GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

STUDENT SEMINARS

FOR 2017-2018

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

2017-2018 SEMINARS

S.*NO*	DATE	SEM	NAME OF THE TOPIC	Name of the Students
1	10-07-2017	*III*	*Valence Bond Theory*	*Y.Satyanarayana*
2	17-07-2017	V	Werners Theory	J.Viswamma
3	01-08-2017	I	PREPARATION OF Di-Boranes	B.Abbai Reddy
4	03-11-2017	II	Henry Slaw, Ideal &Non-Ideal Solutions	K.Anusha
5	16-12-2017	IV	Kohlrausch Law & Its Applications	P.Aruna
6	25-01-2018	VI	Environmental Chemistry	K.Veera Durga Rao

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

REPORT ON STUDENT SEMINAR-II B.Sc

The Department of Chemistry Conducted a student Seminar for the students of II B.Sc mpc Students on 10-07-2017.The topic of the Seminar was Chemical Bond " Valence bond theory".

Majority of the students from I B.Sc II B.Sc III B.Sc attend the Seminar.The topic was enlightened and informative to the students. Few Students have asked questions related to the topic .After the completion of seminar feed back was also Collected from the students.

TO
THE PRINCIPAL,
GOVT.DEGREE COLLEGE,
RAMPACHODAVARAM.

RAMPACHODAVARAM,
01-08-2017.

Respected Sir,

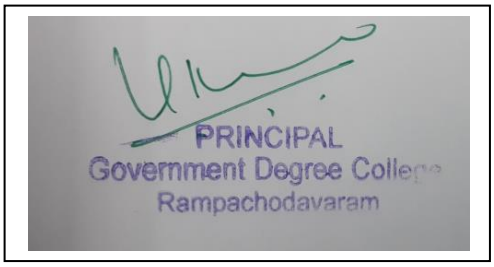
SUB: Seeking permission to conduct student seminars for the year 2017-18 Req reg.

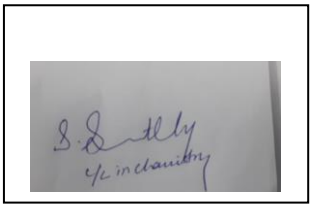
I S.Swarna Latha,Lecturer in chemistry,Govt.Degree College, Rampachodavaram, planned to conduct student seminars for the year 2017-18 for I,II,III B.Sc[MPC] classes.

So kindly grant me permission to conduct seminars.

Thanking you sir.

Yours faithfully





S. Swarna Latha

REPORT ON STUDENT SEMINARS

Department of chemistry *organized student seminar on 10-07-2017. All the students were participated enthusiastically in the seminar. They were taken up the topic like* ***Valence Bond Theory.*** *Topic presented by y. SATYANARAYANA REDDY And B. Ganga Bhavani studying I B.SC MPC.*

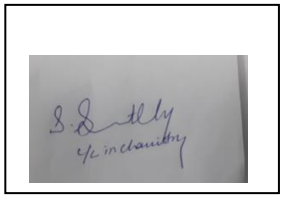
GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

CIRCULAR

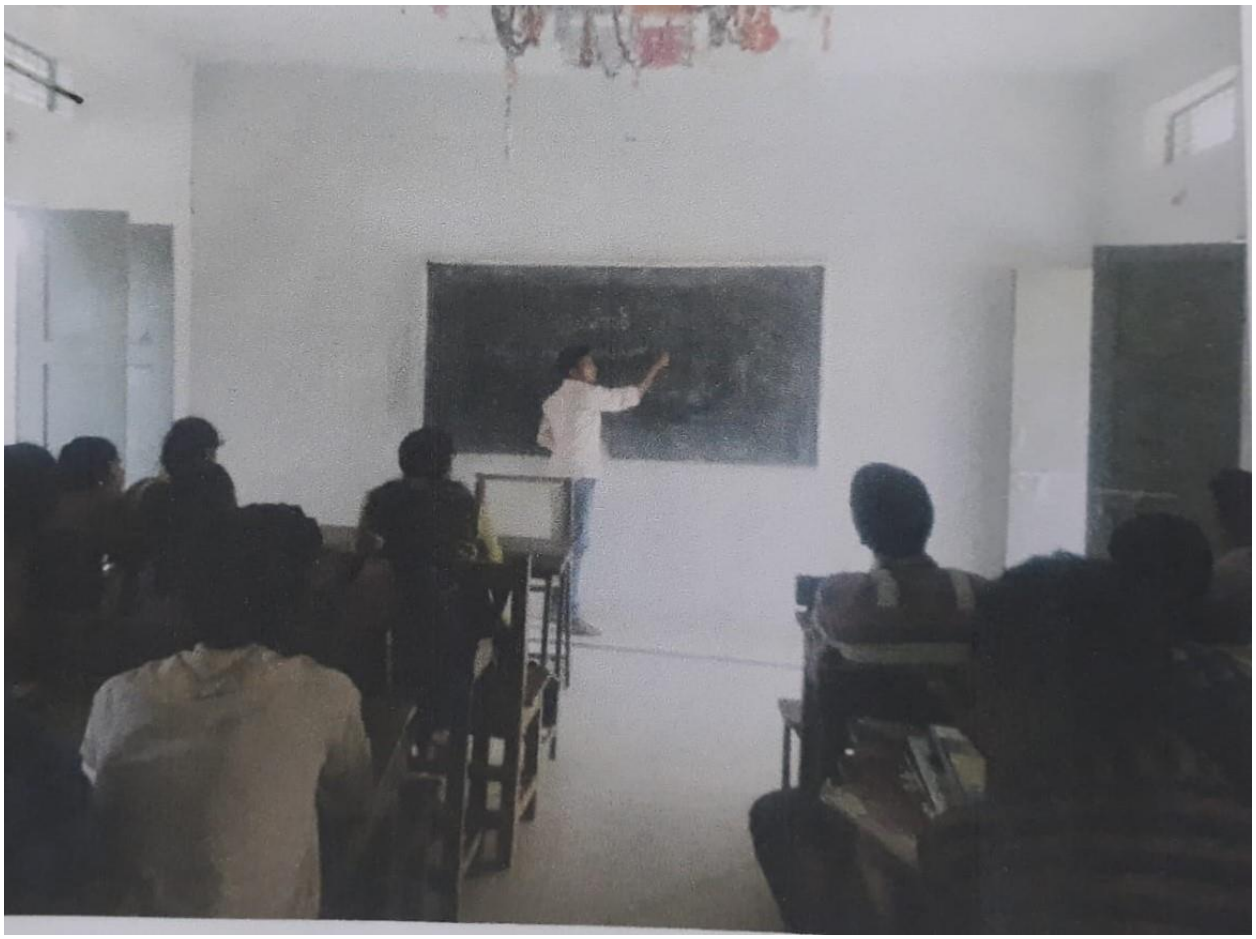
The Department of Chemistry is going to be conduct a student seminar on 10-07-2017.All the students must attend the Seminar in Chemistry Lab Room:17 without fail



S.Swarna Latha

Lecturer in Chemistry

PHOTO GALLERY



* సంయోజకత బంధ సిద్ధాంతం మరియు స్ఫటిక క్షేత్ర సిద్ధాంతం

* సంయోజకత బంధ సిద్ధాంతం:

* సిద్ధీనిక్ సిద్ధాంతంలోని విషయాలను వివరించడానికి సమన్వయ సమీకరణాల చిత్ర విధానాలను వివరించడానికి వైనస్ పాలింగ్ సంయోజకత బంధ సిద్ధాంతాన్ని ప్రవేశపెట్టారు.

* ఈ సిద్ధాంతానికి కేంద్ర భావం భూస్థాయి ఎలక్ట్రాన్ విన్యాసం ఉత్తేజిత స్థాయి ఎలక్ట్రాన్ విన్యాసం, ఏర్పడే సంకరీకరణం ముఖ్య పాత్ర పోషిస్తాయి

* సంయోజకత బంధ సిద్ధాంతాన్ని అనుసరించి సమన్వయ సమీకరణాల స్థిరత్వాన్ని, అయస్కాంత ధర్మాలను వివరించడానికి ఉపయోగపడింది.

* ఈ సిద్ధాంతం ప్రకారం, సంశ్లిష్ట పదార్థాల ఏర్పాటు వివిధ దశల్లో క్రింది విధంగా జరుగుతుంది.

* సంయోజకత బంధ అనుగుణంగా భూస్థాయిలోని లోహ పరమాణువు ఎలక్ట్రాన్లను పొగొట్టుకుని ధనాయన స్థితికి వస్తుంది. దీన్ని ధనాయన భూస్థాయి అంటారు

* దీన్ని కావాలి పరమాణు స్థితిలోనే సంశ్లిష్ట పదార్థాలు ఏర్పడుతాయి.

* రెండవయిడు లోహ పరమాణువు ధనాయన స్థితికి వస్తుంది.

* ఆవసరాన్ని బట్టి, లోహ ధనాయన, భూస్థాయి నుంచి ఉత్తేజిత స్థాయికి వెళ్తుంది.

* ఈ ప్రక్రియల్లో లోహ ఏర్పాటయిన ఎలక్ట్రాన్లు చివరకు వెడుతాయి.

* లోహ సమన్వయ సంఖ్యకు సమానంగా ఉండేటట్లు లోహంలోని అనువయిన ఏర్పాటయిన సంకరీకరణ కంటి భాళీ సంకరీకరణ ఏర్పాటయిన ఏర్పరుస్తాయి.

* రెండు ఎలక్ట్రాన్ జంటలున్న లిగాండ్ ఏర్పాటయిన లోహం భాళీ సంకర ఏర్పాటయిన ఉపయోగం వుంటాయి.

* ఈ ప్రక్రియలో లిగాండ్లు నుంచి ఎలక్ట్రాన్ జంటలు భాళీ సంకర ఏర్పాటయిన లోహ లోకి చేరి ఉన్నాయి.

సమన్వయ సంఖ్య	సంకరీకరణం	ఆకృతి	ఉదాహరణ
1	sp	రేఖీయం	$Ag(NH_2)_4$
2	sp^2	సమతల త్రిభుజం	$[HgI_3]$
3	sp^3	టెట్రా హెడ్రల్	$[Ni(CO)_4]$
4	dsp^2	సమతల చతురస్రం	$(Ni(CN)_4)^2$
5	d^2sp^3 లేదా sp^3d^2	ఆక్టా హెడ్రల్	$Fe(CN_4)^{?}$ $[CoF_6]$

* లోహ పరమాణువులోని ఒంటరి ఎలక్ట్రాన్ల ఆర్బిటాళ్ళు, లైగాండ్ల దాత ఆర్బిటాళ్ళ అతిపాతం సంయోజక బంధ సిద్ధాంతం వివరిస్తుంది.

* సంకరీకరణంలో [n-1]d ఆర్బిటాళ్ళు పాల్గొనటం వలన ఏర్పడిన సంశ్లిష్టాలను అంతర్ భ్రమణ లేక భ్రమణ రహిత అంటారు.

