Department of Chemistry
Kisan Veer Mahavidyalaya, Wai
Date: 27.09.2025

Notice

All the students of M.Sc. are hereby informed that the Department of Chemistry has organized Seminars on various topics on Monday, 29/09/2025. So all students should remain present for the same.

Head
Department of Chemistry
Kisan Veer Mahavidyalaya, Wai

Janata shikshan Sanstha's
Kisan Veer Mahavidyalaya, Wai
Department of Chemistry
Seminar M. Sc. I

Report

A seminar of Nikam Anisha Nivas ,student of M.Sc. I was conducted on Monday, 29/09/2025 at 11:00 am on topic

The points included in seminar are as follows-

* Aromatic compound :-

It is defined as class of cylic, unsaturated, conjugated, planner organic compound which obeyed Huckel's rules

$(4n+2)\ \pi\ e^{\ominus}$

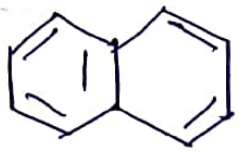
Where, $n = 0, 1, 2, 3, 4$

I> Benzonide aromtic compound :-

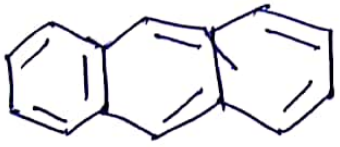
Aromatic compound having one or more benzenering in their structure called as Benzonide aromatic compound.

i> 

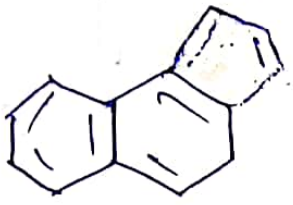
(Benzen)

ii> 

(Napthlene)

iii> 

(anthracene)

iv> 

v> 

B) Antiaromatic compound -

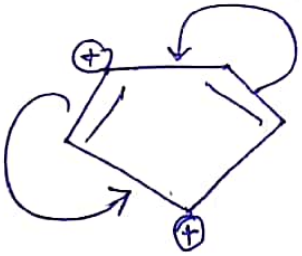
The class of compounds which are planner, cyclic, conjugated shifting & obey huckel's rules that is Antiaromatic compound.

$\therefore (4n)\ \pi e^{\ominus} = 4, 8, 12, 16$

i)

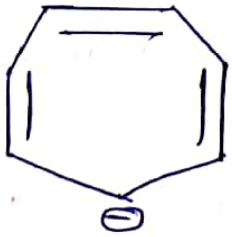
ii)

iii)



iv)

v)



Janata shikshan Sanstha's
Kisan Veer Mahavidyalaya, Wai
Department of Chemistry
Seminar M. Sc. I

Report

A seminar of Jadhav Pranali B. ,student of M.Sc. I was conducted on Monday, 29/09/2025 at 11:00 am on topic

The points included in seminar are as follows-

SN1 reaction :- (substitution nucleophilic unimolecular reaction).

General reaction - $R-X + Nu \xrightarrow[RDS]{Slow} R-Nu$

Step I : fromation of carbocation

$$R-X \xrightarrow[RDS]{Slow} R^{\oplus} + X^{\ominus}$$

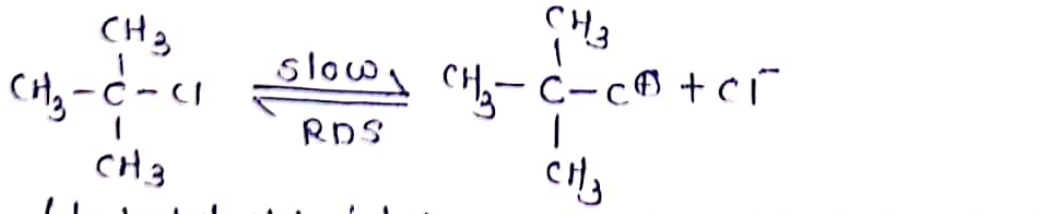
Carbocation intermediate

Step II : Neucleophilic attack on carbocation.

$$R^{\oplus} + Nu^{\ominus} \xrightarrow{Fast} R-Nu$$

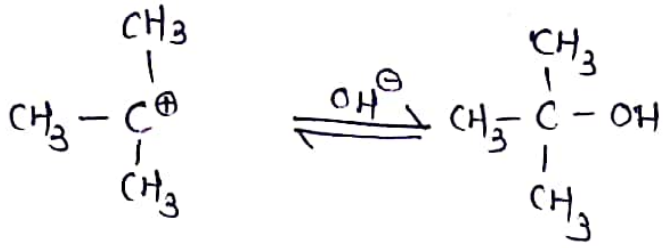
- for eg Hydrolysis of tertiary butyl chloride to tertiary butyl carbocation.

Step I : 3° butyl chloride ionized with 3° bytyl carbocation



(t-butyl chloride) (t-butyl carbocation)

Step II : Neucleophilic solvent water to give protonated alcohol first & them second alcohol itself



— Solvent molecules such as a H_2O, NH_3, OH such substitution rean are called solvelyosis.

