ	2022-03-21 09:39:27+05:30	2022-03-21 09:45:53+	0:06:21	90	9
57	57-Raut Rutuja Dattatraya	2022-03-21 09:39:13+05:30	2022-03-21 09:48:48+	0:09:29	90	9
58	58-kumari riya manohar lal	2022-03-21 09:39:32+05:30	2022-03-21 09:47:23+	0:07:43	80	8
59	59. Salunke Aniket Vilas	2022-03-21 09:40:07+05:30	2022-03-21 09:49:50+	0:09:08	60	6
60	Shah Aarif Majid	2022-03-21 09:38:41+05:30	2022-03-21 09:44:37+	0:05:49	80	8
61	61-Shevate Deepraj Navnath	2022-03-21 09:42:48+05:30	2022-03-21 09:48:16+	0:05:19	80	8
62	62 shinde sejal Ganesh	2022-03-21 09:42:22+05:30	2022-03-21 09:49:40+	0:03:12	70	7
63	63-solanke pratiksha gajanan	2022-03-21 09:39:58+05:30	2022-03-21 09:50:00+	0:09:57	80	8
64	64-sonawane shubham raju	2022-03-21 09:42:19+05:30	2022-03-21 09:52:04+	0:09:45	80	8
65	65 Taware Viraj Dipak	2022-03-21 09:40:35+05:30	2022-03-21 09:50:28+	0:08:25	80	8
66	66- Tonde Amrapali Shahaji	2022-03-21 09:39:33+05:30	2022-03-21 09:49:32+	0:09:51	60	6
67	Shrinath sachin wadhane	2022-03-21 09:41:41+05:30	2022-03-21 09:49:02+	0:06:59	80	8
68	68-Wagh Prasad Eknath	2022-03-21 09:41:09+05:30	2022-03-21 09:49:27+	0:08:14	50	5
69	69- zagade Janhavi Devidas	2022-03-21 09:44:33+05:30	2022-03-21 09:49:45+	0:05:09	70	7
70	71- zagade Rahul Rohidas	2022-03-21 09:44:41+05:30	2022-03-21 09:50:21+	0:05:26	80	8
71	71 - Zende Pranali Ashok	2022-03-21 09:44:04+05:30	2022-03-21 09:49:38+	0:05:31	60	6
72	Anantwal sakshi ashok	2022-03-21 09:39:07+05:30	2022-03-21 09:49:00+	0:09:32	80	8
73	Bhoite Aniket Rajendra	2022-03-21 09:39:31+05:30	2022-03-21 09:49:29+	0:09:49	90	9
74	74 - jadhav pranoti sanjaykumar	2022-03-21 09:39:08+05:30	2022-03-21 09:47:56+	0:08:39	70	7
75	75-Jagtap Vrushali Sunil	2022-03-21 09:39:19+05:30	2022-03-21 09:48:06+	0:08:19	50	5
76	Kadam madhura ramdas	2022-03-21 09:38:46+05:30	2022-03-21 09:47:49+	0:08:55	70	7
77	77- Kalgunde Monika Ashok	2022-03-21 09:39:15+05:30	2022-03-21 09:48:46+	0:09:25	80	8
78	jalsheete kapil sanjay	2022-03-21 09:40:36+05:30	2022-03-21 09:48:35+	0:07:49	90	9
79	79 - PATIL PAYAL CHANDRAKANT	2022-03-21 09:40:35+05:30	2022-03-21 09:49:51+	0:09:07	70	7
80	80 Yadav Shraddha murlidhar	2022-03-21 09:39:46+05:30	2022-03-21 09:49:49+	0:09:54	70	7
81	81-Zende Dhanashri Sudhakar	2022-03-21 09:40:30+05:30	2022-03-21 09:50:31+	0:09:56	70	7

by
(Mys. J.R. Jagtap)

Name:- Prateeti Devanand Jagtap

Roll No:- 25

Class:- S.Y.B-Pharmacy

Subject:- Pharmaceutical organic chemistry

Date:- 9/04/2022

6^{1/2}/10 *ms*

Tutorial

- 1) Define the following terms with examples
 - a) Conformation
 - b) Configuration
- 2) Energy profile diagram of n-butane.
- 3) Why chair conformation of cyclohexane is more stable than boat conformation.
- 4) Discuss geometrical isomerism with example.
- 5) Explain Atropisomerism.

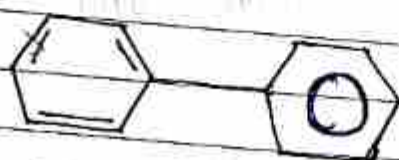
1) a) Conformation :- It is the different spatial arrangement of atoms ~~and~~ ^{or} groups ^{of atom} arising due to part of molecule to rotate about a single bond. It is easily interconvertible.
eg:- Staggered, Anti-staggered, Gauche.

2) b) Configuration :-
It is different spatial arrangement of atoms or group of atom due to part of ridge of molecule. It is not easily interconvertible.
~~eg:-~~ Eg:- Geometrical and optical.
It requires high energy barrier.

Example :- Geometrical and optical isomerism.

5) Atropisomers can be defined as isomers that can be isolated due to prevention or restriction of rotation of a single bond between two planar moieties.

- Atropisomerism is also called axial chirality and the chirality is not simply a centre or a plane but an axis. Phenomenon of axial chirality relies on the rotational stability about a single bond. C-C sigma bond is known as pivotal bond.



Symmetric achiral structure of Biphenyl.

- Atropisomerism is not a phenomenon restricted to biphenyls and many other systems from *t*-alkyl-tryptyls to binaphthyls exhibiting atropisomerism.

> conditions

- They are recognized as physically separable species at given temperature.
- They have half life of at least 16.7 min.

4) Geometrical isomers:-

Isomers have two or more coordinate compound having same molecular formula, bond but different in their spatial arrangement of atoms and molecules.

- There are two types of geometrical isomers

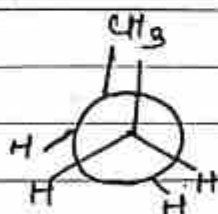
- Cis-isomer - ~~is isomer having~~
- Trans-isomers

7. Criteria

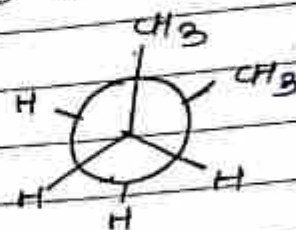
a) Restriction of double bond

b) There should be different group present at either left or right side of double bond

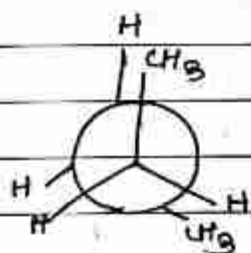
- 2) The illustrations of butane is represented by Newman projections below by designating the two middle carbon and one as front and the other as behind carbon and connecting the two end methyl groups.



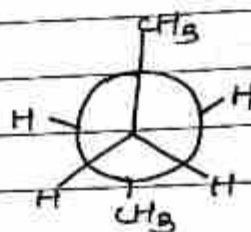
syn (eclipsed)
Dihedral angle = $0, 360^\circ$



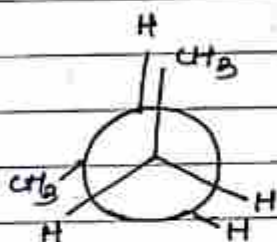
gauche (staggered)
Dihedral angle = 60°



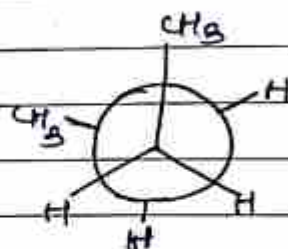
Eclipsed
Dihedral angle = 120°



Anti (staggered)
Dihedral angle = 180°

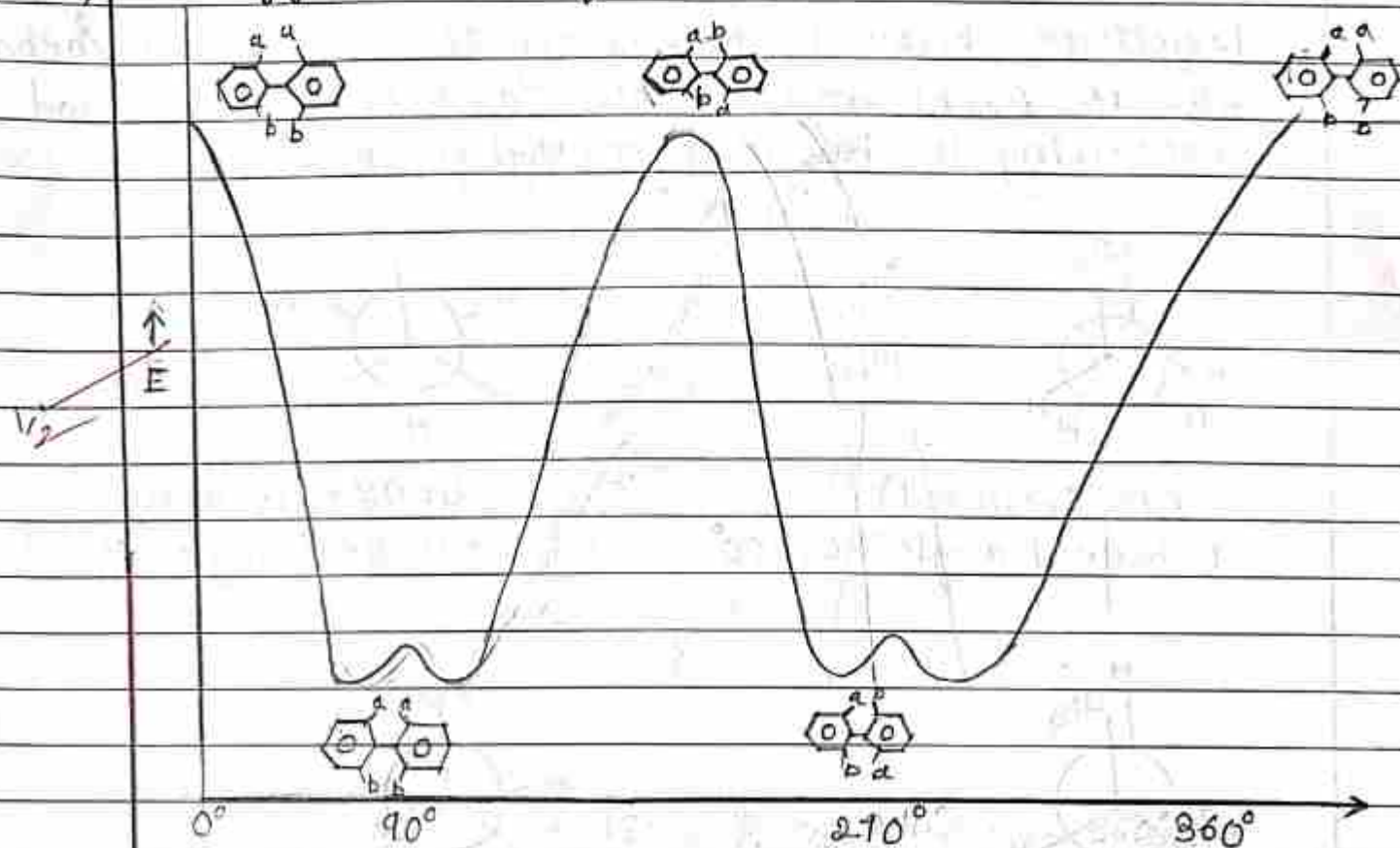


Eclipsed
Dihedral angle = 240°



gauche (staggered)
Dihedral angle = 300°

5) Energy profile diagram Atropisomerism



13

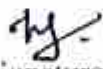
Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Class: S. Y. B. Pharm. (Sem.-IV)