* nd ఆర్బిటాళ్ళు సంకరీకరణములో పాల్గొనుట వలన ఏర్పడిన సంశ్లిష్టములను బాహ్య ఆర్బిటాల్ సంశ్లిష్టములు లేదా అధిక భ్రమణము ఉన్న సంశ్లిష్టములందురు.

* బలమైన లైగాండ్ల సమక్షంలో హుండ్స్ నియమానికి వ్యతిరేకంగా ఒంటరి ఎలక్ట్రాన్లు జంటగా మారతాయి.

* సంశ్లిష్టాలు ఒంటరి ఎలక్ట్రాన్లను కలిగి ఉంటే పారా అయస్కాంత ధర్మాన్ని, జతకూడిన ఎలక్ట్రాన్లను మాత్రమే కలిగి ఉంటే డయా అయస్కాంత ధర్మాన్ని ప్రదర్శిస్తాయి.

* స్ఫటిక క్షేత్ర సిద్ధాంతం :

1930లో బెతే, వాన్ వ్లెక్ అనే ఇద్దరు భౌతిక శాస్త్రవేత్తలు స్ఫటికాల లవణ అయస్కాంత ధర్మాలు, వర్ణ ధర్మాలను వివరించుటకు స్ఫటిక క్షేత్ర సిద్ధాంతాన్ని అభివృద్ధి చేశారు.

స్ఫటిక క్షేత్ర సిద్ధాంతాన్ని పరివర్తన మూలకాలు ఏర్పరిచే సంశ్లిష్ట పదార్థాల ధర్మాలను వివరించడంలో ఉపయోగించటం వల్ల సంశ్లిష్ట పదార్థాలకు సంబంధించి ఈ సిద్ధాంతం అభివృద్ధి చెందింది. ప్రకారం, ధనాత్మక అయాన్, ఋణాత్మక లైగాండ్ల మధ్య అయానిక బంధాల ద్వారా ఆకర్షణ ఉంటుంది.

* లైగాండ్లు బిందు ఆవేశాలుగా ప్రవర్తిస్తాయి.

* ఈ సిద్ధాంతం ప్రకారం కేంద్ర d- ఆర్బిటాళ్ళు అన్నింటికీ ఒకే శక్తి
ఉండి స్వతంత్ర స్థితిలో ఉంటుంది.

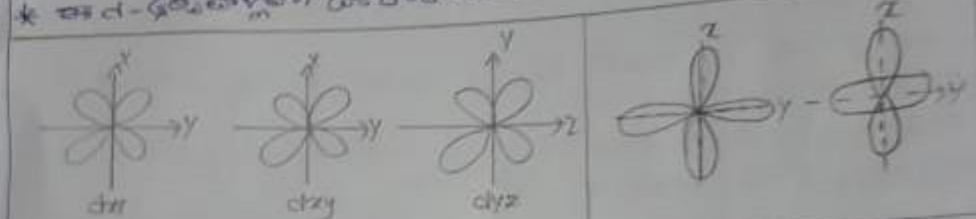
* స్వేచ్ఛాయానంలో d- ఆర్బిటాళ్ళ శక్తి సమానంగా ఉంటుంది.

* d- ఆర్బిటాళ్ళ రకాలు:

* ఐదు రకాల d- ఆర్బిటాళ్ళు $d_{xy} + d_{xz} + d_{yz} + d_{xy} + d_{z^2}$
కలిగి ఉంటాయి.

* మొదటి మూడు ఆర్బిటాళ్ళు ... అక్షాల మధ్య ఉంటాయి.

* ఈ d-ఆర్బిటాళ్ళను ...



* అష్టాహెడ్రల్ సంశ్లిష్టాలలో d- ఆర్బిటాళ్ళ విభజన:

* అష్టాహెడ్రల్ నిర్మాణం ఉన్న సంశ్లిష్ట పదార్థాలకు ఉదాహరణలు:
$[Fe(CN_4)]^{2+}$ + $[Co(NH_3)_4]^{2+}$ + $[Co(F_4)]^{2}$ మొదలైనవి.

* ఈ సంశ్లిష్ట పదార్థాల విభజనలో లైగాండ్‌లు X, Y, Z
అక్షాల దిశగా లోహ అయాన్‌ను సమీపిస్తాయి.

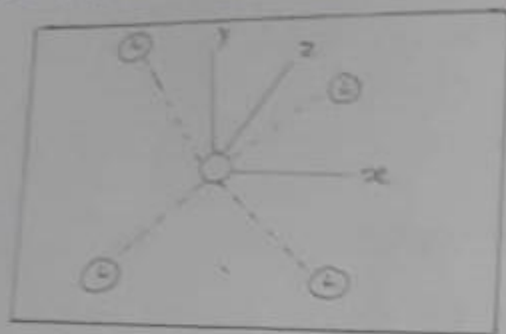
* టెట్రాహెడ్రల్ సంశ్లిష్టాలలోని d- ఆర్బిటాళ్ళు:

* టెట్రాహెడ్రల్ సంశ్లిష్టాలకు ఉదాహరణలు: $[CoCl_4]^{2-}$, $[NiCl_4]^{2}$
+ $[ZnNH_2]$ మొదలైనవి

* టెట్రాహెడ్రల్ సంశ్లిష్టంలో d-ఆర్బిటాళ్ళ విభజన ...
ఉంటుంది.

* టెట్రాహెడ్రల్ ... లోహ అయాన్ వద్దకు ...
... లైగాండ్ అక్షాల ... వల్ల ...
... d_{xy}, d_{yz}, d_{xyz} ల ...
... శక్తి పెరుగుతుంది.

* ఇలా d_{z^2} ఆర్బిటాల్ శక్తి పెరుగుతుంది.



ప్రయోజనాలు :

* వేలన్సీ బంధ సిద్ధాంతం కంటే స్ఫటిక క్షేత్ర సిద్ధాంతానికి [illegible] [illegible] ఉంది
* సంశ్లిష్టాల స్థిరత్వం [illegible] [illegible] వివరించడానికి CFT [illegible]
* చాలా సంశ్లిష్టాల [illegible] ధర్మాలను CFT ద్వారా [illegible] వివరించింది.

లోపాలు :

* కేవలం లైగాండ్ [illegible] CFT [illegible] [illegible] సంశ్లిష్టాల [illegible].
* [illegible] సంశ్లిష్టాలు [illegible] సంశ్లిష్టాల కంటే స్థిరమైనవి [illegible] CFT [illegible]
* [illegible] సంశ్లిష్టాలు స్థిరంగా ఉన్నాయి.
* [illegible] కారకాలు ఉన్నాయి.
* ఈ కారకాలను CFT పరిగణనలోకి తీసుకోలేదు.
* ఈ లోపాలను అధిగమించడానికి లైగాండ్ క్షేత్ర సిద్ధాంతం.
* [illegible] సిద్ధాంతం ([illegible]).

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

STUDENT SEMINAR –II

Questions from the Students

1. Define a chemical bond.

2. Give the main feature of Lewis' approach of chemical bonding. 3. Write electron dot structure (Lewis structure)
of Na, Ca, B, Br, Xe, As, Ge, N^{3-}Na, Ca, B, Br, Xe, As, Ge, N3−.

4. Give the octet rule in short. 5. Define an ionic bonding.

6. Which one of the following has the highest bond order? N_2,N^{+}_{2}or $N^{-}_{2}$$N_2$,$N_2^{++}$or N_2^{-}.

7. Define bond order.

8. What type of bond is formed when atoms have a high difference of electronegativity?.

9. Define dipole moment.

10. Give the mathematical expression of the dipole moment.

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

FEED BACK Student Seminar –II B.Sc

1.Is the seminar useful for you

a) Yes b) No

2.How was the student present Presentation

a)Good b) Better C)Excellent

3.Did the event meet your expectation

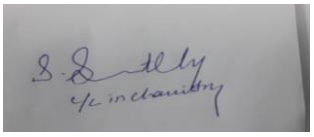
a) yes b) No

4.Is the content clear by the presenter

a) Yes b) No

5.Did you enjoyed the seminar or felt bored

a) Enjoyed b) Bored



S.SWARNA LATHA
LECTURER IN CHEMISTRY

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

STUDENT SEMINARS

FOR 2018-19

2018-2019 SEMINARS

S.NO	DATE	SEMESTER	Name of the Student	SEMINAR TOPIC
01	03/07/2018	III	J.Subhadra	SN^1 ,SN^2 Reaction And Preparation of alky halides
02	7/7/2018	V	B.Ganga Bhavani	Preparation of Amino acids and propeties
03	13/7/2018	I	Vanjam.Durga Rao	Preparation of Silanes,an application
04	6/12/2018	II	Sadala.Bhagya Sree	Conzion Condensation
05	22/1/2019	IV	M.Anil Kumar Dora	Joule-Thomson Effect and Kirchoffs Equation
06	11/2/2019	VI	K.Aruna Kumari	Friedal Crafts alkylation and Friedal Crafts acylation

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

REPORT ON STUDENT SEMINAR-II B.Sc

The Department of Chemistry Conducted a student Seminar for the students of II B.Sc mpc Students on 03-07-2018.The topic of the Seminar was Halogenated Hygrocabon compoud "SN1 &SN2 Reaction ".

Majority of the students from I B.Sc II B.Sc III B.Sc attend the Seminar.The topic was enlightened and informative to the students.

Few Students have asked questions related to the topic .After the completion of seminar feed back was also Collected from the students.

TO
THE PRINCIPAL,
GOVT.DEGREE COLLEGE,
RAMPACHODAVARAM.

RAMPACHODAVARAM,
1-07-2018.

Respected Sir,

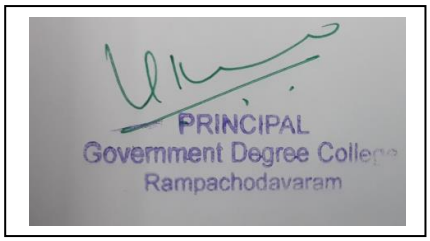
SUB: Seeking permission to conduct student seminars for the year 2018-19 Req reg.

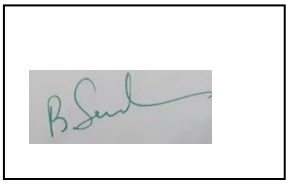
I S.Swarna Latha,Lecturer in chemistry,Govt.Degree College, Rampachodavaram, planned to conduct student seminars for the year 2018-19 for I,II,III B.Sc[MPC] classes.

So kindly grant me permission to conduct seminars.

Thanking you sir.

Yours faithfully





S. Swarna Latha

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

CIRCULAR

The Department of Chemistry is going to be conduct a student seminar on 03-07-2018 .All the students must attend the Seminar in Chemistry Lab Room:17 without fa

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

STUDENT SEMINAR REPORT

Date:03/07/2018

Department of chemistry Organized student seminar on 03/07/2018. All the students are participated enthusiastically in the seminar they were taken up different topics like" Halogenated Hydrocabon Compounds" SN1,SN2 Reaction and preparation of alky halides.Topic presented by II B.Sc MPC B.Ganga Bhavani

(1) ఆల్కైల్ హాలైడుల ఆధారంగా $S_{N}1$, $S_{N}2$ చర్యలను వివరించండి.

