Department of Chemistry,
Kisan Veer Mahavidyalaya, Wai.
Date:- 02 .12.2022

Notice:-

All the students of M.Sc.- II are hereby informed that your Seminar on Organic Reaction Mechanism by Aakash M.Savane on Trapping Of Intermediates , Priyanka V. Jadhav on Method Of Determination Of Order & Dipali U. Kachare on Physical Significance Of ρ will be conducted on Saturday 03.12. 2022 at 9.00 am onward So all should remain present for the same.

Head,
Department of Chemistry

Department of Chemistry
Kisan Veer Mahavidyalaya, Wai
Attendance Sheet

M.Sc.- II 03.12.2022

Sr.No.	Roll. No.	Name	Signature	Teachers Name
1	01	malusare Suraj Sampat	Smalusare	
2	02	Pisal Ashutosh Shrikrushna	Pisal.	
3	03	Gaikwad Kiran Kalidas	Kgaikwad	
4	04	Sarvane Akash Malhari	Sawad	
5	05	Shinde Nikhil Uttam	Shinde NU.	
6	06	Dhaygude Suraj Dilip	Suraj.	
7	07	Shinde divya krishna	Shinde DK	
8	08	Dhumal komal shivaji	Dhumal.	
9	09	Shinde Vinod P.	Shinde	Miss P.S.Bhosale
10	10	Deve Mayur A	MADeve.	
11	11	kumbhar Abhishek S	Kumbhar	
12	12			
13	13	Kamble Mayawati Ravindra	Mkamble	
14	14	Jadhav Priyanka Vijay	PVJadhav	
15	15	Ranali Pandurang Tarade	Ptarade	
16	16	Nikita Suryakant kadam	Nkadam	
17	17	Mane Suraj Sharad	Smane	
18	18	Dhanawade Mayuri Ganesh	Mayuri	
19	19	kachare Dipali uttam	kachare	
20	20	Tarade Rushikesh Sanjay	Rtarade	
21	21	patil Ajit suresh	Ajpatil	
22	~~22~~	Mungase saurabh D.	Saurabh M	
23	23	Mungase Namdev M.	Namdev	