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Department of Chemistry
Seminar M. Sc. II

Report

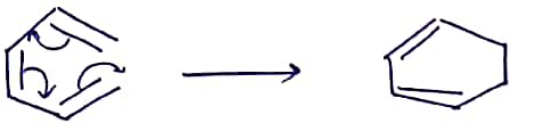
A seminar of Bhosale Priyanka chandrakant, student of M.Sc. II was conducted on Monday, 29/09/2025 at 11:00 am on topic Pericyclic Re & it's types.

The points included in seminar are as follows-

Pericyclic Reactions → Pericyclic reaction is defined as the reactions that occur by a concerted cyclic shift of an electrons.

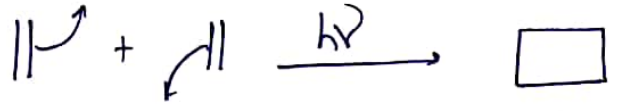
Types of Pericyclic Reaction →

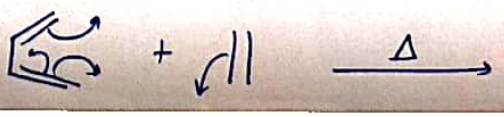
1) Electrocyclic Reaction → The rean in which ring is closed or opened at a expense of conj gated double or triple bond.

e.g ⟹  — new bond formed closed the ring

Loss of one π bond
gain of one σ bond

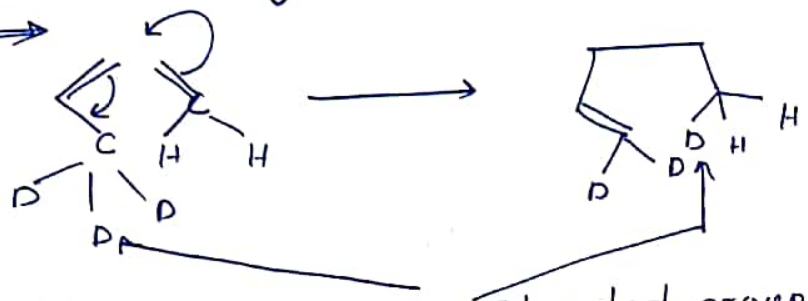
2) cycloaddition Reaction → The rean in which two or more π electrons system react to form a ring at the expense of one π bond

e.g ⟹ 

loss of 2π bond gain  new σ bond formed
new σ bond formed

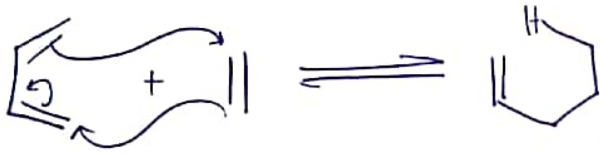
3) **Sigmatropic Rearrangement Rea.n** → The reaction in which σ bond migrates from one end to another end of a π electrons system react to form a ring at the no of π bonds remain same.

eg ⟹



σ bonded group migrates from one end to another end of the π electron system

4) **Group transfer Reac^n** → The rea.n in which one or more group or atoms transfer from one molecule to another molecules.



In this rea.n both molecules are joined together by new σ bond

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Department of Chemistry
Seminar M. Sc. II

Report

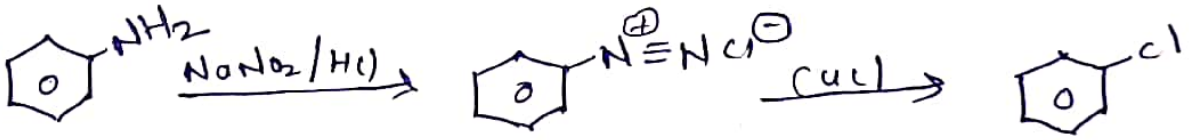
A seminar of Shinde Sakshi prakash, student of M.Sc. II was conducted on Monday, 29/09/2025 at 11:00 am on topic

The points included in seminar are as follows-

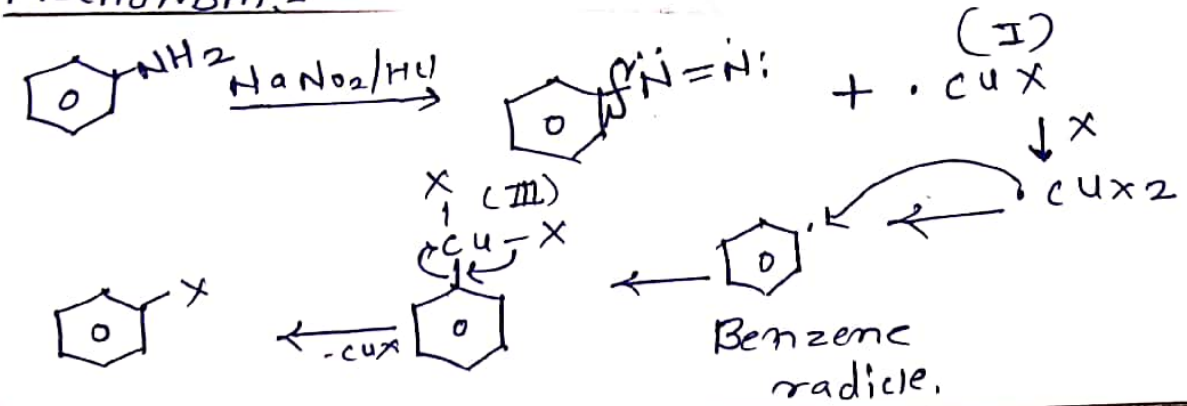
* Sandmayer Reaction

- **Statement:-** The chemical reaction use to synthesis aryl halide from aryl diazonium salt by using copper salt as catalyst or reagent this reaction is example of aromatic nucleophilic substitution of radicle.