Subject: Pharmaceutical Organic Chemistry-III

Sr. No.	Particulars	Roll No	Name of Students
1	Slow Learner	1	Badhe Pranav Rajendra
		2	Bande Aakash Bharat
		6	Bhoite Adarsh Jalindar
		13	Dighe Yash Dadaso
		14	Gaikwad Omkar Deepak
		15	Gaikwad Rutik Shivdas
		17	Ghatole Pooja Sunil
		18	Gorule Shreyas Nitin
		20	Jadhav Srushti Shekhar
		23	Jagtap Prakruti Devanand
		24	Jagtap Shivani Sanjay
		26	Jogdand Aditi Rajaram
		27	Kad Geetanjali Ramdas
		31	Kamthe Yash Ramchandra
		35	Khaire Reva Anil
		36	Kirve Abhijith Sunil
		43	Md Washim Akram
		44	Memane Anuj Avinash
		52	Pathare Aniket Kanifnath
		54	Pawar Omprasad Anandrao
		56	Pursharth Bhardwaj
		59	Salunke Aniket Vilas
		64	Sonawane Shubham Raju
		65	Taware Viraj Dipak
		67	Wadhane Shrinath Sachin
		68	Wagh Prasad Eknath
		69	Zagade Janhavi Devidas
		70	Zagade Rahul Rohidas
		73	Bhoite Aniket Rajendra
		78	Kapil Sanjay Jalshette
2	Advanced Learner	3	Bankar Sanjana Ajitkumar
		4	Bhale Supriya Hanumant
		22	Jagtap Pradnya Navnath
		34	Khade Ashvini Laxman
		48	Nawale Chanchal Sanjay
		49	Nevse Namrata Rajendra
		66	Tonde Amrapali Shahaji
		76	Kadam Madhura Ramdas


 Name and Signature of Teacher
 (Mrs. J. R. Jagtap)

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

List of Students required remedial coaching

Class: S. Y. B. Pharm Sem-IV

Subject: Pharmaceutical Organic Chemistry-III

Roll No.	Name of Students	21/03/22	29/04/22	14/06/22				
1	Badhe Pranav Rajendra	P	P	P				
2	Bande Aakash Bharat	P	P	P				
6	Bhoite Adarsh Jalindar	P	P	P				
13	Dighe Yash Dadaso	P	P	A				
14	Gaikwad Omkar Deepak	P	P	P				
15	Gaikwad Rutik Shivdas	P	P	P				
17	Ghatole Pooja Sunil	A	P	P				
18	Gorule Shreyas Nitin	P	P	P				
20	Jadhav Srushti Shekhar	P	P	P				
23	Jagtap Prakruti Devanand	P	P	P				
24	Jagtap Shivani Sanjay	P	P	P				
26	Jogdand Aditi Rajaram	P	P	P				
27	Kad Geetanjali Ramdas	P	P	P				
31	Kamthe Yash Ramchandra	P	A	P				
35	Khaire Reva Anil	P	P	P				
36	Kirve Abhijith Sunil	P	P	P				
43	Md Washim Akram	P	P	A				
44	Memane Anuj Avinash	P	P	P				
52	Pathare Aniket Kanifnath	P	P	P				
54	Pawar Omprasad Anandrao	P	P	P				
56	Pursharth Bhardwaj	P	P	P				
59	Salunke Aniket Vilas	P	P	P				
64	Sonawane Shubham Raju	P	P	P				
65	Taware Viraj Dipak	P	P	P				
67	Wadhane Shrinath Sachin	P	P	P				
68	Wagh Prasad Eknath	P	P	P				
69	Zagade Janhavi Devidas	P	P	P				
70	Zagade Rahul Rohidas	P	P	P				
73	Bhoite Aniket Rajendra	P	P	P				
78	Kapil Sanjay Jalshette	P	P	P				
		Practice test	Revision on stereochemistry & IUPAC	Conformation & examples				

Name and Signature of Subject Teacher
(Mrs. J. R. Jagtap)

POC-III Class test-1 (21/03/2022)

1. Which compound is not an isomer of the other three?

1 point

- ☐ 2,2- Dimethyl propane
- ☐ 2- Methyl butane
- ☐ n-pentane
- ☐ 2, 3- Dimethyl butane

2. Cis-trans isomers are:

1 point

- ☐ Diastereomers
- ☐ Enantiomers
- ☐ Diastereomers
- ☐ Geometric isomers

3. (2R,4S) -2,4-Dichloropentane and (2S,4R)-2,4-dichloropentane are:

1 point

- ☐ Enantiomers
- ☐ Diastereomers
- ☐ Identical
- ☐ Conformational isomers

4. Which is a meso compound?

1 point

- ☐ (2R,3R)-2,3-Dibromobutane
- ☐ (2R,3S)-2,3-Dibromopentane
- ☐ (2R,4R)-2,4-Dibromopentane
- ☐ (2R,4S)-2,4-Dibromopentane

5. Following are types of optical isomers except

1 point

Time remaining: 00:03

- ☐ Enantiomers
- ☐ Diastereomers
- ☐ Conformers
- ☐ Meso compounds

1 point

6. Which of the following is true of any (S)-enantiomer?

- ☐ It rotates plane-polarized light to the right.
- ☐ It rotates plane-polarized light to the left.
- ☐ It is a racemic form.
- ☐ It is the mirror image of the corresponding (R)-enantiomer.

1 point

7. Which instrument is used to measure angle of rotation?

- ☐ Polarimeter
- ☐ IR spectrometer
- ☐ UV spectrometer
- ☐ Conductometer

1 point

8. Which statement is not true for a meso compound?

- ☐ There are one or more planes of symmetry.
- ☐ The specific rotation is 0° .
- ☐ More than one stereogenic center must be present.
- ☐ The stereo chemical labels, (R) and (S), must be identical for each stereogenic centre.

9. Absolute configuration of stereoisomers is denoted by----

1 point

- ☐ R and S isomers
- ☐ D and L isomers
- ☐ d and l isomers

Time remaining: 00:03

☐ cis and trans isomers

10. For the compound to be optically active, it should not possess following characteristics: 1 point

- ☐ Plane of symmetry
- ☐ Center of symmetry
- ☐ Alternating axis of symmetry
- ☐ All of the mentioned

Time remaining: 00:03

PDEA's Seth Govind Raghunath Sable College of Pharmacy Saswad

Class Test-1

Platform: Online (Testmoz)

Class: S. Y. B. Pharm. (Sem.-IV)

Subject: Pharmaceutical Organic Chemistry-III

Roll no.	Name	Start Datetime	End Datetime	Time	Percent	Points Earned
1	01 Badhe pranav rajendra	2022-03-21 09:41:04+05:30	2022-03-21 09:51:09+	0:09:58	90	9
2	Bande Aakash bharat	2022-03-21 09:42:51+05:30	2022-03-21 09:48:51+	0:04:02	40	4
3	03 Bankar sanjana ajitkumar	2022-03-21 09:39:07+05:30	2022-03-21 09:48:45+	0:09:32	70	7
4	Roll no.-05 Bhale Supriya Hanuman	2022-03-21 09:39:58+05:30	2022-03-21 09:49:35+	0:09:31	60	6
5	05_Bhandari Rohan Sanjaykumar	2022-03-21 09:39:51+05:30	2022-03-21 09:49:06+	0:09:05	60	6
6	06-Bhoite Adarsh Jalindar	2022-03-21 09:39:51+05:30	2022-03-21 09:49:22+	0:09:24	80	8
7	7-Bhoite Rutika rajendra	2022-03-21 09:40:59+05:30	2022-03-21 09:51:02+	0:09:35	60	6
9	09-Bhujbal Nandini shirang	2022-03-21 09:39:03+05:30	2022-03-21 09:47:38+	0:08:29	80	8
10	10- Botre Rutuja Sanjay	2022-03-21 09:38:53+05:30	2022-03-21 09:48:51+	0:09:52	80	8
11	13-Budhe Rupali Prakash	2022-03-21 09:40:31+05:30	2022-03-21 09:50:33+	0:09:56	60	6
12	12.DANDE OM SANTOSH	2022-03-21 09:38:57+05:30	2022-03-21 09:48:54+	0:06:13	80	8
13	13 dighe yash dadaso	2022-03-21 09:41:16+05:30	2022-03-21 09:48:51+	0:07:32	70	7
14	14 Gaikwad omkar deepak	2022-03-21 09:43:33+05:30	2022-03-21 09:48:15+	0:04:40	70	7
15	15 Gaikwad Rutik Shivdas	2022-03-21 09:39:06+05:30	2022-03-21 09:48:55+	0:09:34	80	8
16	16 Gaikwad Sudarshan Macchindra	2022-03-21 09:39:48+05:30	2022-03-21 09:48:37+	0:08:45	70	7
17	17, Ghatole Pooja Sunil	2022-03-21 09:40:59+05:30	2022-03-21 09:50:10+	0:09:05	70	7
20	Jadhav srushti Shekhar	2022-03-21 09:39:06+05:30	2022-03-21 09:48:26+	0:08:40	80	8
21	21 jagtap gaurav sambhaji	2022-03-21 09:41:00+05:30	2022-03-21 09:51:03+	0:09:55	80	8
22	22 - Jagtap Pradnya Navnath	2022-03-21 09:39:24+05:30	2022-03-21 09:49:27+	0:09:54	60	6
23	Jagtap Prakruti Devanand	2022-03-21 09:39:07+05:30	2022-03-21 09:48:44+	0:09:33	80	8
24	24 Jagtap Shivani Sanjay	2022-03-21 09:55:16+05:30	2022-03-21 09:56:01+	0:00:44	80	8
25	25 jagtap Swapnil Prakash	2022-03-21 09:39:13+05:30	2022-03-21 09:47:18+	0:07:47	70	7
26	Jogdand Aditi Rajaram	2022-03-21 09:38:58+05:30	2022-03-21 09:49:27+	0:07:06	70	7
27	27- kad Geetanjali Ramdas	2022-03-21 09:39:17+05:30	2022-03-21 09:48:14+	0:08:52	80	8
28	Roll no -28 kadam Somnath Dadasa	2022-03-21 09:39:20+05:30	2022-03-21 09:49:03+	0:09:34	80	8
29	29-Kalane Chetan Somnath	2022-03-21 09:41:04+05:30	2022-03-21 09:50:10+	0:08:48	70	7
30	30-kamble Namrata vijay	2022-03-21 09:39:06+05:30	2022-03-21 09:49:02+	0:09:47	80	8
31	31 Kamthe yash ramchandra	2022-03-21 09:43:05+05:30	2022-03-21 09:49:56+	0:06:48	80	8
32	32_Karpe Valbhav Gangaprasad	2022-03-21 09:40:01+05:30	2022-03-21 09:48:51+	0:08:40	60	6
33	33 kaur deepinder jasbir singh	2022-03-21 09:39:13+05:30	2022-03-21 09:47:21+	0:08:01	90	9
34	34-Ichade Ashvini laxman	2022-03-21 09:42:59+05:30	2022-03-21 09:48:58+	0:05:56	80	8
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36	36-KIRVE ABHUTH SUNIL	2022-03-21 09:40:02+05:30	2022-03-21 09:49:03+	0:07:49	90	9
37	37-Konde Rutuja Dipak	2022-03-21 09:40:41+05:30	2022-03-21 09:49:10+	0:08:17	80	8
38	38- Kudale Suhas Santosh	2022-03-21 09:39:13+05:30	2022-03-21 09:48:52+	0:09:34	90	9
39	39 Lohar Om Ganesh	2022-03-21 09:39:42+05:30	2022-03-21 09:48:50+	0:09:02	60	6
40	40 Lokhande Shubhada Vijay	2022-03-21 09:39:13+05:30	2022-03-21 09:48:34+	0:03:18	70	7
42	42 - Magare Avinash Rajnikant	2022-03-21 09:38:40+05:30	2022-03-21 09:48:31+	0:09:47	60	6
43	43- Md Washim Akram	2022-03-21 09:39:40+05:30	2022-03-21 09:49:11+	0:09:23	60	6
44	44 Memane Anuj Avinash	2022-03-21 09:40:00+05:30	2022-03-21 09:48:53+	0:08:31	80	8
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47	47.BHAT AKIB MUSHTAQ	2022-03-21 09:39:58+05:30	2022-03-21 09:48:43+	0:08:39	70	7
48	48- Nawale Chanchal Sanjay.	2022-03-21 09:38:59+05:30	2022-03-21 09:49:01+	0:09:54	60	6
50	50 Newase Prashant Kailas	2022-03-21 09:39:23+05:30	2022-03-21 09:48:34+	0:08:58	80	8
51	51-Raskar Nikita Rohidas	2022-03-21 09:39:29+05:30	2022-03-21 09:48:48+	0:09:12	80	8
52	52 Pathare Aniket Kanfnath	2022-03-21 09:41:18+05:30	2022-03-21 09:48:56+	0:07:34	90	9
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55	55- Pawar Shweta Digambar	2022-03-21 09:39:05+05:30	2022-03-21 09:47:39+	0:08:25	50	5