న్యూక్లియోఫిలిక్ ప్రతిక్షేపణ చర్య ఉదాహరణ:-

ఆల్కైల్ హాలైడ్ అణువులోని హాలోజన్ పరమాణువు [illegible] -X హాలోజన్ బదులు ఇతర పరమాణువులు -OH, NH_2 వంటివి [illegible] ప్రతిక్షేపణ చెందుతాయి. దీనిని న్యూక్లియోఫిలిక్ ప్రతిక్షేపణ చర్య.

$$R-X+Y^{\ominus} \longrightarrow RY+X^{\ominus}$$

$X^{\ominus}, Y^{\ominus}$ అనేవి [illegible] న్యూక్లియోఫిలిక్ [illegible] ఉంటాయి. న్యూక్లియోఫైల్ [illegible]

$$CH_3^{\ominus} > NH_2^{\ominus} > OR^{\ominus} > OH^{\ominus} > I^{\ominus} > Br^{\ominus} > Cl^{\ominus} > F^{\ominus}$$

ఆల్కైల్ హాలైడ్ [illegible] న్యూక్లియోఫిలిక్ ప్రతిక్షేపణ చర్య [illegible] S_N2 చర్య [illegible] S_N1 చర్య [illegible] (Configuration) [illegible]

చర్యా విధానం: S_N2 చర్య (Substitution Nucleophilic Bimolecular)

ఇది ఒక ఏకకాలిక స్థానభ్రంశ (displacement) చర్య. ఈ చర్యలో [illegible]

$$\overset{\ominus}{Y}: + \begin{matrix} R \\ R \\ R \end{matrix}\!\!>C-X \rightleftharpoons \left\{ \begin{matrix} & R & \\ Y \cdots & C & \cdots X \\ R & & R \end{matrix} \right\} \rightleftharpoons Y-C\!\!<\!\begin{matrix} R \\ R \\ R \end{matrix} + X^{\ominus}$$

పరివర్తన స్థితి

ఈ చర్యలో [illegible] పరివర్తన స్థితి [illegible] X, Y లు [illegible] X ను [illegible]

గతిక లక్షణాలు:-

ఉదాహరణకు 2-బ్రోమో బ్యుటేన్ [illegible] 2-హైడ్రాక్సీ బ్యుటేన్ [illegible]

$$H-C-Br + OH^{\ominus} \rightleftharpoons [HO \cdots C \cdots Br]$$

(H_5C_2, H on the reactant carbon; CH_3, H, C_2H_5 on the carbon in the bracketed complex)

[illegible] ಸಂಕೀರ್ಣ
[illegible]

$$\rightleftharpoons HO-C(CH_3)(H)(C_2H_5) + Br$$

[illegible]

[illegible] :-

[illegible] 2- [illegible] ಬ್ಯುಟೇನ್ [illegible] CH_3, H, C_2H_5 $> C-Br$ [illegible]

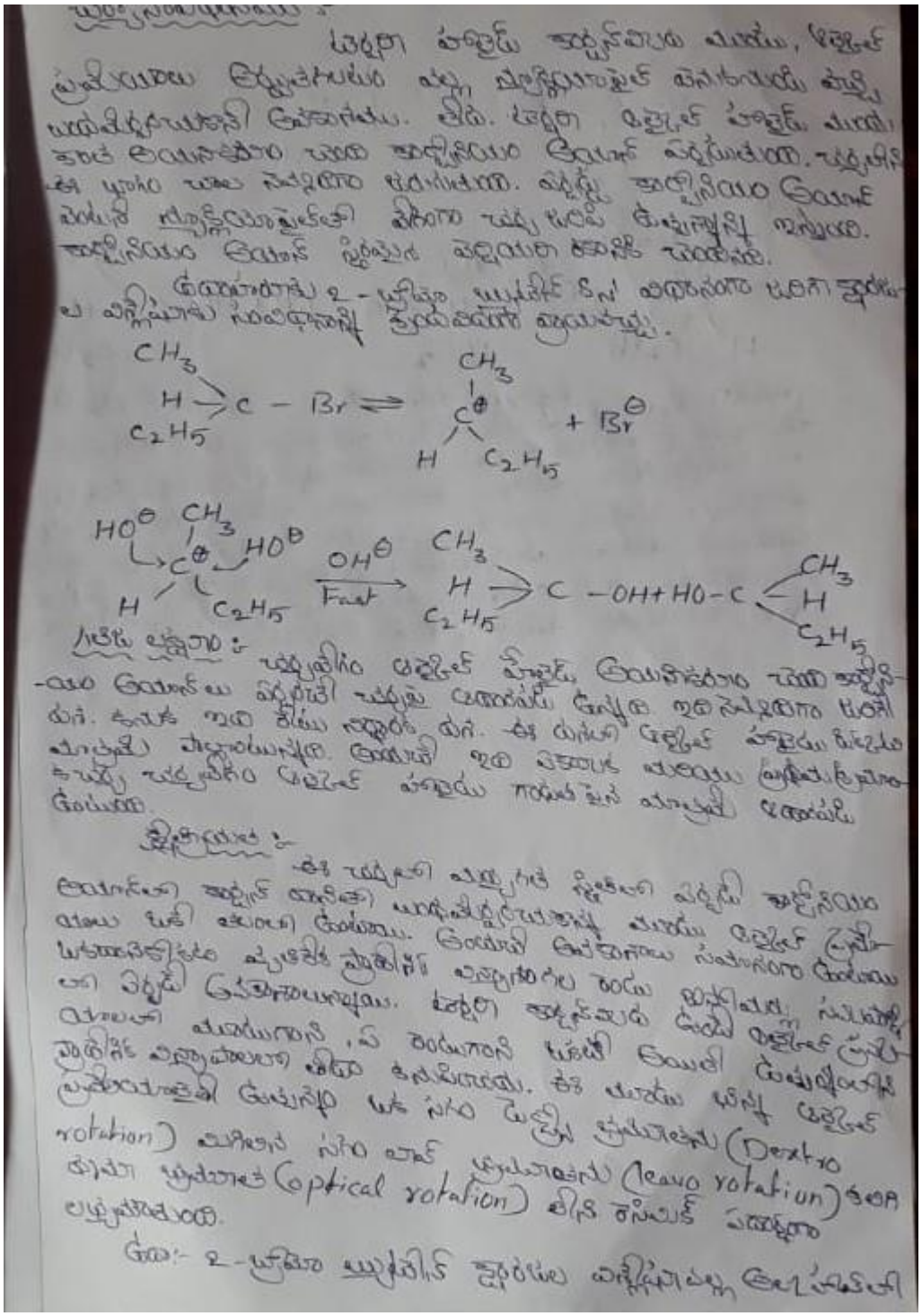
$HO-C<(CH_3)(H)(C_2H_5)$ [illegible]

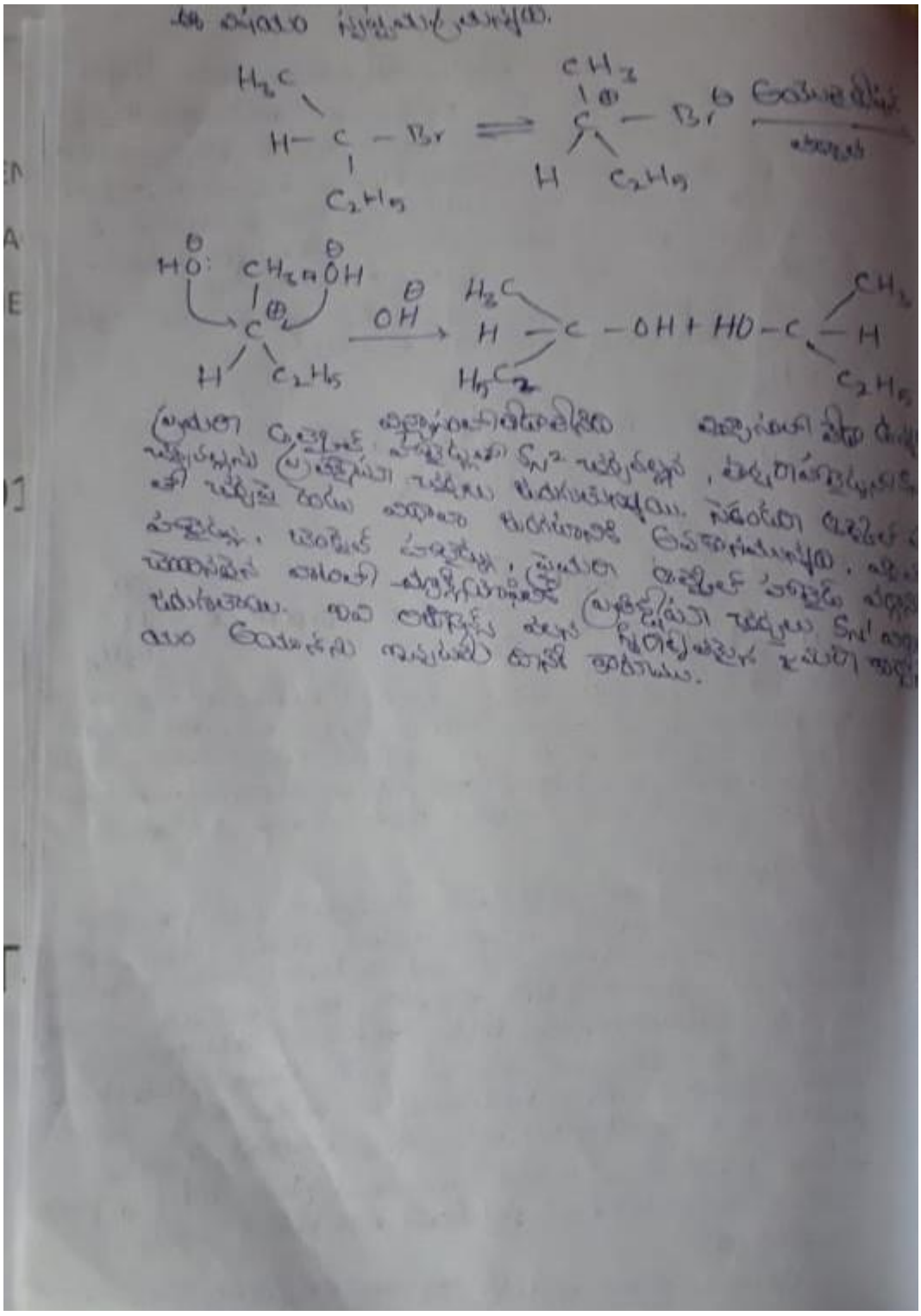
[illegible] (Walden inversion) [illegible]. ಉದಾ. 2- [illegible] ಬ್ಯುಟೇನ್ [illegible] 2- [illegible] ಬ್ಯುಟೇನ್ [illegible] (dextro, d-) [illegible] (laevo, l-) [illegible].

$$C_2H_5,\ H,\ CH_3 > C-Br \xrightarrow[S_N2]{NaOH} HO-C<(C_2H_5)(H)(CH_3)$$

2- [illegible] ಬ್ಯುಟೇನ್ 2 - [illegible] ಬ್ಯುಟೇನ್

S_N' [illegible] (Substitution Nucleophilic unimolecular): [illegible] S_N' [illegible].