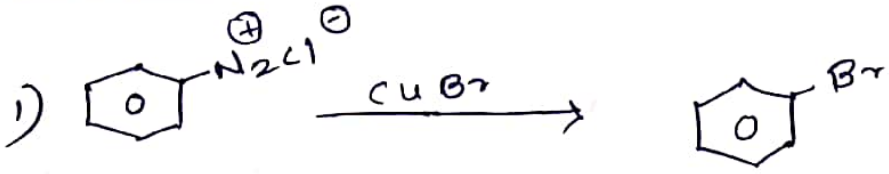
- **G.R:-**

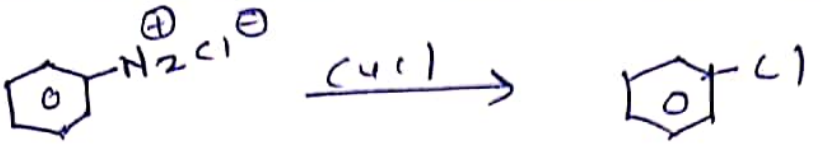


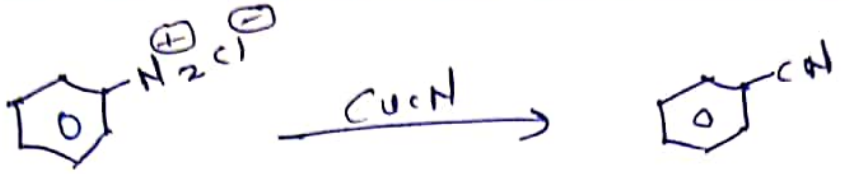
- **Mechanism:-**



Example:-

1) 

2) 

3) 

Janata shikshan Sanstha's
Kisan Veer Mahavidyalaya, Wai
Department of Chemistry
Seminar M. Sc. II

Report

A seminar of Jadhav pratiksha Sadashiv, student of M.Sc. II was conducted on Monday, 29/09/2025 at 11:00 am on topic

The points included in seminar are as follows-

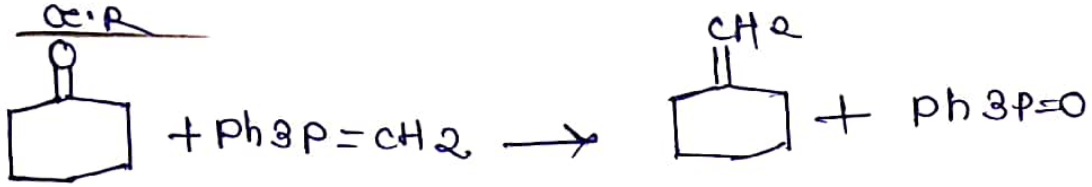
phosphorus ylides

* phosphorous ylide is known as phosphorus Its ability to generate alkene from carbonyl compound.

* Reaction of phosphorous glides

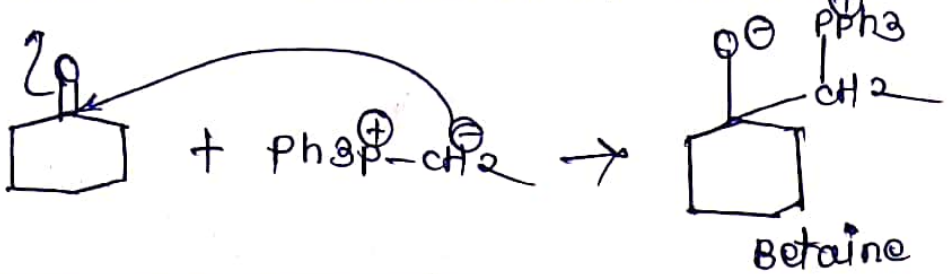
The most well known Reaction of phosphorus ylide is this Reaction with carbonyl compound to give olefins.

- Aldehyde or Ketone on treatment with phosphorus ylide known as witting Reagent given alkene the Reaction is known as witting Reagent.