56	PURSHARTH BHARDWAJ	2022-03-21 09:39:27+05:30	2022-03-21 09:45:53+	0:06:21	90	9
57	57-Raut Rutuja Dattatraya	2022-03-21 09:39:13+05:30	2022-03-21 09:48:48+	0:09:29	90	9
58	58-kumari riya manohar lal	2022-03-21 09:39:32+05:30	2022-03-21 09:47:23+	0:07:43	80	8
59	59. Salunke Aniket Vilas	2022-03-21 09:40:07+05:30	2022-03-21 09:49:50+	0:09:08	60	6
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61	61-Shevate Deepraj Navnath	2022-03-21 09:42:48+05:30	2022-03-21 09:48:16+	0:05:19	80	8
62	62 shinde sejal Ganesh	2022-03-21 09:42:22+05:30	2022-03-21 09:49:40+	0:03:12	70	7
63	63-solanke pratiksha gajanan	2022-03-21 09:39:58+05:30	2022-03-21 09:50:00+	0:09:57	80	8
64	64-sonawane shubham raju	2022-03-21 09:42:19+05:30	2022-03-21 09:52:04+	0:09:45	80	8
65	65 Taware Viraj Dipak	2022-03-21 09:40:35+05:30	2022-03-21 09:50:28+	0:08:25	80	8
66	66- Tonde Amrapali Shahaji	2022-03-21 09:39:33+05:30	2022-03-21 09:49:32+	0:09:51	60	6
67	Shrinath sachin wadhane	2022-03-21 09:41:41+05:30	2022-03-21 09:49:02+	0:06:59	80	8
68	68-Wagh Prasad Eknath	2022-03-21 09:41:09+05:30	2022-03-21 09:49:27+	0:08:14	50	5
69	69- zagade Janhavi Devidas	2022-03-21 09:44:33+05:30	2022-03-21 09:49:45+	0:05:09	70	7
70	71- zagade Rahul Rohidas	2022-03-21 09:44:41+05:30	2022-03-21 09:50:21+	0:05:26	80	8
71	71 - Zende Pranali Ashok	2022-03-21 09:44:04+05:30	2022-03-21 09:49:38+	0:05:31	60	6
72	Anantwal sakshi ashok	2022-03-21 09:39:07+05:30	2022-03-21 09:49:00+	0:09:32	80	8
73	Bhoite Aniket Rajendra	2022-03-21 09:39:31+05:30	2022-03-21 09:49:29+	0:09:49	90	9
74	74 - jadhav pranoti sanjaykumar	2022-03-21 09:39:08+05:30	2022-03-21 09:47:56+	0:08:39	70	7
75	75-Jagtap Vrushali Sunil	2022-03-21 09:39:19+05:30	2022-03-21 09:48:06+	0:08:19	50	5
76	Kadam madhura ramdas	2022-03-21 09:38:46+05:30	2022-03-21 09:47:49+	0:08:55	70	7
77	77- Kalgunde Monika Ashok	2022-03-21 09:39:15+05:30	2022-03-21 09:48:46+	0:09:25	80	8
78	jalsheete kapil sanjay	2022-03-21 09:40:36+05:30	2022-03-21 09:48:35+	0:07:49	90	9
79	79 - PATIL PAYAL CHANDRAKANT	2022-03-21 09:40:35+05:30	2022-03-21 09:49:51+	0:09:07	70	7
80	80 Yadav Shraddha murlidhar	2022-03-21 09:39:46+05:30	2022-03-21 09:49:49+	0:09:54	70	7
81	81-Zende Dhanashri Sudhakar	2022-03-21 09:40:30+05:30	2022-03-21 09:50:31+	0:09:56	70	7

by
(Mys. J.R. Jagtap)

Name:- Prateeti Devanand Jagtap

Roll No:- 25

Class:- S.Y.B-Pharmacy

Subject:- Pharmaceutical organic chemistry

Date:- 9/04/2022

6^{1/2}/10 *ms*

Tutorial

- 1) Define the following terms with examples
 - a) Conformation
 - b) Configuration
- 2) Energy profile diagram of n-butane.
- 3) Why chair conformation of cyclohexane is more stable than boat conformation.
- 4) Discuss geometrical isomerism with example.
- 5) Explain Atropisomerism.

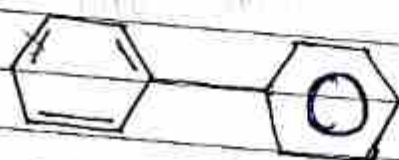
1) a) Conformation :- It is the different spatial arrangement of atoms ~~and~~ ^{or} groups ^{of atom} arising due to part of molecule to rotate about a single bond. It is easily interconvertible.
eg:- Staggered, Anti-staggered, Gauche.

2) b) Configuration :-
It is different spatial arrangement of atoms or group of atom due to part of ridge of molecule. It is not easily interconvertible.
~~eg:-~~ Eg:- Geometrical and optical.
It requires high energy barrier.

Example :- Geometrical and optical isomerism.

5) Atropisomers can be defined as isomers that can be isolated due to prevention or restriction of rotation of a single bond between two planar moieties.

- Atropisomerism is also called axial chirality and the chirality is not simply a centre or a plane but an axis. Phenomenon of axial chirality relies on the rotational stability about a single bond. C-C sigma bond is known as pivotal bond.



Symmetric achiral structure of Biphenyl.

- Atropisomerism is not a phenomenon restricted to biphenyls and many other systems from *t*-alkyl-tryptyls to binaphthyls exhibiting atropisomerism.

> conditions

- They are recognized as physically separable species at given temperature.
- They have half life of at least 16.7 min.

4) Geometrical isomers:-

Isomers have two or more coordinate compound having same molecular formula, bond but different in their spatial arrangement of atoms and molecules.

- There are two types of geometrical isomers

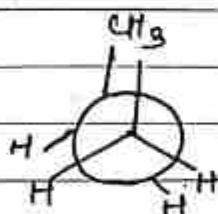
- Cis-isomer - ~~is isomer having~~
- Trans-isomers

7. Criteria

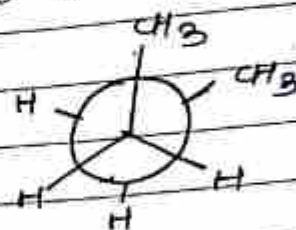
a) Restriction of double bond

b) There should be different group present at either left or right side of double bond

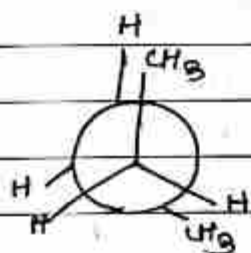
- 2) The illustrations of butane is represented by Newman projections below by designating the two middle carbons as front and the other as behind carbon and connecting the two end methyl groups.



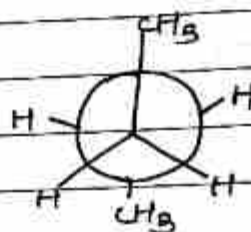
syn (eclipsed)
Dihedral angle = $0, 360^\circ$