- *Photo gallery of seminar*

1. SN1SN2**reaction with an appropriate reaction.**

2.write the differences between SN1 & SN2 Reaction

3.Give the Examples for SN1 & SN2 Mechisms

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

FEED BACK Student Seminar –II B.Sc

1.Is the seminar useful for you

a) Yes b) No

2.How was the student present Presentation

a)Good b) Better C)Excellent

3.Did the event meet your expectation

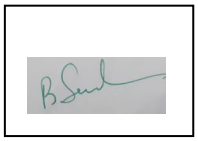
a) yes b) No

4.Is the content clear by the presenter

a) Yes b) No

5.Did you enjoyed the seminar or felt bored

a) Enjoyed b) B



B.SURENDRA

Lecturer in Chemistry

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

STUDENT SEMINARS

FOR 2019-20

2019-2020 SEMINARS

S.NO	DATE	SEMESTER	Name of the student	SEMINAR TOPIC
01	20-07-2019	III	Vanjam.Durga Rao	Valence bond theory
02	13-07-2019	V	N.Usharani	Werners theory
03	17-07-2019	I	M.Satyanarayana Reddy	Preparation of Di boranes
04	13-07-2019	II	P.ashok Reddy	Braggs Equation
05	09-12-2019	IV	Pallala.Narayana Reddy	Kohlrausch law
06	28-01-2020	VI	S. Subhani	Preparation of paracetmol

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

REPORT ON STUDENT SEMINAR-II B.Sc

The Department of Chemistry Conducted a student Seminar for the students of II B.Sc mpc Students on 17-07-2019.The topic of the Seminar was Gas Chomatography liquid Chomatography ".

Majority of the students from I B.Sc II B.Sc III B.Sc attend the Seminar.The topic was enlightened and informative to the students. Few Students have asked questions related to the topic .After the completion of seminar feed back was also Collected from the students.

TO
THE PRINCIPAL,
GOVT.DEGREE COLLEGE,
RAMPACHODAVARAM.

RAMPACHODAVARAM,
5-7-2019.

Respected Sir,

SUB: Seeking permission to conduct student seminars for the year 2019-20 Req reg.

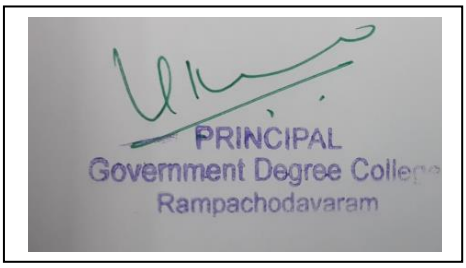
I S.Swarna Latha,Lecturer in chemistry,Govt.Degree College, Rampachodavaram, planned to conduct student seminars for the year 2019-20 for I,II,III B.Sc[MPC] classes.

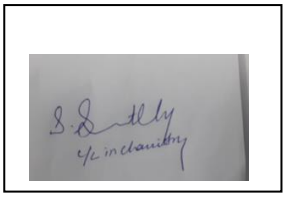
So kindly grant me permission to conduct seminars.

Thanking you sir.

Yours faithfully

B.SURENDRA





REPORT ON STUDENT SEMINARS

Department of chemistry *organized student seminar on 17-07-2019. All the students were participated enthusiastically in the seminar. They were taken up the topic like* ***PREPARATION AND STRUCTURE OF DI-BORANE.*** *Topic presented by M.Satyanarayana studying I B.SC MPC.*

డైబోరేన్:

IIIA (గ్రూపు) మూలకాలలో 3 వేలెన్సీ ఎలక్ట్రాన్లు ఉండటం వల్ల [illegible] సంయోజనీయ బంధాలను ఏర్పరచలేవు. అందువల్ల [illegible] మూలకాలు [illegible] హైడ్రైడ్ [illegible] 6 ఎలక్ట్రాన్లు మాత్రమే [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] π బంధం లేదా [illegible] [illegible] [illegible]

డైబోరేన్ తయారీ విధానం:

→ మెగ్నీషియం బోరైడ్ ను వేడి HCl తో చర్య జరిపినప్పుడు [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] డైబోరేన్ ఏర్పడును.

$Mg_3B_2 + 6HCl \xrightarrow{\Delta}$ మిశ్రమ వాయువు $\xrightarrow{\Delta}$

$B_2H_6 + 3MgCl_2$

* B_2O_3 [బోరిక్ ఆక్సైడ్] ను Al + H_2 సమక్షంలో వేడి చేసిన

B_2H_6 ఏర్పడును.

B_2H_6 తయారీ

$2BF_3 + 6LiH \xrightarrow{\Delta} B_2H_6 + LiF$

[illegible] !

* [illegible] -165° [illegible] -93°C [illegible]

[illegible]

[illegible] B_2H_6 [illegible]

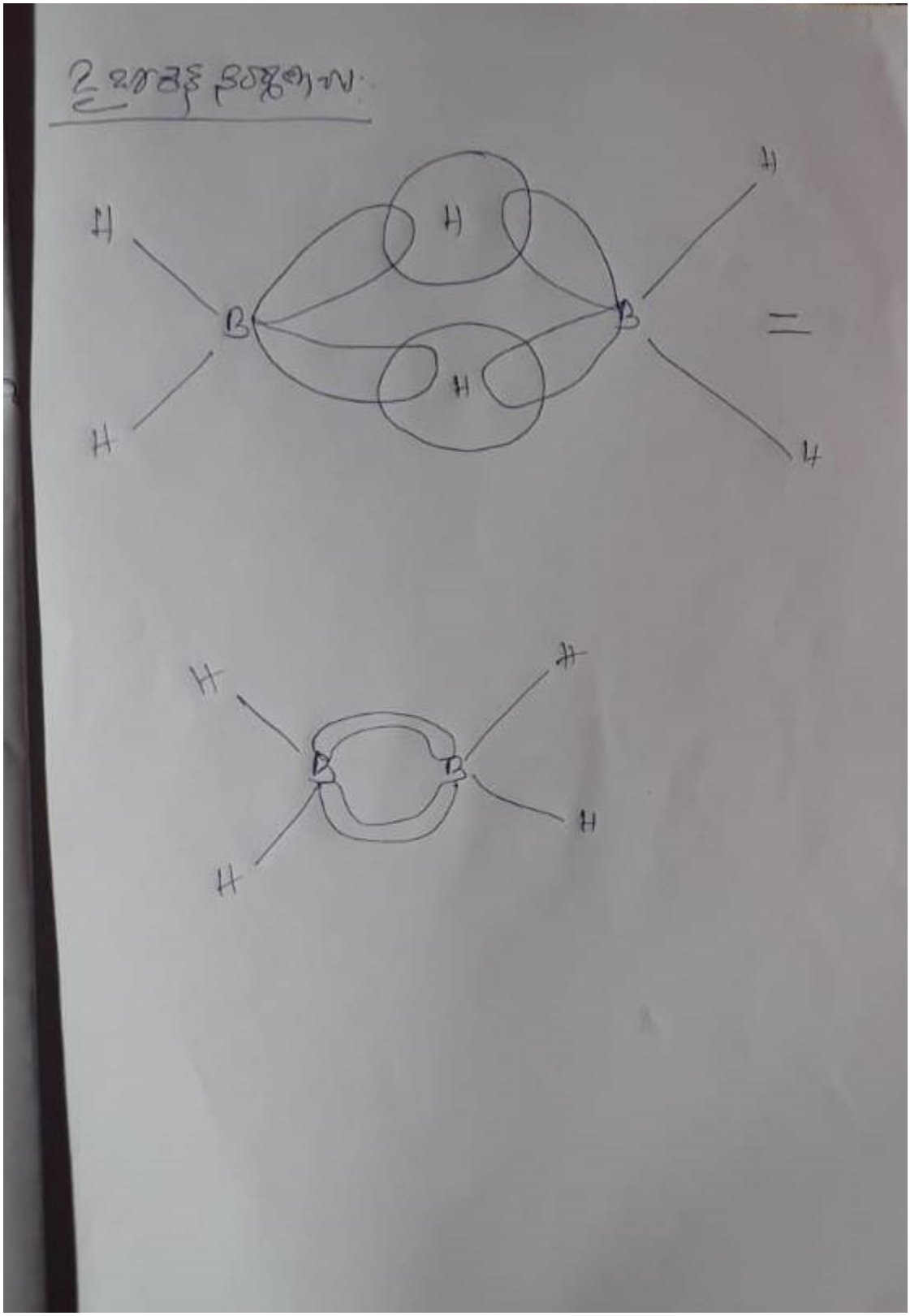
$$2B_2H_6 \xrightarrow{28-60^\circ C} B_4H_{10} + H_2$$

$$5B_2H_6 \xrightarrow{U\ [illegible]\ 113^\circ C} 2B_5H_{11} + 4H_2$$

$$5B_2H_6 \xrightarrow{100^\circ C\ [illegible]} B_{10}H_{14} + 8H_2$$

$$5B_2H_6 \xrightarrow{250^\circ C,\ 120\ min\ [illegible]} B_5H_9 + B_5H_{11} + 5H_2$$

$$5B_2H_6 \xrightarrow{200-250^\circ C} 2B_5H_9 + 6H_2$$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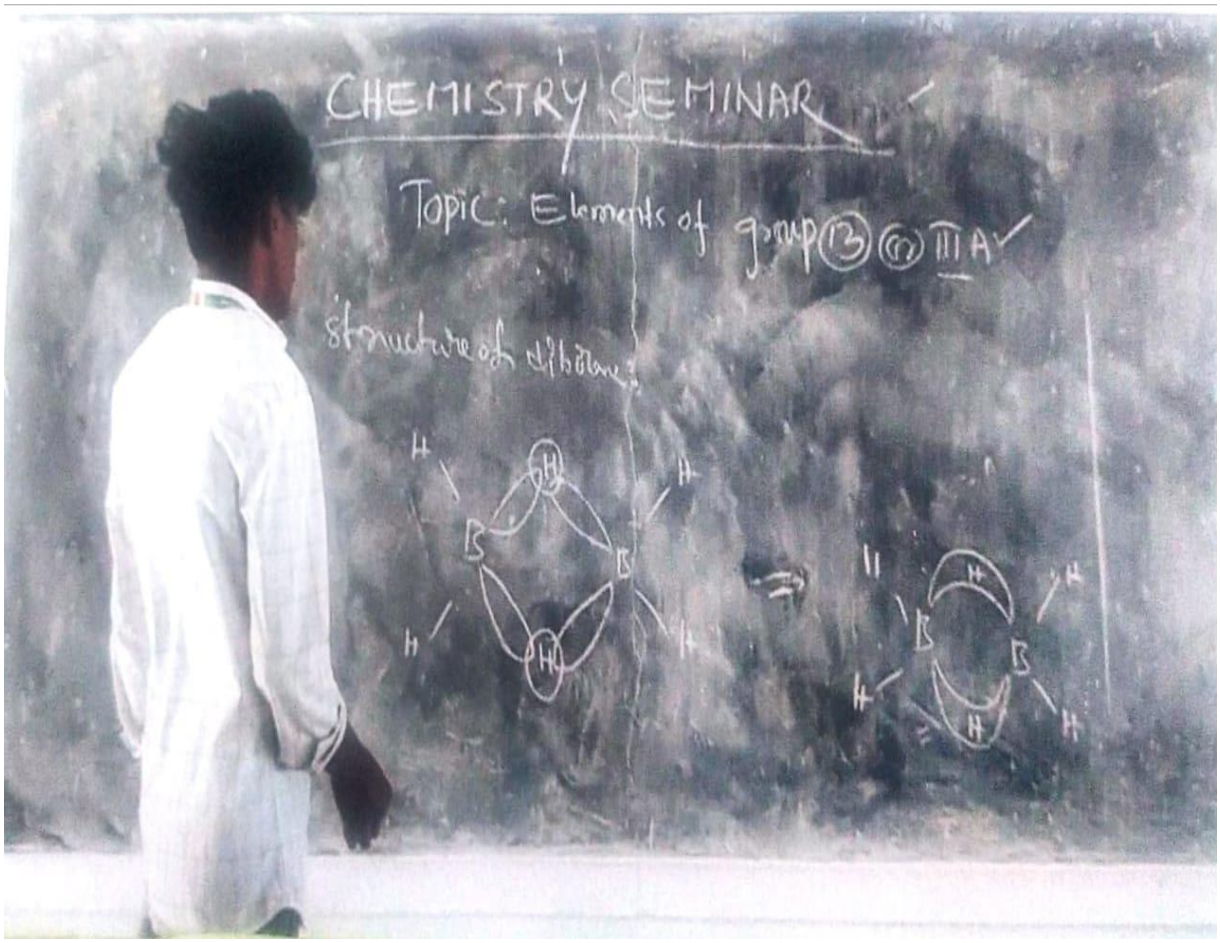