* 

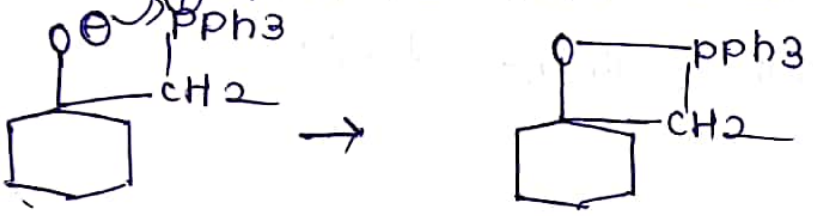
mechanism:-

(E) Nucleophile attack of the ylide on carbonyl carbon to formation of intermediate ylide



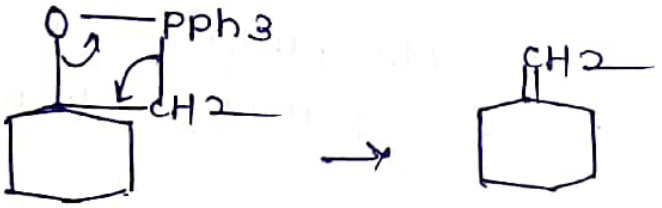
(II) Betaine intermediate undergoes decompositions by intermediate intramolecular attack of Negatively charge oxygen on positively charge phosphorous atom via.

- acyclic four membee transition state known as oxaphosphetane intermediate.



oxaphosphetane intermediate

(III) Decomposition of oxaphosphetane intermediate to form alkene.



+ PPh3=O

(alkene) (Triphenyl phosphine oxide)

Janata shikshan Sanstha's
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Department of Chemistry
Seminar M. Sc. II

Report

A seminar of Nimbalkar Neha Jalindar, student of M.Sc. II was conducted on Monday, 29/09/2025 at 11:00 am on topic Hundsdieker Reaction.

The points included in seminar are as follows-

* Hundsdieker Reaction :-

It is chemical reaction that involve silver salt of Carboxylic acid (R-COOAg) react with Halogen to form reacting intermediate which further undergo decarboxylation ($-CO_2$) leads to formation of alkyl halide

○ General Reaction :-

$$\underset{\text{Silver salt}\\ \text{Carboxylic acid}}{R\text{-}COOAg} + X_2 \xrightarrow[\text{(Polar aprotic solvent)}]{CCl_4} \left[R\text{-}\overset{O}{\overset{\|}{C}}\text{-}\dot{O}\ \dot{X}\right]$$

Reactive intermediate.

$\downarrow -CO_2$

$R - X$
alkyl halide.

○ Mechanism :-

Step I :→

$$R\text{-}\overset{O}{\overset{\|}{C}}\text{-}O\overset{\oplus}{Ag} + \overset{\oplus}{Br}\text{-}\overset{\ominus}{Br} \xrightarrow{-AgBr} R\text{-}\overset{O}{\overset{\|}{C}}\text{-}O\text{-}Br$$

Step II :→

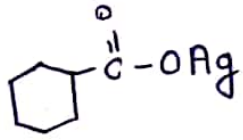
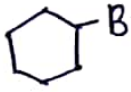
$$R\text{-}\overset{O}{\overset{\|}{C}}\text{-}O\text{-}Br \rightleftharpoons R\text{-}\overset{O}{\overset{\|}{C}}\text{-}\dot{O}\ \dot{Br} \xrightarrow{-CO_2} \dot{R}\ \dot{Br}$$

diradical

Step III :→

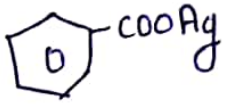
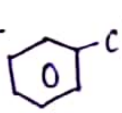
$$\dot{R}\ \dot{Br} \longrightarrow R\text{-}Br$$

• Examples :

1. 1]  $\xrightarrow[CCl_4]{Br_2}$  $+ CO_2\uparrow + AgBr$

2] $CH_3COOAg \xrightarrow[CCl_4]{X_2} CH_3-X + AgX + CO_2\uparrow$

$X = Cl, Br, I$

3]  $\xrightarrow[CCl_4]{Cl_2}$ ~~CH_3-X~~  $+ AgCl + CO_2\uparrow$

Janata shikshan Sanstha's
Kisan Veer Mahavidyalaya, Wai
Department of Chemistry
Seminar M. Sc. II

Report

A seminar of Mrugendra T. Gurav ,student of M.Sc. II. II was conducted on Monday, 29/09/2025 at 11:00 am on topic Retrosynthesis & terms involved.
The points included in seminar are as follows-

Retrosynthesis is process involving a simple tracing back the path from target molecule to starting materials. The systematic tracing back and breakdown of traget molecules involves Numerous terms which Gives Brief Idea of Mechanism and state of Reaction at each point / step.

- Target Molecule - The product of entire reaction which is to be breakdown for Getting Synthons & Starting Material
- Synthons :- A hypothetical fragment of Molecule, usually with a positive or negative charge
- Disconnection :- You disconnect this bond leading to an electrophilic Synthon and nucleophilic synthon. (eg. CH_3^-).
- Synthetic equivalent :- A chemist would not use a pure methyl cation or anion, instead, they would use a synthetic equivalent (like Grignard reagent. (eg. CH_3MgCl).
- Synthetics :- This real reagent, or synthetic equivalent is then used in the actual chemical reaction.

