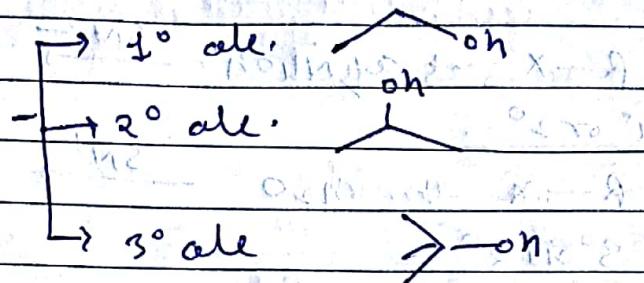


Alcohol, Ether, Phenol

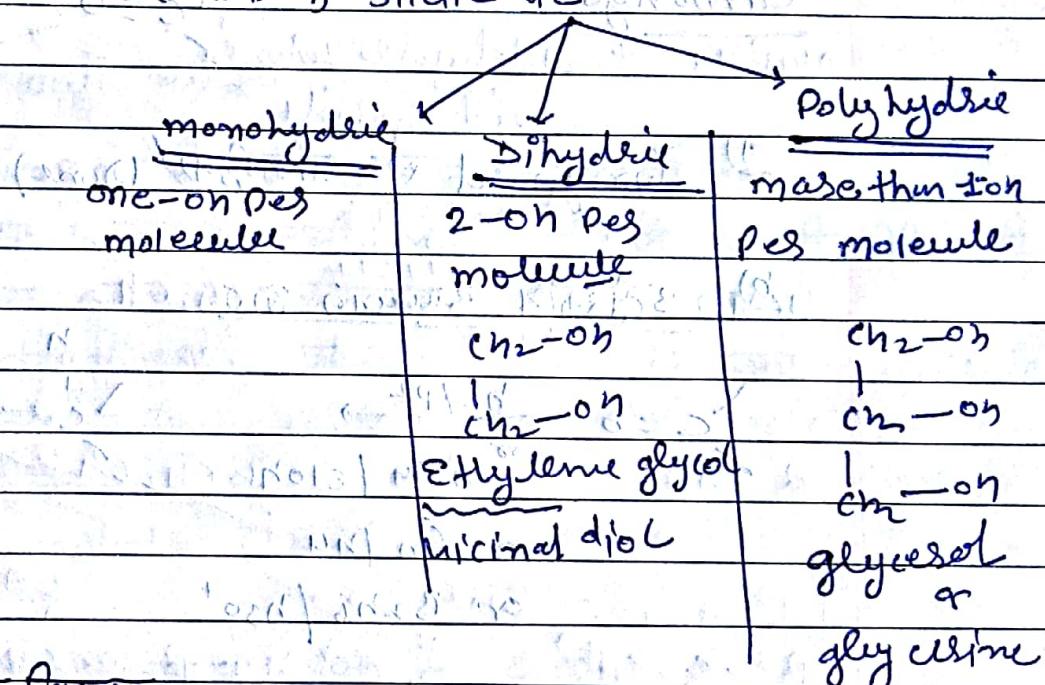
SHREE

Alcohol

२ वाक्यकरण



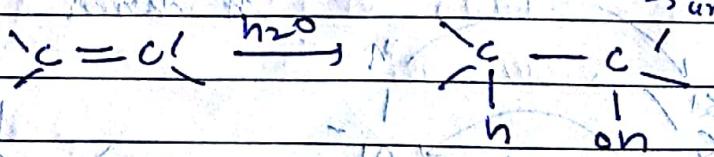
॥ -०५ समृद्धि की संरक्षण के आधार पर



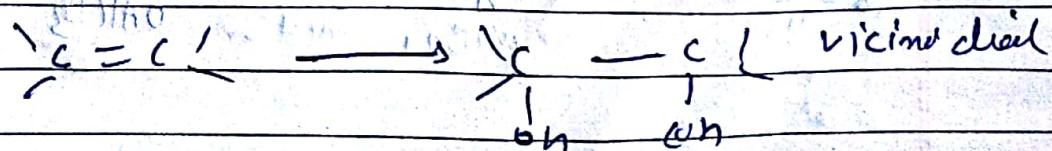
निर्माण आविष्यन :

ii) Alkene गृहरा

a) ग्रेटर अमेरिका $\xleftarrow{\text{OMDM}}$ $\xrightarrow{\text{ATBO}}$ $\xrightarrow{\text{mat-reduce}} \rightarrow$ मर्केनिंग \rightarrow anti-trust limitation