1. Are group 13 elements a part of p block elements?
a) Yes
b) No
c) Only a few
d) Only one
Answer:a

2. Which of the following group's elements have smaller atomic radii?
a) Group 1 elements
b) Group 2 elements
c) Group 13 elements
d) All have the same atomic radii
Answer:c
3. The atomic radius of gallium is greater than that of aluminum.
a) True
b) False
Answer:b
4. Gallium remains liquid up to _____ Kelvin.
a) 2176
b) 2376
c) 2476
d) 2276

Answer: d

5. The ionization enthalpy _____ down the group in the family.
a) Increases
b) Decreases
c) Constant
d) Is a regular
View Answer
Answer: d

6. Inert pair affect _____ down the group.
a) Increases
b) Decreases
c) Constant
d) Is a regul
Answer: a

7. Which of the following element exhibits + 3 Oxidation State only?
a) Gallium
b) Thallium
c) Indium
d) Aluminium
Answer:d
8. Which of the following is true regarding reducing character?
a) Gallium < aluminium > indium > thallium
b) Aluminium > gallium > indium > thallium
c) Aluminium > gallium < indium > thallium
d) Gallium > aluminium > indium > thallium

Answer: b

9. Complex formation is more likely to be possible in _____
a) alkali metals
b) alkaline earth metals
c) boron family
d) equally likely

Answer: c
10. The compounds formed by the Boron family are _____
a) ionic
b) covalent
c) both ionic and covalent
d) neither ionic nor covalent
Answer:c

FEED BACK Student Seminar –II B.Sc

1.Is the seminar useful for you

a) Yes b) No

2.How was the student present Presentation

a)Good b) Better C)Excellent

3.Did the event meet your expectation

a) yes b) No

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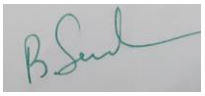
a) Enjoyed b) Bored



B.SURENDRA

Lecturer in Chemistry

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

STUDENT SEMINARS

FOR 2020-21

RAMPACHODAVARAM

DEPARTMENT OF COLLEGE

2020-2021 SEMINARS

S.NO	DATE	SEMESTER	Name of the Student	SEMINAR TOPIC
01	04-01-2020	III	M.Saraswathi	Preparation of alkyl halides
02	10-01-2020	V	Vanjam Durga Rao	Carbohydrates
03	26-02-2020	I	K.K.Bhavani	Preparation of Di boranes
04	12-09-2020	II	M.Lavanya	Preparation of Alkanes
05	09-11-2020	IV	K.Hema Maheswari	Kolhrausch law and appilications
06	04-01-2021	VI	Pallala.Narayana Reddy	Green House Effect and Acid Rains

TO
THE PRINCIPAL,
GOVT.DEGREE COLLEGE,
RAMPACHODAVARAM.

RAMPACHODAVARAM,
3-01-2020.

Respected Sir,

SUB: Seeking permission to conduct student seminars for the year 2020-21 Req reg.

I S.Swarna Latha,Lecturer in chemistry,Govt.Degree College, Rampachodavaram, planned to conduct student seminars for the year 2020-21 for I,II,III B.Sc[MPC] classes.

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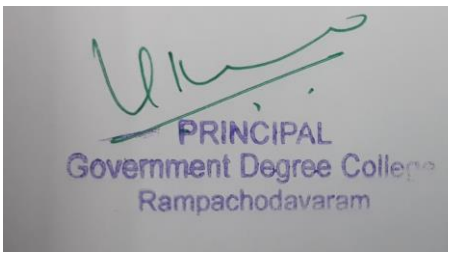
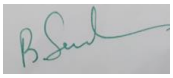
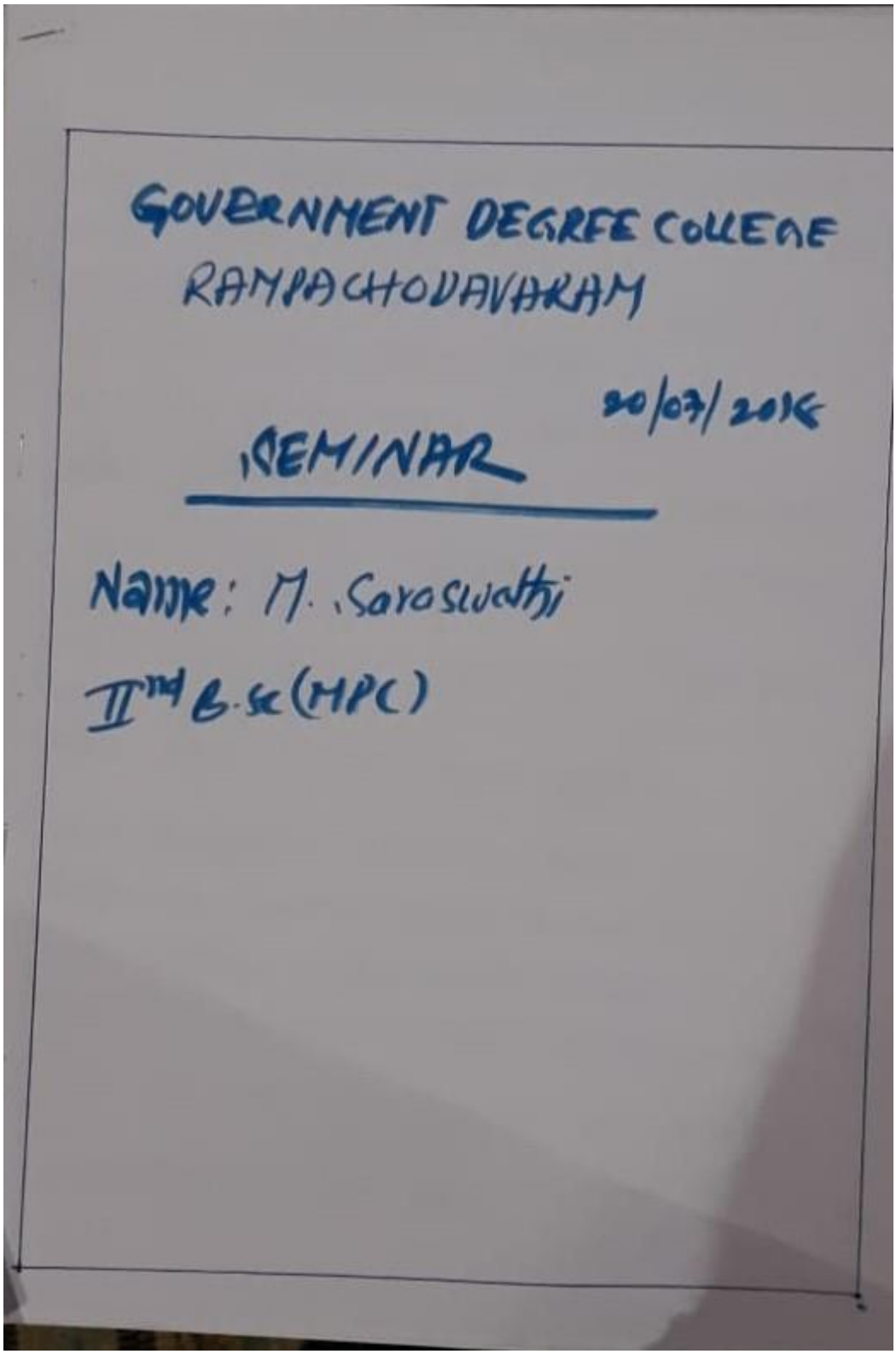
B.SURENDRA





REPORT ON STUDENT SEMINARS

Department of chemistry *organized student seminar on 04-01-2020. All the students were participated enthusiastically in the seminar. They were taken up the topic like* ***PREPARATION of Alkyl halids.*** *Topic presented by M.Saraswathi studying II B.SC MPC.*