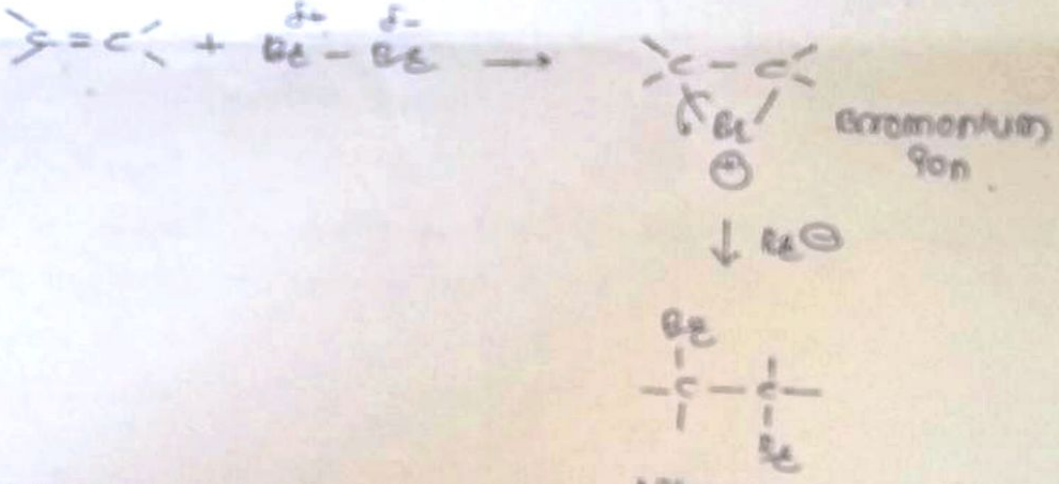
FeMale = 08
F. Male = 14
Total = 22

JANATA SHIKSHAN SANSTHA'S
KISAN VEER MAHAVIDYALAYA, WAI
DEPARTMENT OF CHEMISTRY
SEMINAR M.Sc.II
REPORT

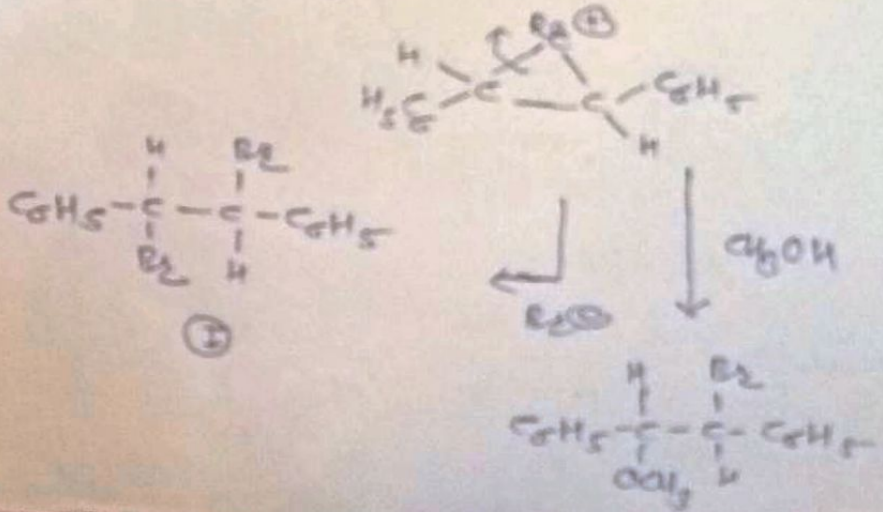
A seminar of Akash M. Savane a student of M.Sc. II was conducted on Saturday 03.12.2022 at 09.00 am on Trapping of intermediates. The points included in his seminar are as follows-

III) Teaping of Intermediates.
The Intermediate formed during the reactions are sometime teapped by using trapping reagent.

e.g. (i) Addition of bromine across $>C=C<$ bond.
In polar forms cyclic bromonium ion which again treat with $Br^{\ominus}$ to form diborane.



(ii) $C_6H_5-CH=CH-C_6H_5 \xrightarrow{Br_2-Br_2}$



JANATA SHIKSHAN SANSTHA'S

KISAN VEER MAHAVIDALYA , WAI

DEPARTMENT OF CHEMISTRY

SEMINAR M.Sc .II

REPORT

A seminar of Priyanka V.Jadhav, a student of M.Sc II was conducted on Saturday ,03/12/2022 at 10:00am on Method of Determination of order .The points included in his seminar are as follows

Order and molecularity of reaction are used to predict the reaction mechanism.

Order of reaction is determined by following methods,

a) Integration method.
b) Van't half differential method.
c) Graphical method.
d) Time ratio method.
e) Ostwald's isolation method.

a) Integration method - In this method amount of reactant or product formed at various intervals for is measured graphically & values of slope or substituted in various rate eq^n of 1st, 2nd, 3rd order reaction.

b) Graphical method -

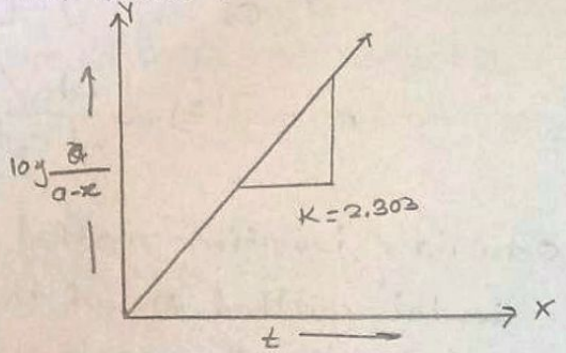
The order of rea^n is determined by plotting different fraction of concentration against time.

For first order rea^n,

$$K = \frac{2.303}{t} \log \frac{a}{(a-x)}$$

plot of $\log \frac{a}{a-x}$

drawn,



If not try for 2nd order rea^n

$$K = \frac{2.303}{t} \log \frac{x}{a(a-x)} \quad \& \quad K = \frac{2.303}{t(a-b)} \log_{10} \frac{b(a-x)}{a(b-x)}$$

c) Half life method or time-ratio method -
In this method time taken to complete definite fraction of r
is measured & order is determin.