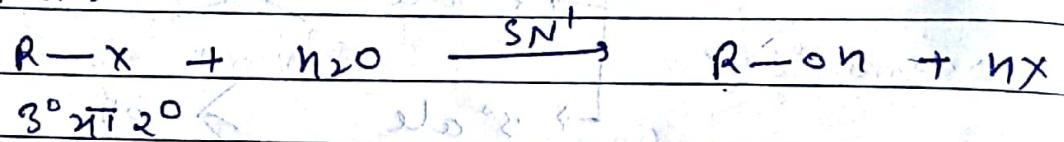
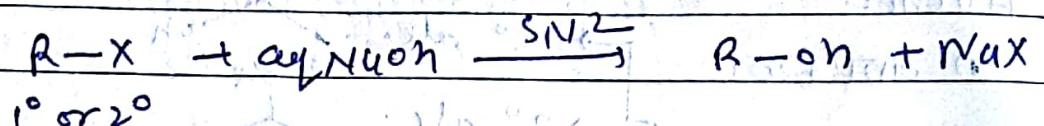


b) ଦ୍ୱାରା କରାଯାଇଥିଲା ଅନ୍ତର୍ଭାବରେ



Teacher's Signature

(iii) alkyl halide का रा

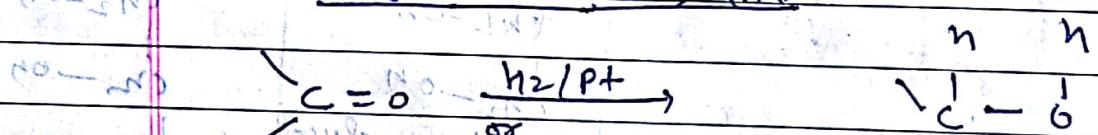


(iv) Carbonyl गॉर्बिल का रा

Note with diagram a) Grignard रे जागतिक (done)

Illustration

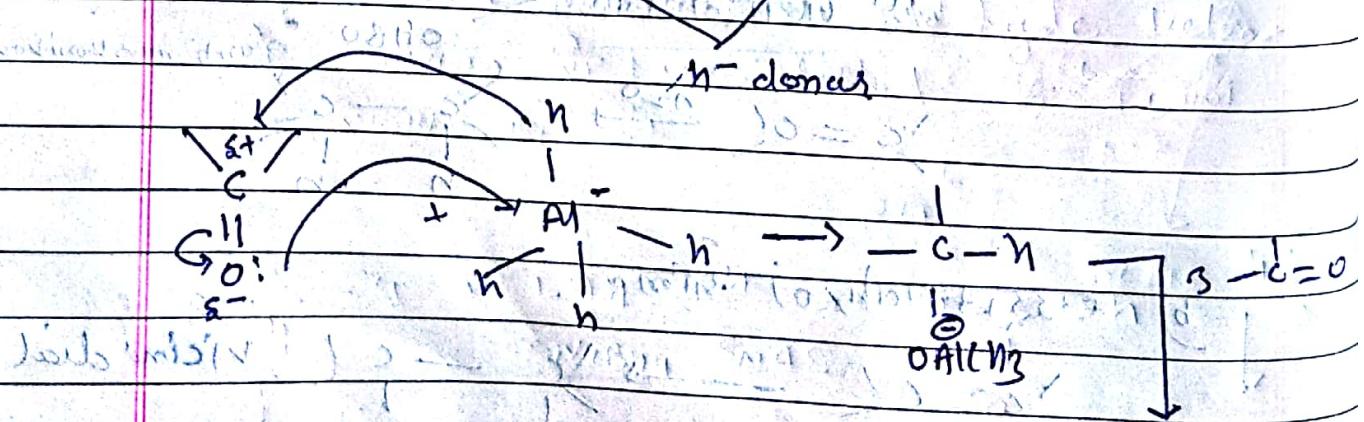
b) उत्प्रेरकीय अप्पार्ट रा



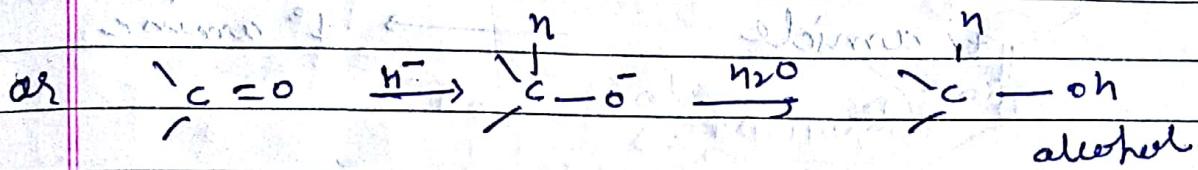
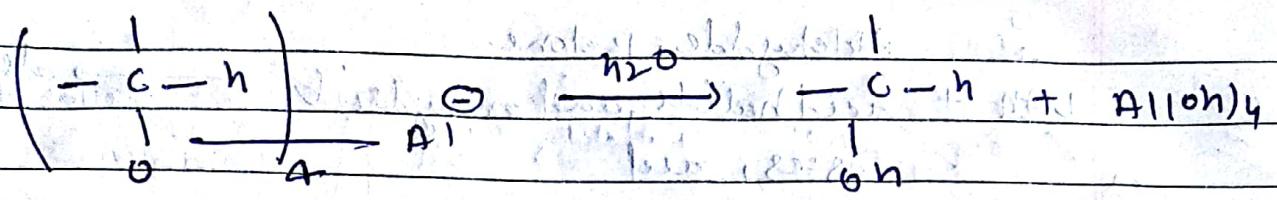
or C_6H_6 / H_3O^+ alcohol