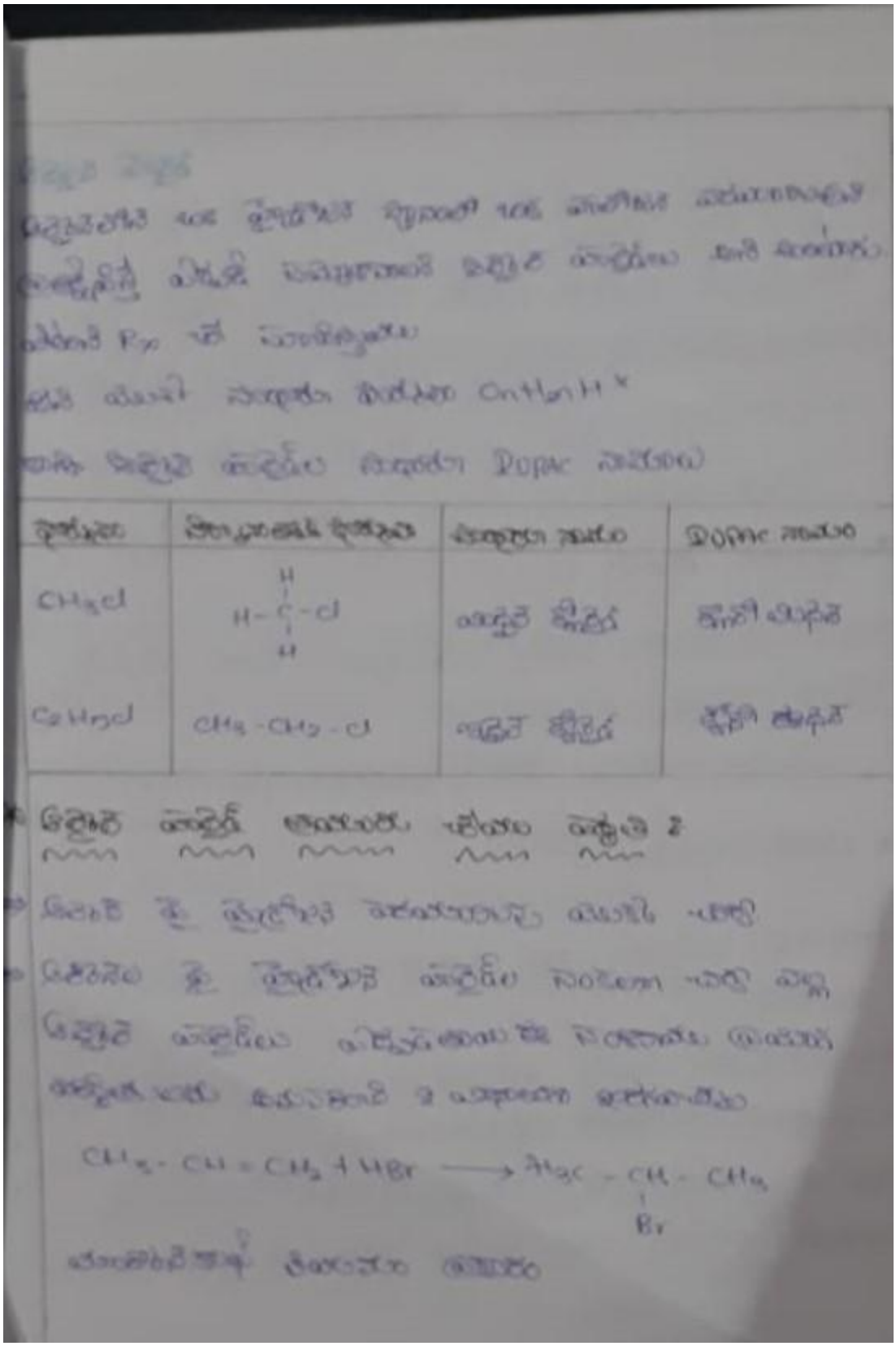

GOVERNMENT DEGREE COLLEGE
RAMACHANDRAPURAM

20/07/2016

SEMINAR

Name: M. Saraswathi

IInd B.Sc (MPC)



CH_3Cl			
C_2H_5Cl	CH_3-CH_2-Cl		

$H_3C-CH=CH_2 + HBr \xrightarrow{R_2O_2} H_3C-CH_2-CH_2-Br$

*** హున్స్ డికర చర్య :**

కార్బాక్సిలిక్ ఆమ్లాల సిల్వర్ లవణాలను క్లోరిన్ లేదా బ్రోమిన్ తో చర్య జరిపిస్తే ఆల్కైల్ హాలైడ్లు ఏర్పడతాయి

$CH_3COOAg + Br_2 \rightarrow CH_3Br + CO_2 + AgBr$

సిల్వర్ ఎసిటేట్ — మిథైల్ బ్రోమైడ్

*** డార్జన్స్ పద్ధతి :**

ఆల్కహాల్ థయోనైల్ క్లోరైడ్ పిరిడిన్ సమక్షంలో చర్య జరిపిస్తే ఆల్కైల్ హాలైడ్లు ఏర్పడతాయి.

$C_2H_5OH + SOCl_2 \xrightarrow{\text{పిరిడిన్}} C_6H_5Cl + SO_2 + HCl$

*** భౌతిక ధర్మాలు :**

⇒ తక్కువ కార్బన్ల గల ఆల్కైల్ హాలైడ్లకు రంగు ఉండదు.

⇒ 18 కార్బన్ల కంటే తక్కువగా ఉండే ఆల్కైల్ హాలైడ్లు ద్రవ పదార్థాలుగా ఉంటాయి.

→ ఆల్కైల్ హాలైడ్లకు ధ్రువ స్వభావం ఉన్నప్పటికీ నీటిలో కరగవు. కాని కర్బన ద్రావణిలో కరుగుతాయి.

రసాయన ధర్మాలు :

ఆల్కైల్ హాలైడ్లలోని (C-X) కార్బన్ X బంధం చాలా
ధ్రువిత ధ్రువ స్వభావం కలిగి ఉంది
అందువల్ల ఇవి రెండు రకాల చర్యలలో పాల్గొంటాయి

1. న్యూక్లియోఫిలిక్ ప్రతిక్షేపణ చర్యలు
2. విలోపన చర్యలు

• న్యూక్లియోఫిలిక్ ప్రతిక్షేపణ చర్యలు :

ఈ చర్యలో ఆల్కైల్ హాలైడ్‌లోని హాలోజన్ పరమాణువును కార్బన్ పై స్థానంలో OH^-, CN^-, NO_2^- & ONO^- వంటి న్యూక్లియోఫిలిక్ ప్రతిక్షేపణ చెందుతాయి.
ఆల్కైల్ బ్రోమైడ్ పొటాషియం సైనైడ్‌తో చర్య జరిపి ఆల్కైల్ సయనైడ్ అనేది ఏర్పడుతుంది.

$$CH_3CH_2Br + K^+CN^- \rightarrow CH_3CH_2CN + KBr$$

* విలోపన చర్య :

→ వేడి ఆల్కహాల్ ద్రావణంలో ఆల్కైల్ హాలైడ్లు సోడియంతో చర్య జరిపి ఆల్కైల్ హాలైడ్ల కార్బన్ రెండు ప్రక్కల ఉండే కార్బన్ల లోని హైడ్రోజన్ విలోపనతో చర్యను విలోపన చర్య అని అంటారు.

Q1. What is the order of SN_2 reaction of the alkyl halide?

(a) RCl > RBr > RF > RI

(b) RI > RBr > RCl > RF

(c) R-F > R-Cl > RBr > RI

(d) RBr > RI > RCl > RF

Answer: (b) The order of SN_2 reaction of the alkyl halide is RI > RBr > RCl > RF.

Explanation: Iodine is a good nucleophile and a good leaving group. Thus, it eliminates easily from an alkyl halide favouring SN_2 elimination reaction.

Q2. Chloroform is used as an

(a) Antiseptic

(b) Anaesthetic

(c) Antipyretic

(d) None of the above

Answer: (b) Chloroform is used as an anaesthetic.

Q3. Methyl chloride reacts with silver acetate to yield

(a) Acetic acid

(b) Methyl acetate

(c) Acetyl chloride

(d) None of the above

Answer: (b) Methyl chloride reacts with silver acetate to yield methyl acetate.

Q4. The given reaction is an example of?

$C_2H_5Br + KCN\ (aq) \rightarrow C_2H_5CN + KBr$

(a) Elimination reaction

(b) Nucleophilic substitution reaction

(c) Electrophilic substitution reaction

(d) None of the above

Answer: (c) The given reaction: $C_2H_5Br + KCN\ (aq) \rightarrow C_2H_5CN + KBr$ is an example of electrophilic substitution reaction.

Q5. An alkyl halide can be converted into alcohol by the

(a) Addition reaction

(b) Substitution reaction

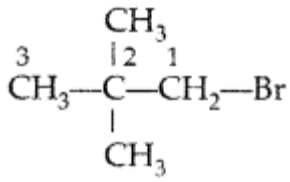
(c) Dehydrohalogenation reaction

(d) None of the above

Answer: (b) An alkyl halide can be converted into alcohol by the substitution reaction.

Q6. Write the IUPAC name of $(CH_3)_3CCH_2Br$.

Answer: The IUPAC name of $(CH_3)_3CCH_2Br$ is 1-Bromo-2, 2-dimethyl propane.



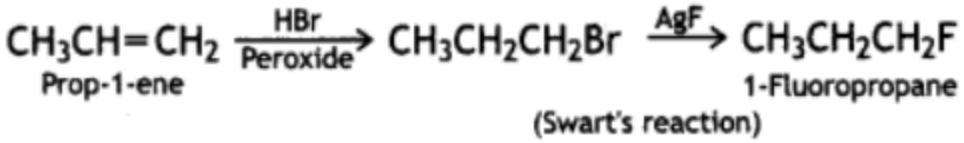
1-Bromo-2, 2-dimethyl propane

Q7. Why do we keep chloroform in the dark coloured bottles?

Answer: We keep chloroform in the dark coloured bottles because it reacts with atmospheric oxygen to produce poisonous phosgene gas.

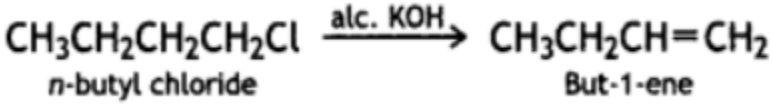
Q8. Conver Prop-1-ene to 1-fluoro propane.

Answer: We can convert Prop-1-ene to 1-fluoro propane by reacting Prop-1-ene with hydrogen bromide in the presence of hydrogen peroxide, followed by the reaction with AgF.



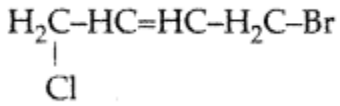
Q9. What happens when n-butyl chloride reacts with alcoholic KOH?

Answer: An elimination reaction takes place when n-butyl chloride reacts with alcoholic KOH to form an unsaturated But-1-ene.



Q10. Draw the structure of 1-Bromo-4-chloro but-2-ene

Answer: The structure of 1-Bromo-4-chloro but-2-ene is mentioned below.



FEED BACK Student Seminar –II B.Sc

1.Is the seminar useful for you

a) Yes b) No

2.How was the student present Presentation

a)Good b) Better C)Excellent

3.Did the event meet your expectation

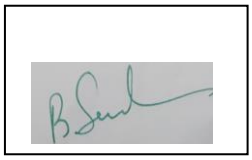
a) yes b) No

4.Is the content clear by the presenter

a) Yes b) No

5.Did you enjoyed the seminar or felt bored

a) Enjoyed b) Bored



B.Surendra

Lecturer in Chemistry

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

STUDENT SEMINARS

FOR 2021-22

S.NO	DATE	SEM	NAME OF THE STUDENT	NAME OF THE TOPIC
1	16-2-2022	III	G.Devendra Verma	Sn1&Sn2 Reaction
2	24-2-2022	V	S.V.V.S.Bhavani Prasad Dora	Iso-Electron Point
3	17-2-2022	I	K.Sai teja sri	Preparation Of Di_Boranes
4	16-7-2022	II	K.Krishna Reddy	Colloids
5	17-5-2022	IV	K.K.Bhavani	Hetero Cyclic Compoud
6	8-7-2022	VI	U.Sai DEEPIKA	Air Pollution

GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

REPORT ON STUDENT SEMINAR-II B.Sc

The Department of Chemistry Conducted a student Seminar for the students of II B.Sc mpc Students on 17-5-2022.The topic of the Seminar wasHetero Cyclic Compounds".

Majority of the students from I B.Sc II B.Sc III B.Sc attend the Seminar.The topic was enlightened and informative to the students. Few Students have asked questions related to the topic .After the completion of seminar feed back was also Collected from the students.