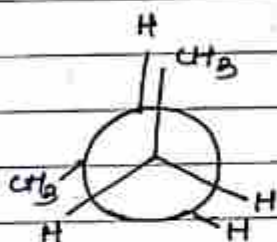
gauche (staggered)
Dihedral angle = 60°



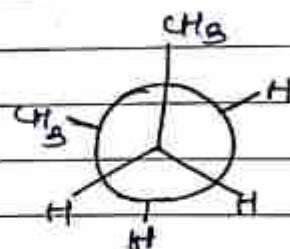
Eclipsed
Dihedral angle = 120°



Anti (staggered)
Dihedral angle = 180°

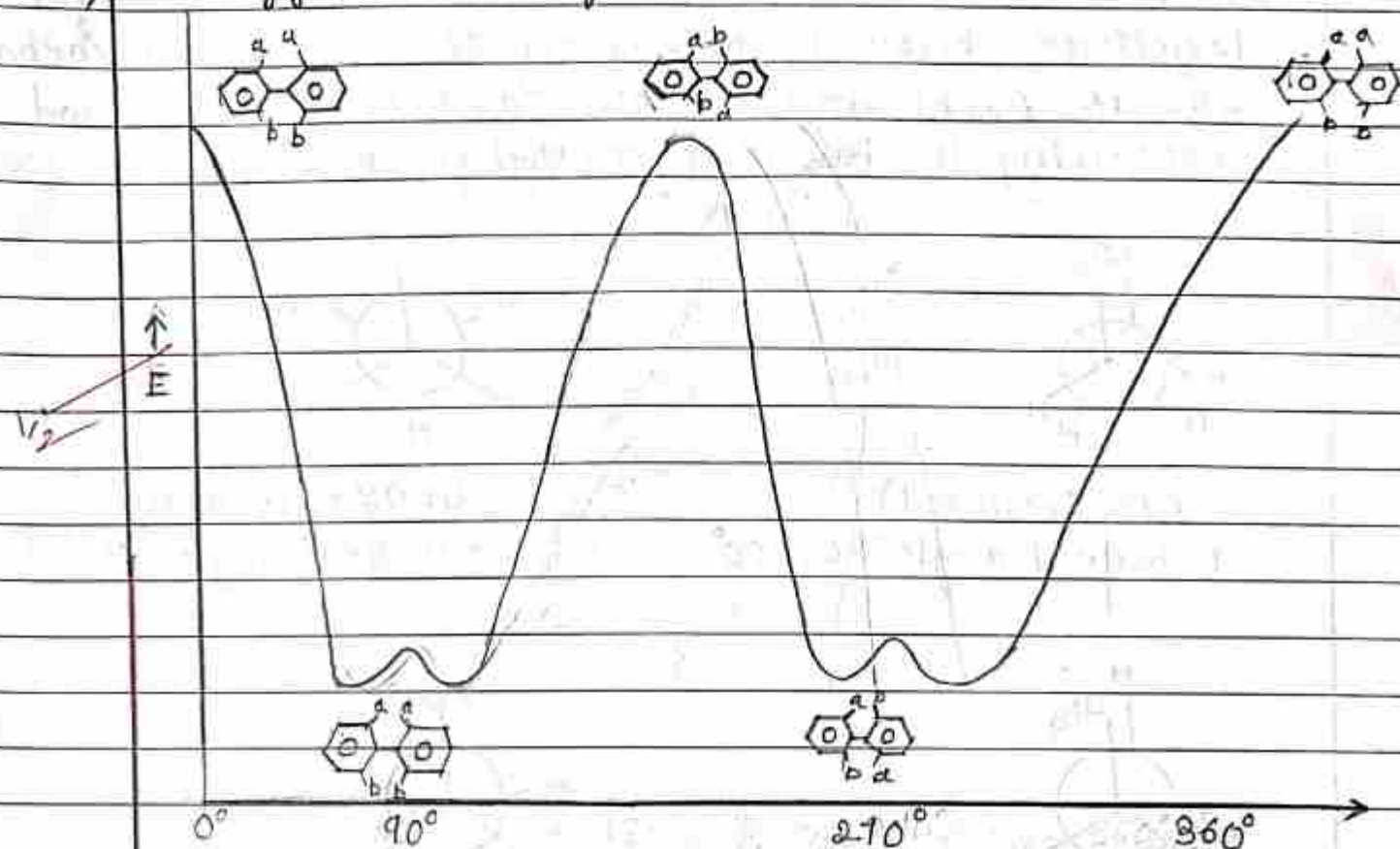


Eclipsed
Dihedral angle = 240°



gauche (staggered)
Dihedral angle = 300°

5) Energy profile diagram Atropisomerism



PDEA's Seth Govind Raghunath Sable College of Pharmacy Saswad

Class Test-1

Platform: Online (Testmoz)

Class: S. Y. B. Pharm. (Sem.-IV)

Subject: Pharmaceutical Organic Chemistry-III

Roll no.	Name	Start Datetime	End Datetime	Time	Percent	Points Ea	Points Po	Which co	Cis-trans
1	01 Badhe pranav rajendra	2022-03-21 09:41:04+05:30	2022-03-21 09:51:09	0:09:58	90	9	10	1	1
2	Bande Aakash bharat	2022-03-21 09:42:51+05:30	2022-03-21 09:48:51	0:04:02	40	4	10	1	0
3	03 Bankar sanjana ajitkumar	2022-03-21 09:39:07+05:30	2022-03-21 09:48:45	0:09:32	70	7	10	0	0
4	Roll no.-05 Bhale Supriya Hanuma	2022-03-21 09:39:58+05:30	2022-03-21 09:49:35	0:09:31	60	6	10	1	1
5	05_Bhandari Rohan Sanjaykumar	2022-03-21 09:39:51+05:30	2022-03-21 09:49:06	0:09:05	60	6	10	0	1
6	06-Bhoite Adarsh jalindar	2022-03-21 09:39:51+05:30	2022-03-21 09:49:22	0:09:24	80	8	10	0	1
7	7-Bhoite Rutika rajendra	2022-03-21 09:40:59+05:30	2022-03-21 09:51:02	0:09:35	60	6	10	1	1
9	09-Bhujbal Nandini shrirang	2022-03-21 09:39:03+05:30	2022-03-21 09:47:38	0:08:29	80	8	10	1	1
10	10- Botre Rutuja Sanjay	2022-03-21 09:38:53+05:30	2022-03-21 09:48:51	0:09:52	80	8	10	1	0
11	13-Budhe Rupali Prakash	2022-03-21 09:40:31+05:30	2022-03-21 09:50:33	0:09:56	60	6	10	1	1
12	12.DANDE OM SANTOSH	2022-03-21 09:38:57+05:30	2022-03-21 09:48:54	0:06:13	80	8	10	1	1
13	13 dighe yash dadaso	2022-03-21 09:41:16+05:30	2022-03-21 09:48:51	0:07:32	70	7	10	1	1
14	14 gaikwad omkar deepak	2022-03-21 09:43:33+05:30	2022-03-21 09:48:15	0:04:40	70	7	10	1	1
15	15 Gaikwad Rutik Shivdas	2022-03-21 09:39:06+05:30	2022-03-21 09:48:55	0:09:34	80	8	10	0	1
16	16 Gaikwad Sudarshan Macchind	2022-03-21 09:39:48+05:30	2022-03-21 09:48:37	0:08:45	70	7	10	1	0
17	17, Ghatole Pooja Sunil	2022-03-21 09:40:59+05:30	2022-03-21 09:50:10	0:09:05	70	7	10	1	1
20	Jadhav srushti Shekhar	2022-03-21 09:39:06+05:30	2022-03-21 09:48:26	0:08:40	80	8	10	1	0
21	21_jagtap gaurav sambhaji	2022-03-21 09:41:00+05:30	2022-03-21 09:51:03	0:09:55	80	8	10	1	1
22	22 - Jagtap Pradnya Navnath	2022-03-21 09:39:24+05:30	2022-03-21 09:49:27	0:09:54	60	6	10	1	1
23	Jagtap Prakruti Devanand	2022-03-21 09:39:07+05:30	2022-03-21 09:48:44	0:09:33	80	8	10	1	0
24	24 Jagtap Shivani Sanjay	2022-03-21 09:55:16+05:30	2022-03-21 09:56:01	0:00:44	80	8	10	1	0
25	25 jagtap Swapnil Prakash	2022-03-21 09:39:13+05:30	2022-03-21 09:47:18	0:07:47	70	7	10	1	1
26	Jogdand Aditi Rajaram	2022-03-21 09:38:58+05:30	2022-03-21 09:49:27	0:07:06	70	7	10	1	1
27	27- kad Geetanjali Ramdas	2022-03-21 09:39:17+05:30	2022-03-21 09:48:14	0:08:52	80	8	10	1	0
28	Roll no -28 kadam Somnath Dada	2022-03-21 09:39:20+05:30	2022-03-21 09:49:03	0:09:34	80	8	10	1	1
29	29-Kalane Chetan Sominath	2022-03-21 09:41:04+05:30	2022-03-21 09:50:10	0:08:48	70	7	10	1	1
30	30-kamble Namrata vijay	2022-03-21 09:39:06+05:30	2022-03-21 09:49:02	0:09:47	80	8	10	1	0

31	31 Kamthe yash ramchandra	2022-03-21 09:43:05+05:30	2022-03-21 09:49:56	0:06:48	80	8	10	1	1
32	32_Karpe Vaibhav Gangaprasad	2022-03-21 09:40:01+05:30	2022-03-21 09:48:51	0:08:40	60	6	10	0	1
33	33 kaur deepinder jasbir singh	2022-03-21 09:39:13+05:30	2022-03-21 09:47:21	0:08:01	90	9	10	1	1
34	34-khade Ashvini laxman	2022-03-21 09:42:59+05:30	2022-03-21 09:48:58	0:05:56	80	8	10	1	1
35	35. Khairé Revā Anil	2022-03-21 09:39:07+05:30	2022-03-21 09:48:59	0:09:46	80	8	10	1	0
36	36-KIRVE ABHIJITH SUNIL	2022-03-21 09:40:02+05:30	2022-03-21 09:49:03	0:07:49	90	9	10	1	1
37	37-Konde Rutuja Dipak	2022-03-21 09:40:41+05:30	2022-03-21 09:49:10	0:08:17	80	8	10	1	0
38	38-Kudale Suhas Santosh	2022-03-21 09:39:13+05:30	2022-03-21 09:48:52	0:09:34	90	9	10	1	1
39	39 Lohar Om Ganesh	2022-03-21 09:39:42+05:30	2022-03-21 09:48:50	0:09:02	60	6	10	0	0
40	40 Lokhande Shubhada Vijay	2022-03-21 09:39:13+05:30	2022-03-21 09:48:34	0:03:18	70	7	10	1	0
42	42 - Magare Avinash Rajnikant	2022-03-21 09:38:40+05:30	2022-03-21 09:48:31	0:09:47	60	6	10	0	1
43	43- Md Washim Akram	2022-03-21 09:39:40+05:30	2022-03-21 09:49:11	0:09:23	60	6	10	0	1
44	44 Memane Anuj Avinash	2022-03-21 09:40:00+05:30	2022-03-21 09:48:53	0:08:31	80	8	10	1	1
45	45 Memane pratik Navnath	2022-03-21 09:40:47+05:30	2022-03-21 09:49:05	0:08:12	70	7	10	0	1
46	46 - Mokashi Aarti Manesh	2022-03-21 09:41:32+05:30	2022-03-21 09:48:50	0:07:11	60	6	10	1	0
47	47.BHAT AKIB MUSHTAQ	2022-03-21 09:39:58+05:30	2022-03-21 09:48:43	0:08:39	70	7	10	1	1
48	48- Nawale Chanchal Sanjay.	2022-03-21 09:38:59+05:30	2022-03-21 09:49:01	0:09:54	60	6	10	1	1
50	50 Newase Prashant Kailas	2022-03-21 09:39:23+05:30	2022-03-21 09:48:34	0:08:58	80	8	10	1	0
51	51-Raskar Nikita Rohidas	2022-03-21 09:39:29+05:30	2022-03-21 09:48:48	0:09:12	80	8	10	1	0
52	52 Pathare Aniket Kanifnath	2022-03-21 09:41:18+05:30	2022-03-21 09:48:56	0:07:34	90	9	10	1	1
53	53 Pawar Ankur Nitin	2022-03-21 09:40:08+05:30	2022-03-21 09:49:36	0:09:23	80	8	10	1	1
54	54 pawar omprasad anandrao	2022-03-21 09:40:28+05:30	2022-03-21 09:49:01	0:08:26	80	8	10	1	1
55	55- Pawar Shweta Digambar	2022-03-21 09:39:05+05:30	2022-03-21 09:47:39	0:08:25	50	5	10	1	0
56	PURSHARTH BHARDWAJ	2022-03-21 09:39:27+05:30	2022-03-21 09:45:53	0:06:21	90	9	10	1	1
57	57-Raut Rutuja Dattatraya	2022-03-21 09:39:13+05:30	2022-03-21 09:48:48	0:09:29	90	9	10	1	1
58	58-kumari riya manohar jal	2022-03-21 09:39:32+05:30	2022-03-21 09:47:23	0:07:43	80	8	10	1	1
59	59. Salunke Aniket Vilas	2022-03-21 09:40:07+05:30	2022-03-21 09:49:50	0:09:08	60	6	10	0	1
60	Shah Aarif Majid	2022-03-21 09:38:41+05:30	2022-03-21 09:44:37	0:05:49	80	8	10	1	1
61	61-Shevate Deepraj Navnath	2022-03-21 09:42:48+05:30	2022-03-21 09:48:16	0:05:19	80	8	10	1	1
62	62 shinde sejai Ganesh	2022-03-21 09:42:22+05:30	2022-03-21 09:49:40	0:03:12	70	7	10	1	1
63	63-solanke pratiksha gajanan	2022-03-21 09:39:58+05:30	2022-03-21 09:50:00	0:09:57	80	8	10	1	1