KISAN VEER MAHAVIDYALAYA, WAI
DEPARTMENT OF CHEMISTRY
SEMINAR
M.Sc. I
Attendance

Date: 29.09.2025

Sr. No.	Roll No.	Name of Participant	Signature
1.	2	Chhaya S. More	Chikam
2	1	Shraddha D. Dere	
3.	5	Akhade Komal Kondiram	
4.	8	Thape Niraj Ravindra	
5.	16	Nikam Mayur Sambhaji	M.S. Nkam
6	03	Wadkar Omkar Ashok	
7.	04	Dalvi Sanket Mohan	S.M. Dalvi
8.	09	Bhosale Vinay Ravindra.	
9.	10	Jadhav Pranali Balkrushna	Jadhav.
10.	11	Nikam Anisha Nivas	Nikam.
11.	13	Thopate Divya Dashrath	
12.	6	Kalakhe Aaditi Kamalakar	Kalakhe
13.	17	Bhosale Prasad Rajendra	Bhosale

KISAN VEER MAHAVIDYALAYA, WAI
DEPARTMENT OF CHEMISTRY
SEMINAR
M.Sc. II
Attendance

Date: 29.09.2025

Sr. No.	Roll No.	Name of Participant	Signature
1	13	Nikam Saurabh Ramdas	Nikam
2	14	Jagtap Aditya Prakash	Jagtap
3	23	Dhumal Sumit Mahesh	
4	28	bhosale omkar Jagannath	bhosale
5	27	KHalate Abhishek Audumbar	
6	25	KHarat Suyog bapurao	
7	24	TARATE Praveen milind	TARATE
8.	22	Bhosale Animish Narendra	
9	26	Pandhare pritik Haridas	
10	9	Vaidya vishalBhimrao	
11	8	Tarade Girish Dhananjay	Tarade
12	03	Rahul suresh chaudhari	Chaudhari
13	04	Pratap Shankar Dhumal	
14	02	Mrugendra. T.	M. I. G.
15	29	Prathamesh. R. More	
16	20	kudale Arati Jitendra	kudale
17	21	Ugale shreya Sanjay	Ugale
18	19	Neha Jalindar Nimbalkar	Nimbalkar
19	18	Shinde Sakshi Pratap	Shinde
20	17	Ghosale Priyanka chandrakant	Priyanka
21	07	Kamble Saileesha Ajay	Kamble
22	05	Jadhav Pratiksha Sadashiv	Jadhav