TO
THE PRINCIPAL,
GOVT.DEGREE COLLEGE,
RAMPACHODAVARAM.

RAMPACHODAVARAM,
01-08-2017.

Respected Sir,

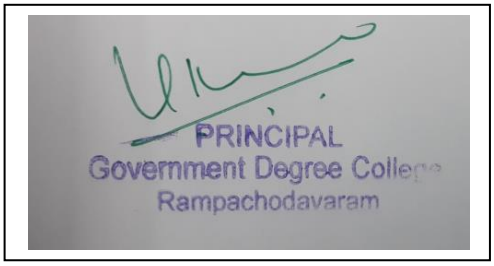
SUB: Seeking permission to conduct student seminars for the year 2017-18 Req reg.

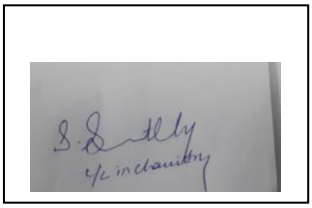
I S.Swarna Latha,Lecturer in chemistry,Govt.Degree College, Rampachodavaram, planned to conduct student seminars for the year 2017-18 for I,II,III B.Sc[MPC] classes.

So kindly grant me permission to conduct seminars.

Thanking you sir.

Yours faithfully





S. Swarna Latha

REPORT ON STUDENT SEMINARS

Department of chemistry *organized student seminar on 17-5-2022. All the students were participated enthusiastically in the seminar. They were taken up the topic like Hetro Cyclic Compounds**.** Topic presented by K.K.Bhavani studying II B.SC MPC.*

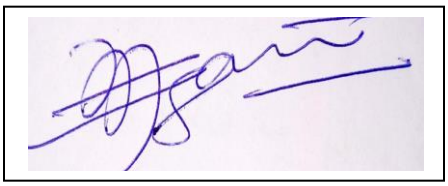
GOVERNMENT DEGREE COLLEGE

RAMPACHODAVARAM

DEPARTMENT OF CHEMISTRY

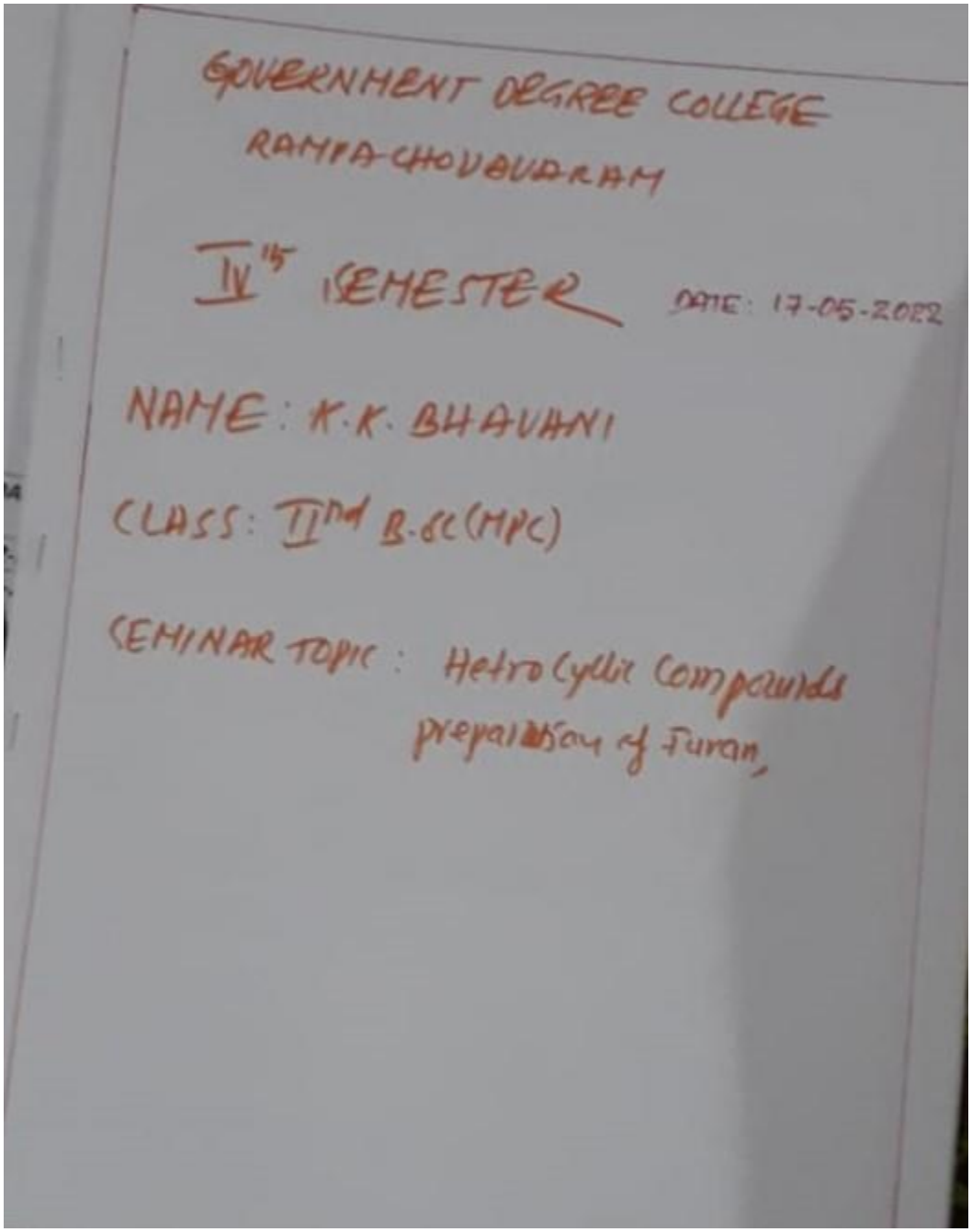
CIRCULAR

The Department of Chemistry is going to be conduct a student seminar on 17-5-2022.All the students must attend the Seminar in Chemistry Lab Room:17 without fail



M.GANESH

Lecturer in Chemistry


GOVERNMENT DEGREE COLLEGE
RAMPACHODAVARAM

IV^th SEMESTER DATE: 17-05-2022

NAME: K.K. BHAVANI

CLASS: II^nd B.Sc (MPC)

SEMINAR TOPIC: Hetro Cyclic Compounds
preparation of Furan,

విజాతీయ వలయ సమ్మేళనాలు:

సమ్మేళన వలయ వ్యవస్థ సమ్మేళనాలలో కార్బన్ పరమాణువులతో పాటు ఇతర పరమాణువులైన N, O, S లాంటి విజాతీయ పరమాణువులు ఉంటాయి. ఆ సమ్మేళనాలను "విజాతీయ వలయ సమ్మేళనాలు" అని అంటారు.

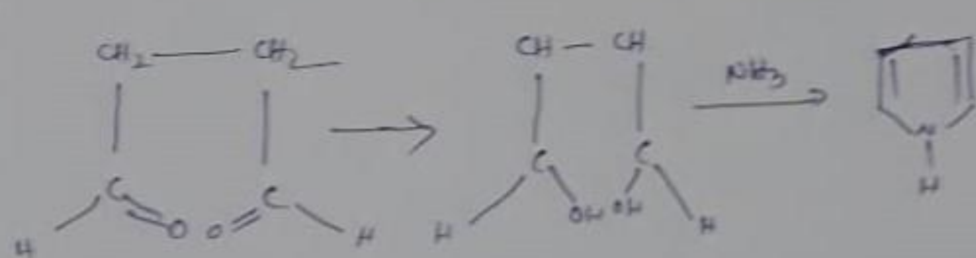
Ex:-

పిర్రోల్ ఫ్యూరాన్ థయోఫీన్

పిర్రోల్ తయారీ విధానం:

① పాల్ నార్ సంశ్లేషణ:

సక్సినాల్డిహైడ్ ను అమ్మోనియాతో చర్య జరిపితే పిర్రోల్ ఏర్పడుతుంది-

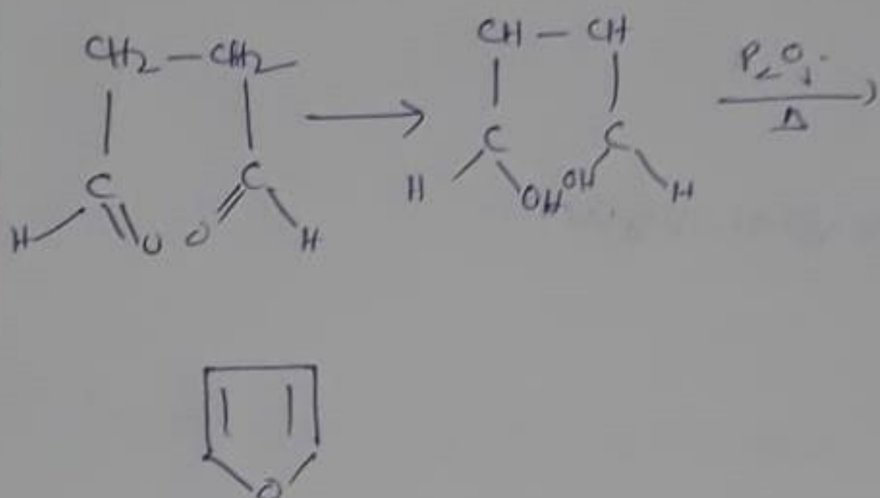


② [illegible]

$2HC \equiv CH + NH_3 \xrightarrow{\text{red hot tube}}$

ဖျူရန် [illegible]

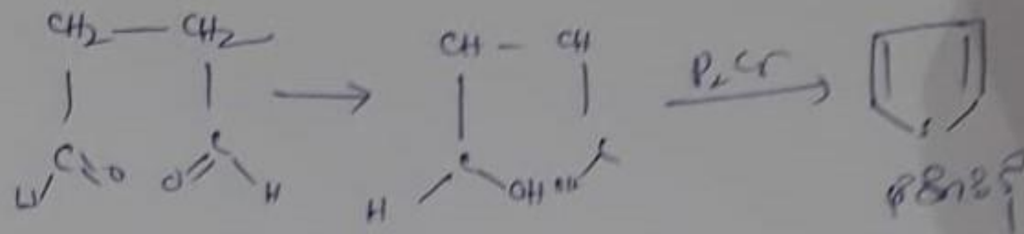
① [illegible] P_2O_5 [illegible] ဖျူရန် [illegible]



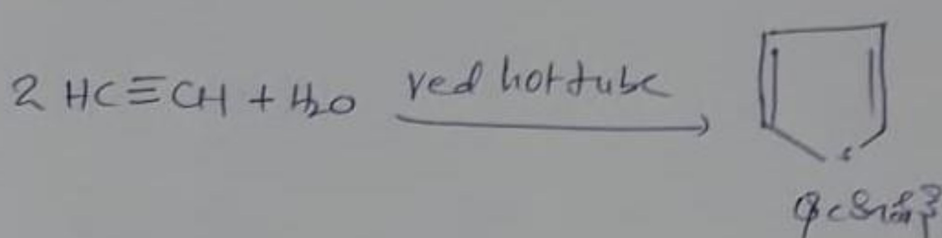
ဖျူရန်

ఫ్యూరాన్ తయారు చేయు పద్ధతులు:

(i) సక్సినాల్డిహైడ్ ను P_2O_5 తో వేడిచేసినపుడు ఫ్యూరాన్ తయారగును

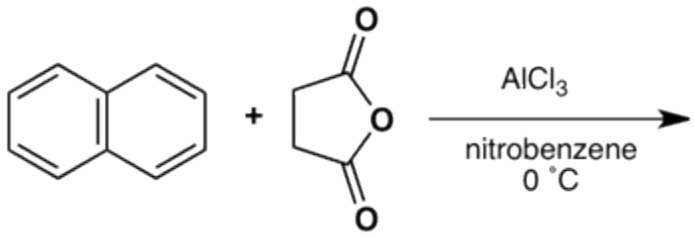


(ii) ఎసిటలీన్ ను నీటి ఆవిరి తో ఎర్రగా కాల్చిన గొట్టం ద్వారా పంపినప్పుడు ఫ్యూరాన్ తయారగును.