64	64-sonawane shubham raju	2022-03-21 09:42:19+05:30	2022-03-21 09:52:04	0:09:45	80	8	10	1	1
65	65-Taware Viraj Dlpak	2022-03-21 09:40:35+05:30	2022-03-21 09:50:28	0:08:25	80	8	10	1	1
66	66- Tonde Amrapali Shahaji	2022-03-21 09:39:33+05:30	2022-03-21 09:49:32	0:09:51	60	6	10	1	1
67	Shrinath sachin wadhane	2022-03-21 09:41:41+05:30	2022-03-21 09:49:02	0:06:59	80	8	10	1	1
68	68-Wagh Prasad Eknath	2022-03-21 09:41:09+05:30	2022-03-21 09:49:27	0:08:14	50	5	10	0	1
69	69- zagade Janhavi Devidas	2022-03-21 09:44:33+05:30	2022-03-21 09:49:45	0:05:09	70	7	10	1	1
70	71- zagade Rahul Rohidas	2022-03-21 09:44:41+05:30	2022-03-21 09:50:21	0:05:26	80	8	10	1	1
71	71 - Zende Pranali Ashok	2022-03-21 09:44:04+05:30	2022-03-21 09:49:38	0:05:31	60	6	10	1	0
72	Anantwal sakshi ashok	2022-03-21 09:39:07+05:30	2022-03-21 09:49:00	0:09:32	80	8	10	1	1
73	Bhoite Aniket Rajendra	2022-03-21 09:39:31+05:30	2022-03-21 09:49:29	0:09:49	90	9	10	1	1
74	74 - jadhav pranoti sanjaykumar	2022-03-21 09:39:08+05:30	2022-03-21 09:47:56	0:08:39	70	7	10	1	1
75	75-Jagtap Vrushali Sunil	2022-03-21 09:39:19+05:30	2022-03-21 09:48:06	0:08:19	50	5	10	0	0
76	Kadam madhura ramdas	2022-03-21 09:38:46+05:30	2022-03-21 09:47:49	0:08:55	70	7	10	1	1
77	77- Kalgunde Monika Ashok	2022-03-21 09:39:15+05:30	2022-03-21 09:48:46	0:09:25	80	8	10	1	1
78	jalshette kapil sanjay	2022-03-21 09:40:36+05:30	2022-03-21 09:48:35	0:07:49	90	9	10	1	1
79	79 - PATIL PAYAL CHANDRAKANT	2022-03-21 09:40:35+05:30	2022-03-21 09:49:51	0:09:07	70	7	10	1	0
80	80 Yadav Shraddha murlidhar	2022-03-21 09:39:46+05:30	2022-03-21 09:49:49	0:09:54	70	7	10	1	1
81	81-Zende Dhanashri Sudhakar	2022-03-21 09:40:30+05:30	2022-03-21 09:50:31	0:09:56	70	7	10	1	1

(2R,4S) a	Which st	Which is	Which of	Absolute	Following	Which in	For the compound to be optically active, it should not possess following characteristics								
0	1	1	1	1	1	1	1								
0	1	1	0	0	0	1	0								
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Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Class: F. Y. B. Pharm. (Sem.-II)

Subject: Pharmaceutical Organic Chemistry-I

Sr. No.	Particulars	Roll No	Name of Students
1	Slow Learner	5	Bhingare Sanskruti Shailesh
		7	Birajdar Vaishnavi Balaji
		8	Chavan Saurabh Ramdas
		9	Choudhari Pratiksha Balaso
		15	Indalkar Ketan Appasaheb
		16	Ingale Shivanjali Vilas
		17	Jadhav Abhishek Nandkumar
		19	Jadhav Anisha Anil
		21	Jagtap Avishkar Dilip
		22	Jagtap Nikita Hanumant
		25	Jagtap Pratik Ajit
		26	Jagtap Pratik Balasaheb
		27	Jagtap Shantanu Chandrakant
		29	Jagtap Yogesh Mahesh
		30	Kakade Parth Satishrao
		33	Khomane Pranit Balu
		35	Kolate Mayuri Machchhindra
		38	Kunjir Atharv Sanjay
		39	Kurpad Ketaki Vitthal
		41	Lokhande Aniket Kashinath
		52	Shinde Ayush Ravindra
		55	Sonawane Srushti Nitin
		57	Tambe Vaishnavi Dattatray
		60	Wagh Saharsh Sunil
2	Advanced Learner	20	Jadhav Snehal Sandeep
		43	Mohite Shravani Santosh
		50	Sayyed Sumayya Firoz
		54	Somani Laxmikant Ganeshlal
		59	Wagh Prachi Gorakhnath
		64	Yadav Sakshi Munnasingh

Name and Signature of Teacher
(Mrs. J. R. Jagtap)

**PUNE DISTRICT EDUCATION ASSOCIATION'S
SETH GOVIND RAGHUNATHI SABLE COLLEGE OF PHARMACY
SASWAD, DIST-PUNE**

Class : F.Y.B.Pharm.(Sem II) Name of Subject: Pharmaceutical Organic Chemistry-I

List of students required for Remedial Coaching 2021-22

Roll No.	Name of student	09/04/22	19/04/22	03/06/22	23/06/22	
5	Bhingare Sanskruti Shailesh	P	P	A	P	
7	Birajdar Vaishnavi Balaji	P	P	P	P	
8	Chavan Saurabh Ramdas	P	A	A	P	
9	Choudhari Pratiksha Balaso	P	P	P	P	
15	Indalkar Ketan Appasaheb	P	P	P	P	
16	Ingale Shivanjali Vilas	A	A	P	P	
17	Jadhav Abhishek Nandkumar	A	P	P	P	
19	Jadhav Anisha Anil	P	P	P	P	
21	Jagtap Avishkar Dilip	P	P	P	P	
22	Jagtap Nikita Hanumant	P	P	P	P	
25	Jagtap Pratik Ajit	P	P	A	P	
26	Jagtap Pratik Balasaheb	P	P	P	P	
27	Jagtap Shantanu Chandrakant	P	P	P	P	
29	Jagtap Yogesh Mahesh	P	P	P	P	
30	Kakade Parth Satishrao	P	P	A	P	
33	Khomane Pranit Balu	A	P	P	P	
35	Kolate Mayuri Machchhindra	A	P	A	P	
38	Kunjir Atharv Sanjay	P	A	P	P	
39	Kurpad Ketaki Vitthal	P	P	P	P	
41	Lokhande Aniket Kashinath	P	P	P	P	
52	Shinde Ayush Ravindra	A	P	P	P	
55	Sonawane Srushti Nitin	P	P	P	P	
57	Tambe Vaishnavi Dattatray	P	P	P	P	
60	Wagh Saharsh Sunil	P	P	P	P	

Name and Sign. of Subject Teacher
(*Mr. J. R. Jagtap*)

Theoretical

Class test on TUPAC names

Class test on carbonyl compd.

Class test

Name : Indalkar Ketan Appasaheb

Roll no : 15

Sub : POC.

Date

Page

IUPAC Name :

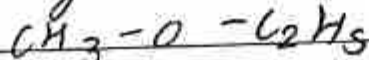
1) cyclopropane carboxylic acid.



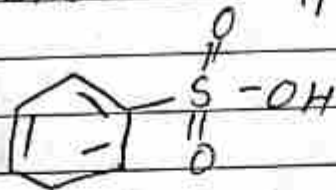
2) 1,2-ethane diol / ethyl glycol



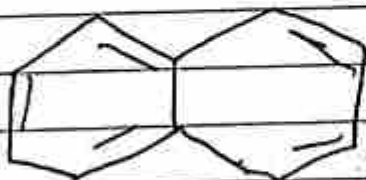
3) ethyl methyl ether

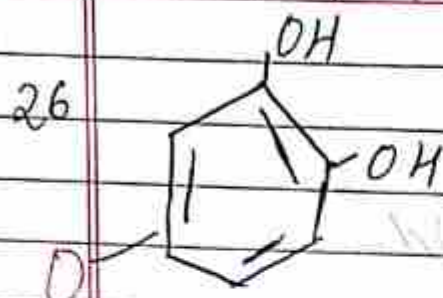


4) Benzene sulphonic acid.

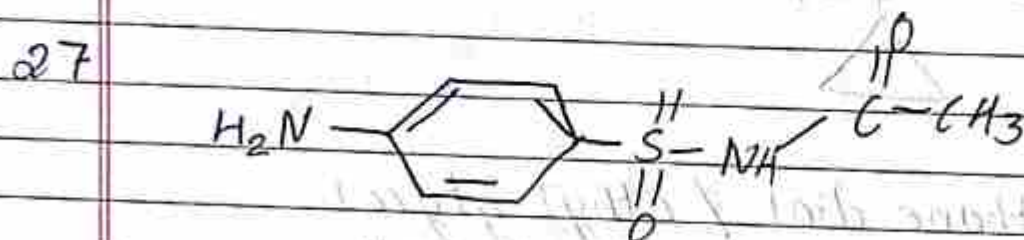


5) Naphthalene

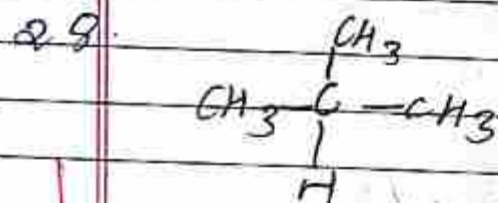




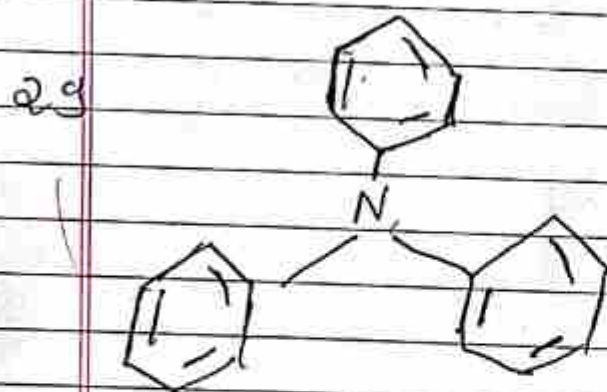
Catechol



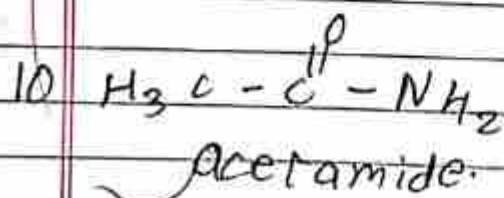
sulphoniacetamide



Isobutane.