Male - 21
Female - 14
Faculty - 02
37

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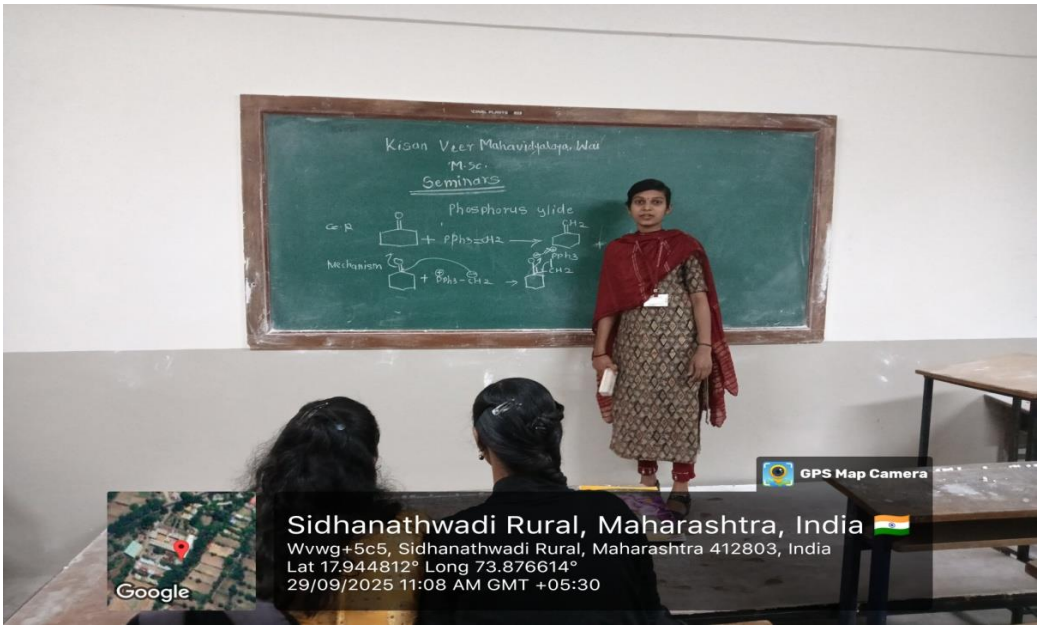
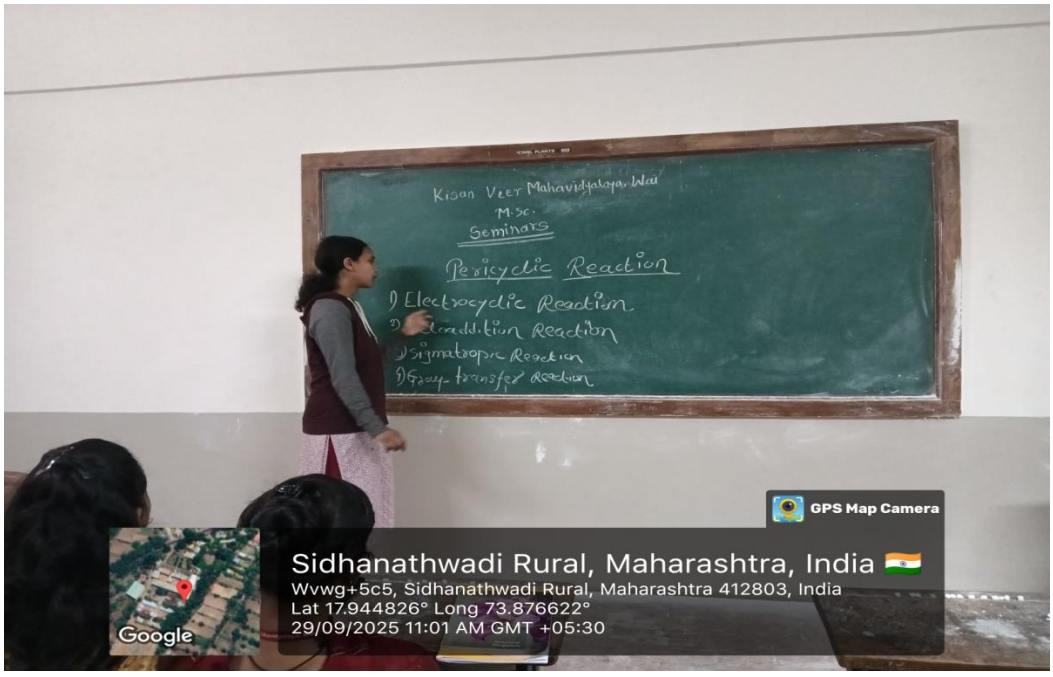
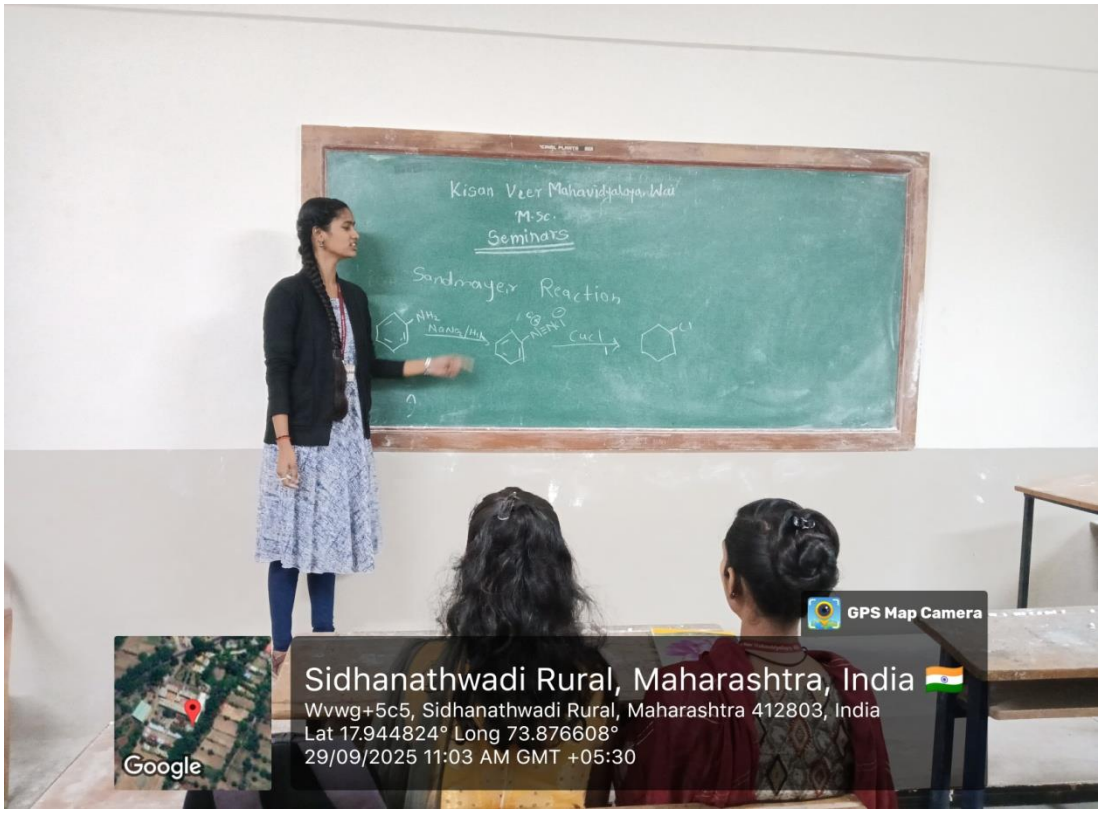
SEMINAR:- M.Sc. I and II 2025-26