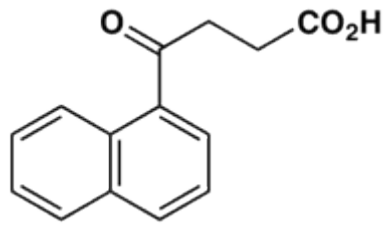


Question 1

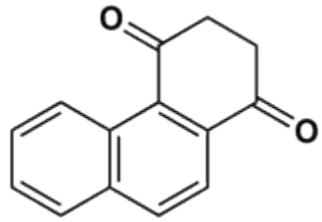
Which is the most probable main product of the following reaction?



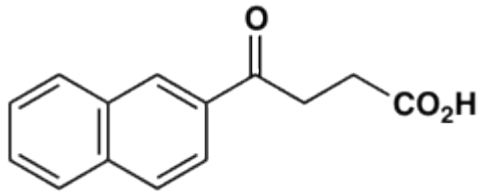
a)



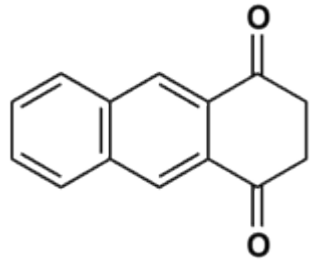
b)



c)

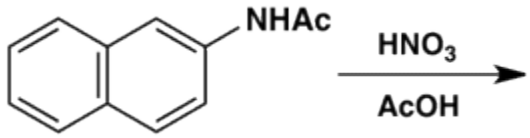


d)



Question 2

Which is the most probable main product of the following reaction?



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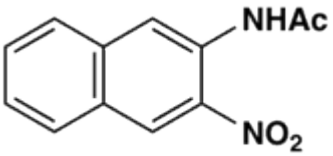

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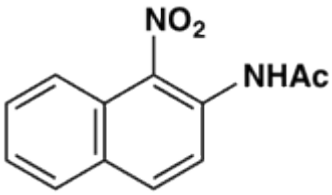

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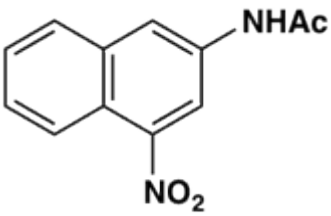

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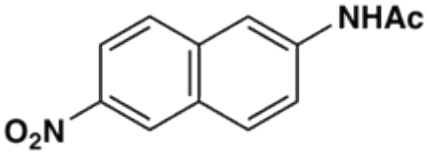
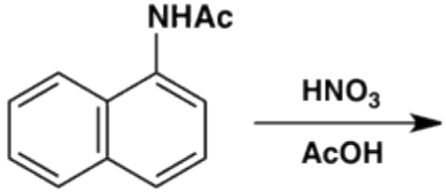
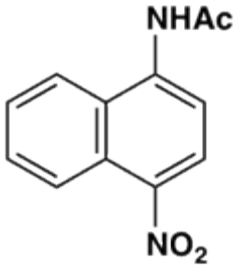
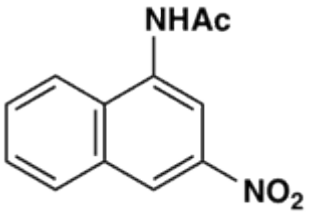


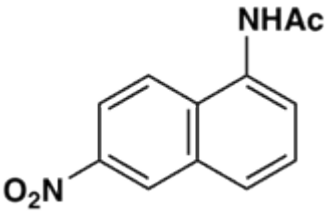
Question 3

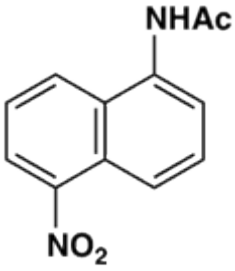
Which is the most probable main product of the following reaction?



a) 

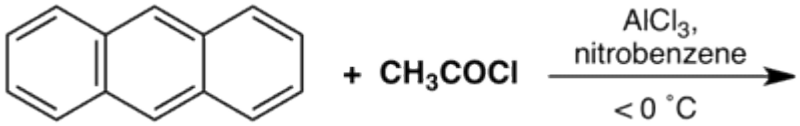
b) 

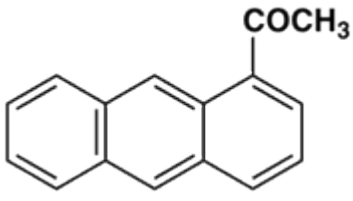
c) 

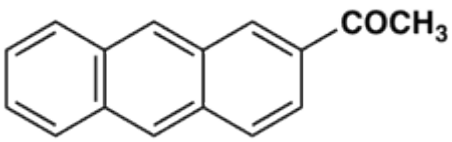
d) 

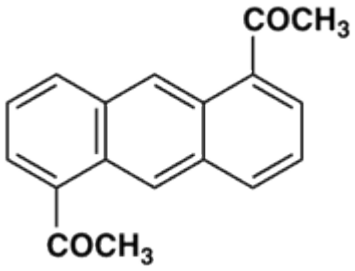
Question 4

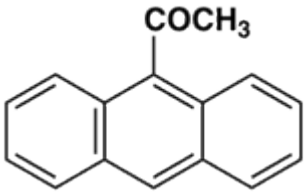
Which is the most probable main product of the following reaction?



a) 

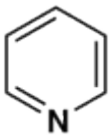
b) 

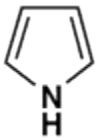
c) 

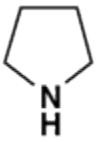
d) 

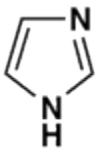
Question 5

Which compound is most basic?

a) 

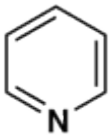
b) 

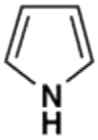
c) 

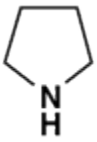
d) 

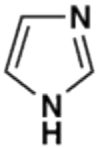
Question 6

Which compound is least basic?

a) 

b) 

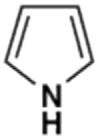
c) 

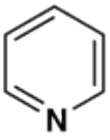
d) 

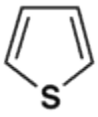
Question 7

Which is most reactive in electrophilic aromatic substitution?

a) 

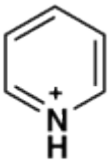
b) 

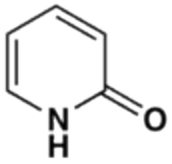
c) 

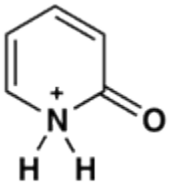
d) 

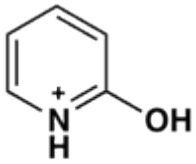
Question 8

Which of (a)-(d) is **not** aromatic?

a) 

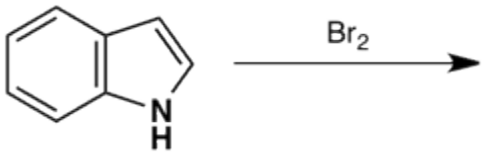
b) 

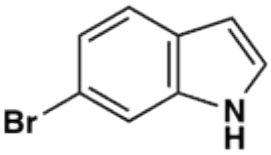
c) 

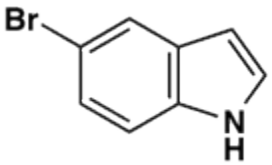
d) 

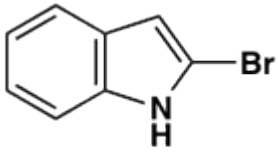
Question 9

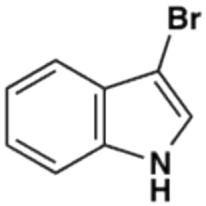
Which is the most probable main product of the following reaction?



a) 

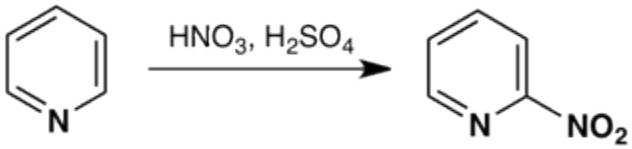
b) 

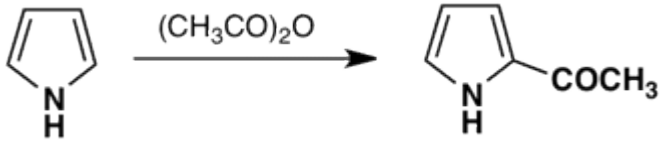
c) 

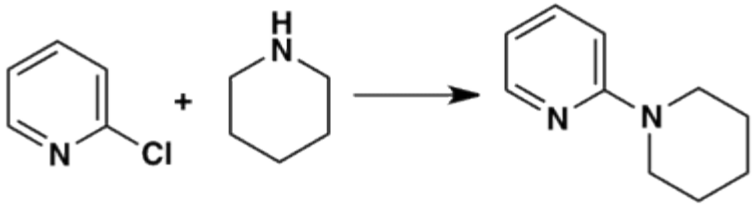
d) 

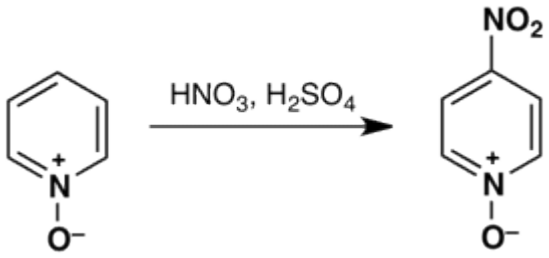
Question 10

Which of the following equations shows an unlikely result?

a) 

b) 

c) 



d)

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1.Is the seminar useful for you

a) Yes b) No

2.How was the student present Presentation

a)Good b) Better C)Excellent

3.Did the event meet your expectation

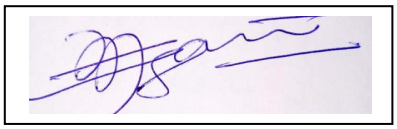
a) yes b) No

4.Is the content clear by the presenter

a) Yes b) No

5.Did you enjoyed the seminar or felt bored

a) Enjoyed b) Bored



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