Triphenyl amine.



4/10

Date = 3/6/22

5/10

Dhanashri Gaddekar

Dhanashri Gaddekar

Name = Ketaki V. H. H. Kurpadi

Roll no = 39

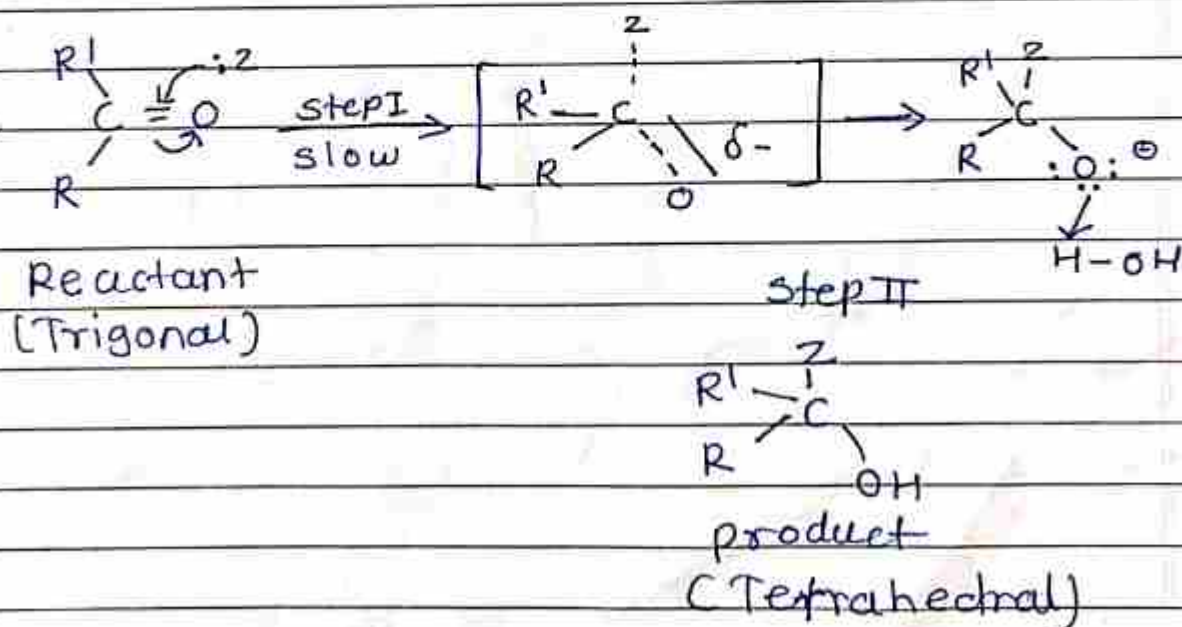
Class = F.Y.B Pharm

Subject = POC

Q.1 Reaction, mechanism of nucleophilic addition reaction to aldehydes & ketones. - (3/19)

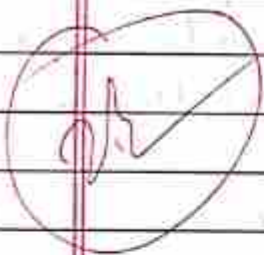
→ under basic condition, the nucleophilic adds first to the electron deficient carbonyl carbon & then reaction is completed by abstraction of an electrophilic (ie $H^{\delta+}$) from the solvent. The carbonyl group is most susceptible to attack by e^- rich nucleophilic reagent i.e. by bases. Thus, the typical reaction of aldehydes & ketones is nucleophilic addition.

consider addition of nucleophile: Z to the carbonyl group.



In this reactant, carbon is trigonal (120°) in the T.S carbon has began to acquire the tetrahedral configuration (109.5°) which is also observed in the product we might expect moderate steric hindrance in this reaction i.e. large R & R' group would tend to resist crowding more than smaller groups. But as compared to T.S for S_N2 reaction (pentavalent 'C') it is less crowded & hence the carbonyl group is "accessible" to attack.

3/2



Compare reactivity of aldehyde & ketones towards nucleophile. -2 M

- 1] Aldehyde are more reactive than ketones
- 2] steric & electronic factor can be used to explain this difference.
- 3] ketones having two alkyl group shows greater crowding as compare to aldehyde that contain only an alkyl group.
- 4] Alkyl group are electron releasing they destabilize the transition state by increasing the negative charge on the oxygen.
- 5] Aromatic aldehydes & ketones are less reactive than their aliphatic counterparts.
- 6] However, the resonance effect of these group stabilizes the reactants even more so that they becomes less to the nucleophile & hence less active.

2 Draw structures

2021- 2022

PBL -1 TRIGGER

Class: F. Y. B. Pharm. (Sem.-II)

Subject: Pharmaceutical Organic Chemistry-I

Date: 10/06/2022



- 1) I < II < III < IV
- 2) II < I < III < IV
- 3) III < II < IV < I
- 4) IV < I < II < III

Arrange the above carboxylic acids with their increasing order of acidic strength and justify your answer.

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad.

FACILITATOR's NOTES

Learning Objectives:

- 1) To learnt about acidity of organic compounds
- 2) To learnt about the different functional groups and its acidity
- 3) To study effect of substituent on acidity of organic compounds.

Compilation of:

- 1) Select correct option of acidity order.
- 2) Give explanation of correct option
- 3) Give explanation of incorrect options
- 4) Explain about acidity of organic compounds.
- 5) Explain effect of substituent on acidity of organic compounds.

References:

- 1) Advanced Organic Chemistry by Bahl & Bahl, S Chand Publication, Twentieth Revised Edition, 2011.
- 2) Organic Chemistry by Morrison & Boyd, 6th edition, Pearson Education.
- 3) Advanced General Organic Chemistry A Modern Approach by S. K. Ghosh, New Central Book Agency (P) Ltd., 3rd edition.

Signature of Facilitator

**Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad.**

2021- 2022

PBL

Class: F. Y. B. Pharm. (Sem.-II))

Subject: Pharmaceutical Organic Chemistry-I

Date: 10/06/2022

Sr. No.	Name of Facilitator	Group	Roll number of the students
1.	Ms. Jagtap V. D.	1	1-09
2.	Mr. Nigade G. B.	2	10-18
3.	Ms. Khatal S.S.	3	19-27
4.	Mrs. Jagtap J. R.	4	28-36
5.	Mr. Kale A. P.	5	37-45
6.	Mr. Bhosale N. R.	6	46-54
7.	Mr. Shilimkar V. C.	7	55-65

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad.

2021- 2022

PBL -1 TRIGGER

Class: F. Y. B. Pharm. (Sem.-II)

Subject: Pharmaceutical Organic Chemistry-I

Date: 10/06/2022



- 1) I < II < III < IV
- 2) II < I < III < IV
- 3) III < II < IV < I
- 4) IV < I < II < III

Arrange the above carboxylic acids with their increasing order of acidic strength and justify your answer.

ny
(Mr. J. N. Jagtap)
Subject Teacher

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad.

FACILITATOR's NOTES

Learning Objectives:

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- 2) Organic Chemistry by Morrison & Boyd, 6th edition, Pearson Education.
- 3) Advanced General Organic Chemistry A Modern Approach by S. K. Ghosh, New Central Book Agency (P) Ltd., 3rd edition.

Handwritten notes:
Sable College of Pharmacy
Saswad
Pune District Education Association

**Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad.**

2021- 2022

PBL

Class: F. Y. B. Pharm. (Sem.-II))

Subject: Pharmaceutical Organic Chemistry-I

Date: 10/06/2022

Sr. No.	Name of Facilitator	Group	Roll number of the students
1.	Ms. Jagtap V. D.	1	1-09
2.	Mr. Nigade G. B.	2	10-18
3.	Ms. Khatal S.S.	3	19-27
4.	Mrs. Jagtap J. R.	4	28-36
5.	Mr. Kale A. P.	5	37-45
6.	Mr. Bhosale N. R.	6	46-54
7.	Mr. Shilimkar V. C.	7	55-65

W
CMMS. J.R. Jagtap

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Feedback of students on PBL conducted on 10/06/2022

Subject: Pharmaceutical Organic Chemistry-I

Class: F. Y. B. Pharm. (Sem.-II)

This questionnaire has been designed to understand the opinion of students involved in the PBL activity so that the activity can be improved in the future. The group leader is advised to answer the questions on behalf of all the group members.

Please tick the appropriate box:

Trigger	Yes	No	Can't say
Was the trigger provided to you easily understandable?	✓		
Was the trigger interesting?	✓✓		
Could you relate the trigger to your curriculum?	✓✓		
Role of facilitator			
Did you find the role of facilitator useful in understanding the problem?	✓		
Did you take the help of the facilitator in identifying the objectives of the problem?	✓		
Resources			
Did you refer to the books available in the library for compiling the data related to your problem?	✓		
Were there sufficient reference books available in the library for researching the problem?	✓		
Did you find the internet facility and online resources adequate?	✓		
Overall activity			
Do you think PBL is enhancing your comprehension and analytical skills?	✓		
Do you think PBL is enhancing your referencing & researching skills?	✓		
Do you think PBL is contributing towards improving your communication and presentation skills?	✓		
Do you think this activity should be continued in future also?	✓		

Suggestions if any ----- No -----

-----Pl. tear from here before submitting-----

Name of the group leader- Kapare Rutuja Sanjay Kapare.

Signature.....

Group No.: 4

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad.

FACILITATOR ASSESSMENT FORM

PBL No.: 1

Date: 10/06/2022

Subject: Pharmaceutical Organic Chemistry-I Cass: F. Y. B. Pharm. (Sem.-II)

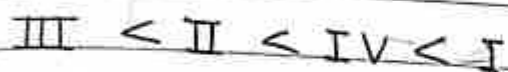
Please rate in the 5 point scale: 5- Excellent, 4- Very Good, 3- Good, 2- Satisfactory, 1 - Not satisfactory

Criteria	Roll No. of the student									
	28	29	30	31	32	33	34	35	36	
Application of knowledge base										
Applies previous knowledge to clarify and define the problem.	5	4	4	5	5	4	5	4	4	
Answers questions and shares his/her opinions by applying acquired knowledge.	5	5	5	4	5	4	5	5	5	
Critical Thinking										
Demonstrate, evidence, critical understanding and critical analysis facts.	4	4	4	5	5	4	5	4	4	
Is applicable making conclusion and decision regarding the diagnostic / therapeutic approaches?	4	5	5	4	4	5	5	5	5	
Demonstrates evidence of following a sequential analysis of the problem.	5	4	4	5	5	4	5	5	5	
Self Directed Learning(Self study)										
Defines learning objectives and learning goals.	5	4	4	5	5	5	5	5	5	
Demonstrates evidence of accomplishment of learning objectives.	5	5	5	4	5	4	5	5	5	
If necessary, seeks counseling to orient His/her study and willing to improve	5	4	4	5	5	4	5	4	4	
Collaborative work										
Works towards achievement of the groups learning goals with commitment.	5	4	4	5	4	5	5	4	4	
Demonstrates effective interpersonal attributes.	5	4	4	4	5	4	4	5	5	
Accepts feedback with openness.	5	4	4	4	5	4	4	4	4	
Reacts positively to feedback and criticism.	4	4	4	4	4	4	5	4	4	
Stands up for his/her points of view.	4	4	4	4	5	4	4	4	4	
Shows ability to change his/her point of view of new information given/ obtained.	5	4	4	5	5	4	5	5	5	

Signature of Facilitator

(Mr. Jagtap J.R.)