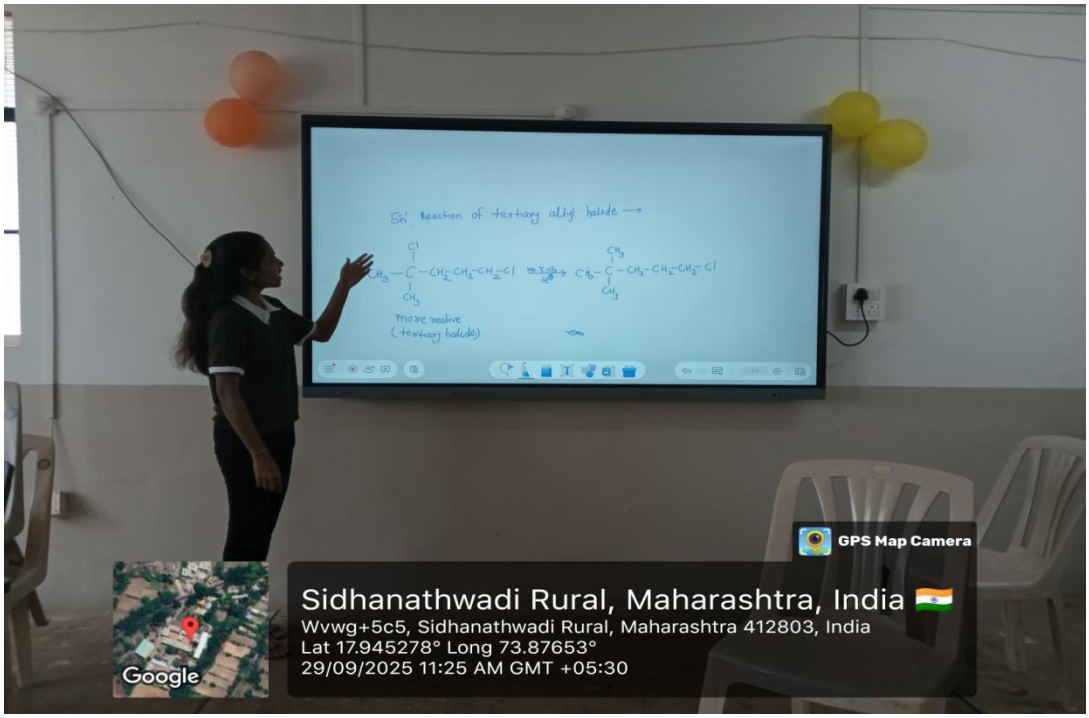
Date: 29.09.2025

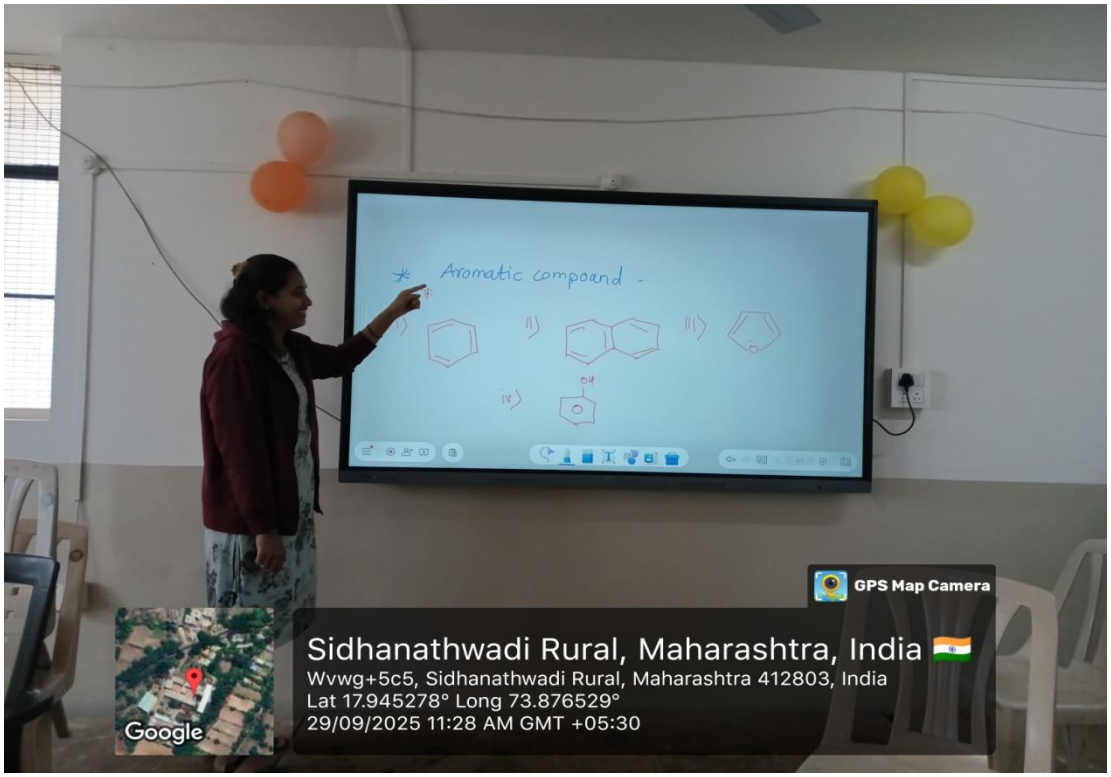


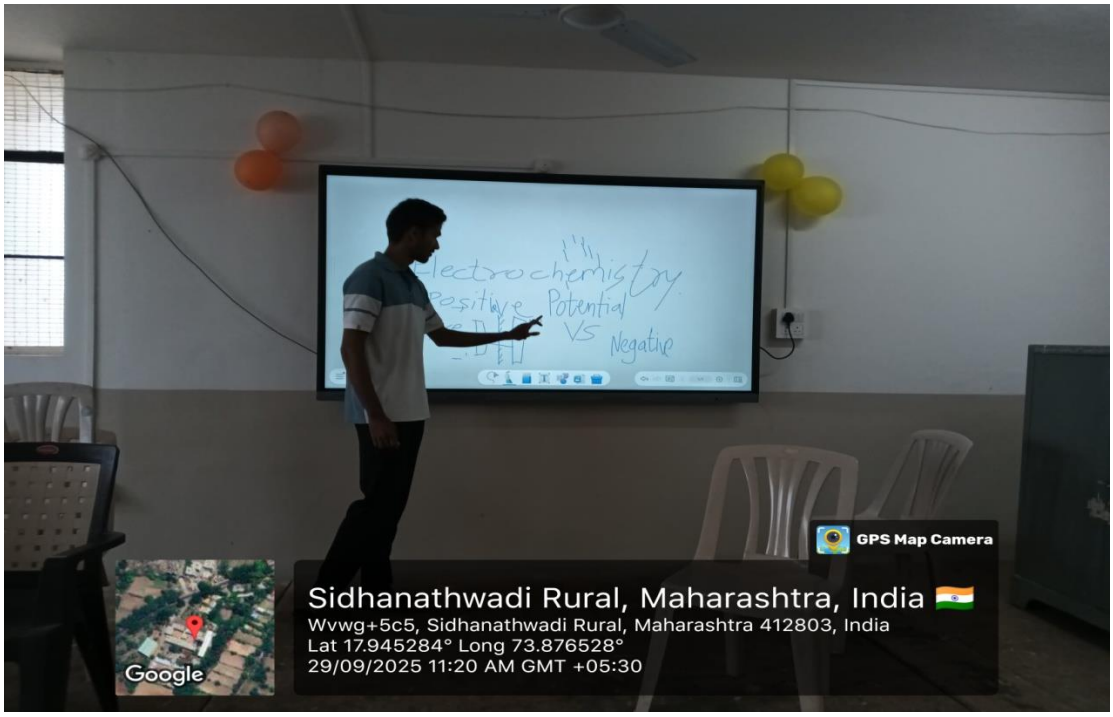



Kisan Veer Mahavidyalaya, Wai
M.Sc.
Seminars
* Hundsdiecker Reaction
R-COOAg + X2 → CCl4 → R-X
GPS Map Camera
Sidhanathwadi Rural, Maharashtra, India
Wvwg+5c5, Sidhanathwadi Rural, Maharashtra 412803, India
Lat 17.944809° Long 73.876614°
29/09/2025 11:05 AM GMT +05:30
Google


Kisan Veer Mahavidyalaya, Wai
M.Sc.
Seminars
Sandmeyer Reaction
GPS Map Camera
Sidhanathwadi Rural, Maharashtra, India
Wvwg+5c5, Sidhanathwadi Rural, Maharashtra 412803, India
Lat 17.944824° Long 73.876608°
29/09/2025 11:03 AM GMT +05:30
Google


Sn1 Reaction of tertiary alkyl halide
more reactive
(tertiary halide)
GPS Map Camera
Sidhanathwadi Rural, Maharashtra, India
Wvwg+5c5, Sidhanathwadi Rural, Maharashtra 412803, India
Lat 17.945278° Long 73.87653°
29/09/2025 11:25 AM GMT +05:30
Google


* Aromatic compound -
GPS Map Camera
Sidhanathwadi Rural, Maharashtra, India
Wvwg+5c5, Sidhanathwadi Rural, Maharashtra 412803, India
Lat 17.945278° Long 73.876529°
29/09/2025 11:28 AM GMT +05:30
Google


electrochemistry
Potential
VS
Negative
GPS Map Camera
Sidhanathwadi Rural, Maharashtra, India
Wvwg+5c5, Sidhanathwadi Rural, Maharashtra 412803, India
Lat 17.945284° Long 73.876528°
29/09/2025 11:20 AM GMT +05:30
Google


GPS Map Camera
Sidhanathwadi Rural, Maharashtra, India
Wvwg+5c5, Sidhanathwadi Rural, Maharashtra 412803, India
Lat 17.944807° Long 73.876596°
29/09/2025 11:18 AM GMT +05:30
Google