$$n = 1 + \frac{\log_{10}(t_1/t_2)}{\log_{10}(a_2/a_2)}$$

$$t_1 \propto \frac{1}{a_1^{(n-1)}} \quad \text{---} (1)$$

$$t_2 \propto \frac{1}{a_2^{(n-2)}} \quad \text{---} (2)$$

diving eq^n (1) by (2)

$$\frac{t_1}{t_2} = \left(\frac{a_2}{a_1}\right)$$

taking log $\log \frac{t_1}{t_2} = (n-1) \log \left(\frac{a_2}{a_1}\right)$

rearranging For 'n'

$$n = 1 + \frac{\log (t_1/t_2)}{\log (a_2/a_1)}$$

d) van't haff differential method -
In this method values of dc/dt can be calculated by plotting
con vs time.

$$n \log \frac{C_1}{C_2} = \log \left[\frac{-dc_2/dt}{-dc_2/dt}\right]$$

$$n = \log \left[\frac{-dc_1/dt}{-dc_2/dt}\right]$$

e) ostwald's isolation method -
In this method one of the reactant is taken in large
excess & order of reaction is determined.

JANATA SHIKSHAN SANSTHA'S

KISAN VEER MAHAVIDALYA , WAI

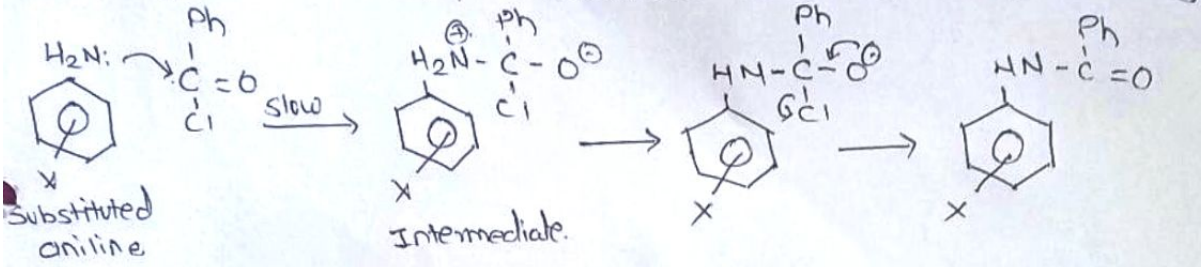
DEPARTMENT OF CHEMISTRY

SEMINAR M.Sc .II

REPORT

A seminar of Dipali U.Kachare, a student of M.Sc II was conducted on Saturday ,03/12/2022 at 11:00am on Physical significance of ρ .The points included in his seminar are as follows -

(a) consider the reaction with -ve ρ value. i.e. Benzoylation of m & p substituted anilines with ρ = -2.69

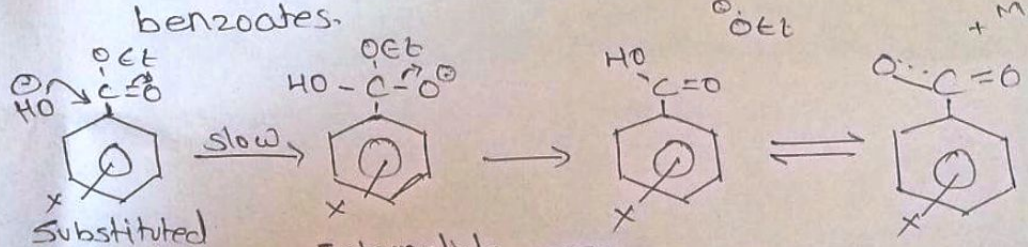


In this reaction,
the lone pair present on Nitrogen atom of substituted aniline attacks the carbonyl carbon. Due to this there is formation of positive reaction centre (intermediate)
Due to formation of +ve reaction centre rate of this reaction - only by electron donating group subsequents.

Electron withdrawing groups / substituents with retard the rate of reaction.

i.e. -ve ρ value induces -ve charge at reaction centre & ∴ rate of reaction is accelerated by e⊖ donating subsequents.

(b) Base catalysed hydrolysis m & p substituted ethyl benzoates.



SEMINAR :- 2022-2023

M.Sc II

TOPIC NAME :- I. PHYSICAL SIGNIFICANCE OF ρ

II . TRAPPING OF INTERMEDIATES

III.METHOD OF DETERMINATION OF ORDER

DATE :-03/12/2022