Select correct option of acidity order



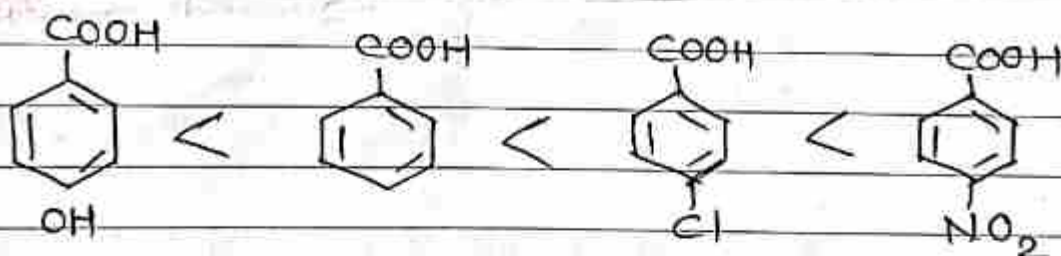
Give explanation of correct option

Electron withdrawing groups increase the acidity of carboxylic acids

$-\text{Cl}$, $-\text{CN}$, $-\text{NO}_2$

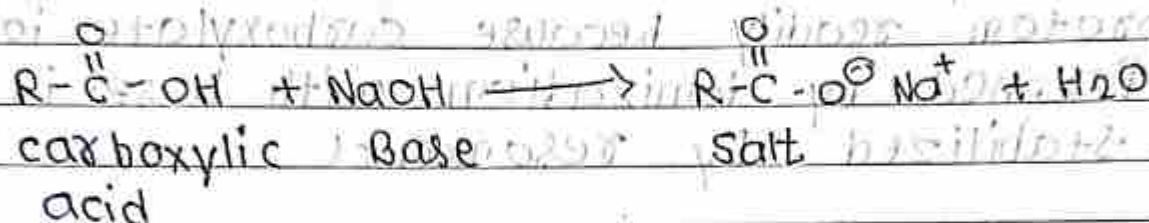
Electron donating groups decrease the acidity of carboxylic acids

$-\text{CH}_3$, $-\text{OCH}_3$, $-\text{OH}$



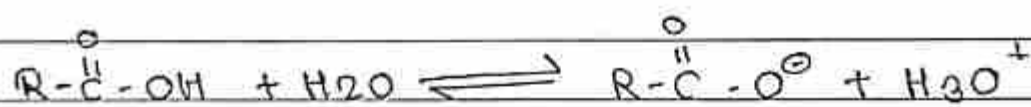
2.4 Acidity of carboxylic acids

- i) carboxylic acids are acidic in nature. They can donate proton and form salt with bases



2) Acidity constant:

- i) strong acids (e.g. HCl or H_2SO_4) completely ionize in aqueous solution.
- ii) Carboxylic acids are weak acids
- iii) They are only partially ionized in aqueous solution & equilibrium exists between ionized and unionized forms.

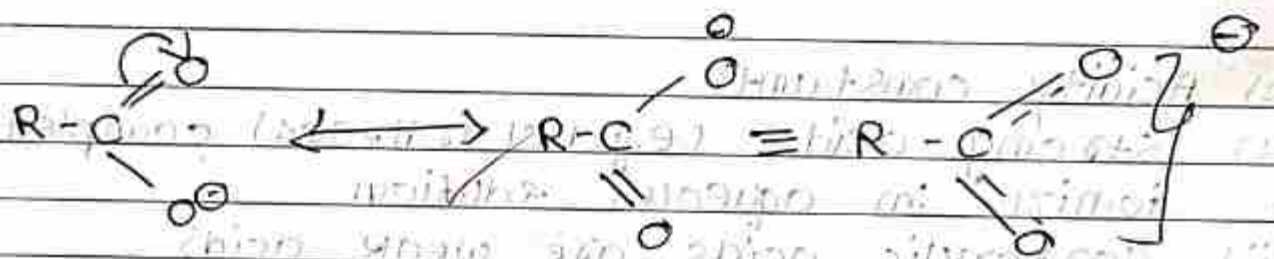


- iv) The extent of ionization is described by an equilibrium constant K_a which is known as Acidity constant
- v) It is defined as concentration of product of ionization in moles per litre divided by concentration of unionized acids

$$K_a = \frac{[\text{RCOO}^{\ominus}] [\text{H}_3\text{O}^{\oplus}]}{[\text{RCOOH}]}$$

vii] The acidity constant describe relative strength of weak acid

carboxylic acids are acidic and lose a proton readily because carboxylate ion formed by ionization with base is stabilized by resonance



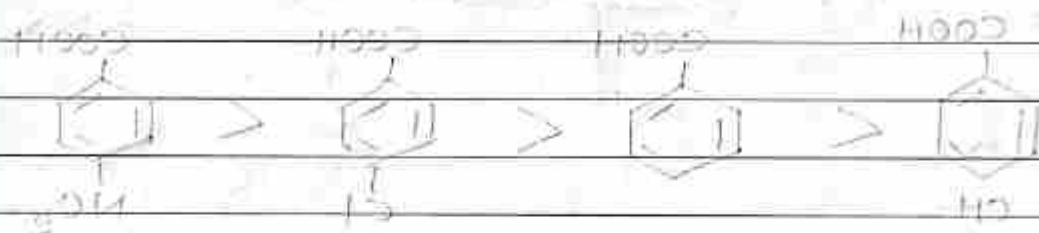
$$K_a = \frac{[\text{R}-\text{C}(=\text{O})\text{O}^-][\text{H}^+]}{[\text{R}-\text{C}(=\text{O})\text{OH}]}$$

Acidity

Q.2. why other three option is incorrect

→ In other option there is no such order of increasing acidity like this option $\text{III} < \text{II} < \text{IV} < \text{I}$

so, the all other option is incorrect hence, they are incorrect option of increasing acidity strength



Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher : Ms. Pooja B. Khatate

Class: F. Y. B. Pharm Sem-I

Subject: Pharmaceutics I

Sr. No.	Particulars	Roll No	Name of Students	09/02/2022	27/03/2022
1	Advanced Learner	50	Sayyad Sumayya	P	P
2		56	Surana Om	P	P
3		64	Yadav Sakshi	P	P
4		65	Yadav Shreya	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/02/2022	11/03/2022	29/03/2022
1	Slow Learner	25	Jagtap Pratik	P	P	P
2		27	Jagtap Shantanu	P	P	P
		29	Jagtap Yogesh	P	P	P
		30	Kakade Parth	P	P	P
Measures taken				Discussion on Introduction to Pharmaceutics	Discussion on dosage form	Discussion on evaluation test

P. Khatate
 Subject Teacher

Ms. Pooja B. Khatate

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher : Ms.S.B.Samgir

Class: F. Y. B. Pharm Sem-II

Subject: Computer Application in Pharmacy.

Sr. No.	Particulars	Roll No	Name of Students	09/02/2022	27/03/2022
1	Advanced Learner	50	Sayyad Sumayya	P	P
2		56	Surana Om	P	P
3		64	Yadav Sakshi	P	P
4		65	Yadav Shreya	P	P
Measures taken				Guidance	Discussion

Sr. No	Particulars	Roll No	Name of Students	08/02/2022	11/03/2022	29/03/2022
1	Slow Learner	25	Jagtap Pratik	P	P	P
2		27	Jagtap Shantanu	P	P	P
		29	Jagtap Yogesh	P	P	P
		30	Kakade Parth	P	P	P
Measures taken				Discussion on Introduction to Pharmaceutics	Discussion on dosage form	Discussion on evaluation test

Subject Teacher

Ms.S.B.Samgir



Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher: Ms.A.A.Khare

Class: F. Y. B. Pharm Sem-II

Subject: Communication Skills

Sr. No.	Particulars	Roll No	Name of Students	23/01/2022	22/03/2022
1	Advanced Learner	50	Sayyad Sumayya	P	P
2		56	Surana Om	P	P
3		64	Yadav Sakshi	P	P
4		65	Yadav Shreya	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	28/01/2022	22/02/2022	25/03/2022
1	Slow Learner -	25	Jagtap Pratik	P	P	P
2		27	Jagtap Shantanu	P	P	P
		29	Jagtap Yogesh	P	P	P
		30	Kakade Parth	P	P	P
Measures taken				Discussion	Discussion o	Discussion

Subject Teacher

Ms.A.A.Khare

Khare.

**Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad**

Academic Year 2021-22

Name of teacher : Mr. Vaibhav Shilimkar

Class: F. Y. B. Pharm Sem-II

Subject: Environmental Sciences.

Sr. No.	Particulars	Roll No	Name of Students	09/02/2022	27/03/2022
1	Advanced Learner	50	Sayyad Sumayya	P	P
2		56	Surana Om	P	P
3		64	Yadav Sakshi	P	P
4		65	Yadav Shreya	P	P
Measures taken				Guidance	Discussion

Sr. No	Particulars	Roll No	Name of Students	08/02/2022	11/03/2022	29/03/2022
1	Slow Learner	25	Jagtap Pratik	P	P	P
2		27	Jagtap Shantanu	P	P	P
		29	Jagtap Yogesh	P	P	P
		30	Kakade Parth	P	P	P
Measures taken				Discussion on Introduction to Pharmaceutics	Discussion on dosage form	Discussion on evaluation test

Subject Teacher

Mr. Vaibhav Shilimkar

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad
Academic Year 2021-22

Name of teacher : Mr. J.V. Shinde
 Class: S. Y. B. Pharm Sem-III
 Subject: Pharmaceutical Engineering

Subject: Pharmaceutical Engineering					
Sr. No.	Particulars	Roll No	Name of Students	15/10/2021	27/01/2022
1	Advanced Learner	22	Jagtap Pradnya Navnath	P	P
2		40	Lokhande Shubhada Vijay	P	P
3		46	Mokashi Aarti Manesh	P	P
4		48	Nawale Chanchal Sanjay	P	P
5		79	Patil Payal Chandrakant	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/08/2021	15/10/2021	21/01/2022
1	Slow Learner	14	Gaikwad Omkar Deepak	P	P	P
2		65	Taware Viraj Dipak	P	P	P
3		67	Wadhane Shrinath Sachin	P	P	P
4		70	Zagade Rahul Rohidas	P	P	P
Measures taken				Discussion on mechanism of size separation	Discussion on Bernoulli's theorem	Discussion on molecular distillation.

Subject Teacher

Mr. J.V. Shinde

J.V. Shinde

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad
Academic Year 2021-22

Name of teacher : Mr. J.V. Shinde
 Class: S. Y. B. Pharm Sem-III
 Subject: Pharmaceutical Microbiology

Subject: Pharmaceutical Microbiology					
Sr. No.	Particulars	Roll No	Name of Students	15/10/2021	27/01/2022
1	Advanced Learner	22	Jagtap Pradnya Navnath	P	P
2		40	Lokhande Shubhada Vijay	P	P
3		46	Mokashi Aarti Manesh	P	P
4		48	Nawale Chanchal Sanjay	P	P
5		79	Patil Payal Chandrakant	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/08/2021	15/10/2021	21/01/2022
1	Slow Learner	14	Gaikwad Omkar Deepak	P	P	P
2		65	Taware Viraj Dipak	P	P	P
3		67	Wadhane Shrinath Sachin	P	P	P
4		70	Zagade Rahul Rohidas	P	P	P
Measures taken				Discussion on D value, Z value	Discussion on sterilization method	Discussion on disinfectant

Subject Teacher

Mr. J.V. Shinde

J.V. Shinde

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

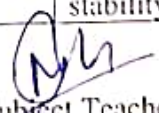
Name of teacher : Mr. N.R.Bhosale

Class: S. Y. B. Pharm Sem-III

Subject: Physical Pharmaceutics II

Sr. No.	Particulars	Roll No	Name of Students	15/02/2022	27/03/2022
1	Advanced Learner	22	Jagtap Pradnya Navnath	P	P
2		40	Lokhande Shubhada Vijay	P	P
3		46	Mokashi Aarti Manesh	P	P
4		48	Nawale Chanchal Sanjay	P	P
5		79	Patil Payal Chandrakant	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/02/2022	15/03/2022	25/03/2022
1	Slow Learner	14	Gaikwad Omkar Deepak	P	P	P
2		65	Taware Viraj Dipak	P	P	P
3		67	Wadhane Shrinath Sachin	P	P	P
4	-	70	Zagade Rahul Rohidas	P	P	P
Measures taken				Discussion on viscosity	Discussion on flow properties of powder	Discussion on drug stability


Subject Teacher

Mr. N.R.Bhosale

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher : Mr. N.R.Bhosale
 Class: S. Y. B. Pharm Sem-III
 Subject: Physical Pharmaceutics I

Subject: Physical Education					
Sr. No.	Particulars	Roll No	Name of Students	15/10/2021	27/01/2022
1	Advanced Learner	22	Jagtap Pradnya Navnath	P	P
2		40	Lokhande Shubhada Vijay	P	P
3		46	Mokashi Aarti Manesh	P	P
4		48	Nawale Chanchal Sanjay	P	P
5		79	Patil Payal Chandrakant	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/08/2021	15/10/2021	21/01/2022
1	Slow Learner	14	Gaikwad Omkar Deepak	P	P	P
2		65	Taware Viraj Dipak	P	P	P
3		67	Wadhane Shrinath Sachin	P	P	P
4		70	Zagade Rahul Rohidas	P	P	P
Measures taken				Discussion on surface tension	Discussion on buffer system	Discussion on drug HLB scale

Subject Teacher

Mr. N.R.Bhosale

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher : Ms. Pooja B. Khatate

Class: T. Y. B. Pharm Sem-VI

Subject: Quality Assurance

Subject: Quality Assurance					
Sr. No.	Particulars	Roll No	Name of Students	11/02/2022	27/03/2022
1	Advanced Learner	01	Prajakta Beldar	P	P
2		09	Isha Dhole	P	P
3		19	Shivani Jadhav	P	P
4		47	Vishalakshi Rokade	P	P
5		57	Poonam Wagh	P	P
Measures taken				Guidance on GPAT	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/02/2022	11/03/2022	25/03/2022
1	Slow Learner	18	Jadhav Adesh	P	P	P
2		31	Khedekar Raj	P	P	P
		33	Takawale Omkar	P	P	P
		54	Kulkarni Omkar	P	P	P
Measures taken				Discussion on QA and QC	Discussion on ISO 9000 and ISO 14000	Discussion on complaints

P. Khatate
Subject Teacher

Ms. Pooja B. Khatate

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher : Ms. Pooja B. Khatate

Class: T. Y. B. Pharm Sem-VI

Subject: Biopharmaceutics And Pharmacokinetics

Sr. No.	Particulars	Roll No	Name of Students	09/02/2022	27/03/2022
1	Advanced Learner	01	Prajakta Beldar	P	P
2		09	Isha Dhole	P	P
3		19	Shivani Jadhav	P	P
4		47	Vishalakshi Rokade	P	P
5		57	Poonam Wagh	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	28/12/2021	09/02/2022	27/03/2022
1	Slow Learner	18	Adesh Jadhav	P	P	P
2		54	Omkar Takawale	P	P	P
Measures taken				Discussion on Introduction to Biopharmaceutics	Discussion on Pharmacodynamic	Discussion on drug acting on system

P. Khatate

Subject Teacher

Ms. Pooja B. Khatate

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

Name of teacher : Ms.V.D.Jagtap

Class: T. Y. B. Pharm Sem-VI

Subject: Pharmaceutical Biotechnology

Sr. No.	Particulars	Roll No	Name of Students	8/02/2022	26/03/2022
1	Advanced Learner	01	Prajakta Beldar	P	P
2		09	Isha Dhole	P	P
3		19	Shivani Jadhav	P	P
4		47	Vishalakshi Rokade	P	P
5		57	Poonam Wagh	P	P
Measures taken				Guidance	Discussion

Sr. No	Particulars	Roll No	Name of Students	28/12/2021	8/02/2022	26/03/2022
1	Slow Learner	18	Adesh Jadhav	P	P	P
2		54	Omkar Takawale	P	P	P
Measures taken				Discussion on Introduction to Biopharmaceutics	Discussion on Pharmacodynamics	Discussion on drug acting on system

Subject Teacher

Ms.V.D.Jagtap

V.D.Jagtap

**Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad**

Academic Year 2021-22

Name of teacher : Mr. N.R. Bhosale

Class: T. Y. B. Pharm Sem-V

Subject: Industrial Pharmacy I

Sr. No.	Particulars	Roll No	Name of Students	12/09/2021	27/12/2021
1	Advanced Learner	2	Bhorade Dipti Sham	P	P
2		03	Bhosale Tanuja Rahul	P	P
3		08	Dhole Isha Popat	P	P
4		44	Pawar Aditya Ashok	P	P
5		47	Salunkhe Dhanashri Sanjay	P	P
Measures taken				GPAT Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/09/2021	11/10/2021	09/12/2021
1	Slow Learner	32	Kulkarni Omkar Sanjay	P	P	P
2		39	Nimbalkar Yash Gorakh	P	P	P
3		45	Raut Ashish Umesh	P	P	P
4		48	Sarwade Ranjit	P	P	P
5		61	Darade Gitanjali	P	P	P
Measures taken				Discussion on tablet manufacturing process	Discussion on granulation	Discussion on pharmaceutical product



Subject Teacher

Mr. N.R. Bhosale

**Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad**

Academic Year 2021-22

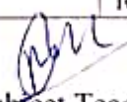
Name of teacher : Mr. N.R. Bhosale

Class: Final Year B. Pharm Sem-VII

Subject: Industrial Pharmacy II

Sr. No.	Particulars	Roll No	Name of Students	09/03/2022	27/04/2022
1	Advanced Learner	49	Pandit Amruta Balasaheb	P	P
2		50	Peshave Tanaya Abhay	P	P
3		57	Shaha Shruti Dilip	P	P
4		16	Giri Pratibha Ramgir	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/02/2022	11/13/2022	21/04/2022
1	Slow Learner	47	Nirhali Nikhil Nandkumar	P	P	P
2		37	Kunjir Sanket Pravin	P	P	P
		34	Kore Aadesh Mahadev	P	P	P
		67	Wagh Sayali Ramdas	P	P	P
Measures taken				Discussion on manufacturing process	Discussion on quality control test	Discussion on liquid dosage form


Subject Teacher

Mr. N.R. Bhosale

Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad

Academic Year 2021-22

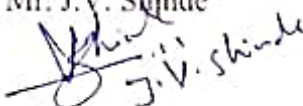
Name of teacher : Mr. J.V. Shinde
 Class: Final. Y. B. Pharm Sem-VIII
 Subject: Cosmetic science

Sr. No.	Particulars	Roll No	Name of Students	11/01/2022	25/03/2022
1	Advanced Learner	49	Pandit Amruta Balasaheb	P	P
2		50	Peshave Tanaya Abhay	P	P
3		57	Shaha Shruti Dilip	P	P
4		16	Giri Pratibha Rangir	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/02/2022	26/02/2022	21/03/2022
1	Slow Learner	47	Nirhali Nikhil Nandkumar	P	P	P
2		37	Kunjir Sanket Pravin	P	P	P
		34	Kore Aadesh Mahadev	P	P	P
		67	Wagh Sayali Ramdas	P	P	P
Measures taken				Discussion on structure of skin	Discussion on cosmaceuticals product	Discussion on surfactants

Subject Teacher

Mr. J.V. Shinde


 J.V. Shinde

**Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad**

Academic Year 2021-22

Name of teacher : Ms. S.M. Deshmukh

Class: Final. Y. B. Pharm Sem-VII

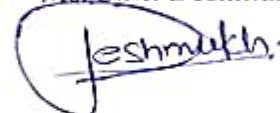
Subject: Novel Drug Delivery System

Sr. No.	Particulars	Roll No	Name of Students	09/09/2021	27/11/2021
1	Advanced Learner	49	Pandit Anruta Balasaheb	P	P
2		50	Peshave Tanaya Abhay	P	P
3		57	Shaha Shruti Dilip	P	P
4		16	Giri Pratibha Ramgir	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/08/2021	11/10/2021	21/12/2021
1	Slow Learner	47	Nirhali Nikhil Nandkumar	P	P	P
2		37	Kunjir Sanket Pravin	P	P	P
		34	Kore Aadesh Mahadev	P	P	P
		67	Wagh Sayali Ramdas	P	P	P
Measures taken				Discussion on NDDS	Discussion on Liposomes	Discussion on Nanoparticle

Subject Teacher

Ms. S.M. Deshmukh



**Pune District Education Association's
Seth Govind Raghunath Sable College of Pharmacy, Saswad**

Academic Year 2021-22

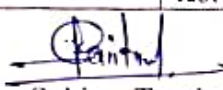
Name of teacher : Mr. S.K.Musale

Class: Final. Y. B. Pharm Sem-VIII

Subject: Biostatistics and Research Methodology

Sr. No.	Particulars	Roll No	Name of Students	09/02/2022	27/03/2022
1	Advanced Learner	49	Pandit Amruta Balasaheb	P	P
2		50	Peshave Tanaya Abhay	P	P
3		57	Shaha Shruti Dilip	P	P
4		16	Giri Pratibha Ramgir	P	P
Measures taken				Guidance	Discussion

Sr. No.	Particulars	Roll No	Name of Students	08/01/2022	11/02/2021	21/01/2022
1	Slow Learner	47	Nirhali Nikhil Nandkumar	P	P	P
2		37	Kunjir Sanket Pravin	P	P	P
		34	Kore Aadesh Mahadev	P	P	P
		67	Wagh Sayali Ramdas	P	P	P
Measures taken				Discussion on factorial design	Discussion on research methodology	Discussion on ANOVA test


Subject Teacher

Mr. S.K.Musale