5 LiAlD₄ व NBD₄ का अन्यमन

Lithium aluminium hydride \rightarrow Sodium Borohydride (i)



Teacher's Signature

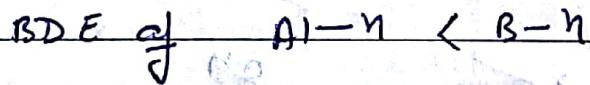


Ques:

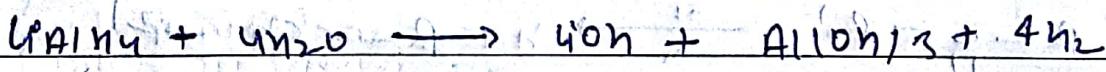
LiAlH₄, NaBH₄ से नियन्त्रित पुरुष उत्पादन की

- (i) LiAlH₄, NaBH₄ से नियन्त्रित जलीय लाइटर्स की सेवन नहीं हो सकती।
- (ii) LiAlH₄ द्वारा अप्प-वर्ग जलीय लाइटर्स की सेवन नहीं हो सकती।
- (iii) Hydride transfer के पश्चात LiAlH₄ की कार्बोहाइड्रेट्रिक अम्लीयता का दृष्टि आयी है।

Soln (i)



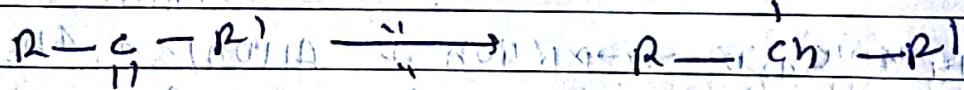
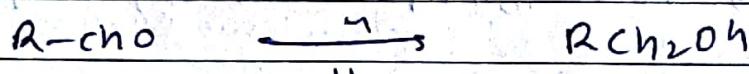
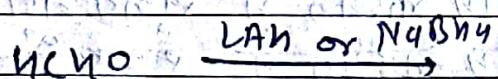
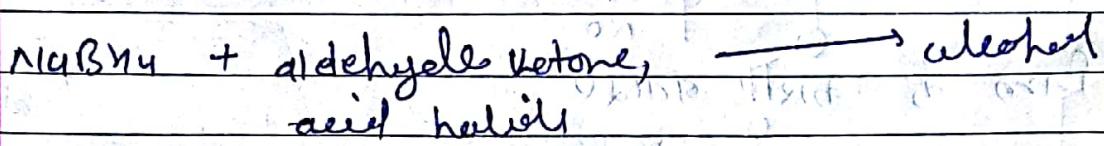
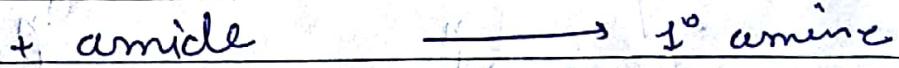
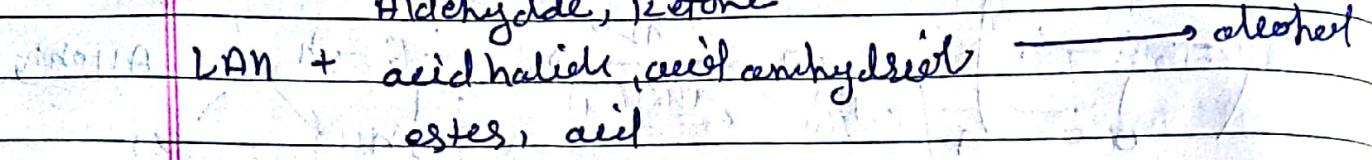
(ii)



इसके लिए जलीय लाइटर्स की सेवन नहीं हो सकती।

Teacher's Signature

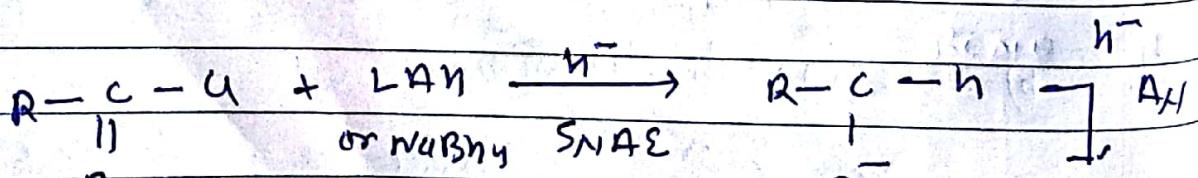
Aldehyde, ketone



Note

$\text{R-C(=O)H} + \text{LAH or NaBH}_4 \xrightarrow{\text{alcohol}}$ aldehyde, ketone

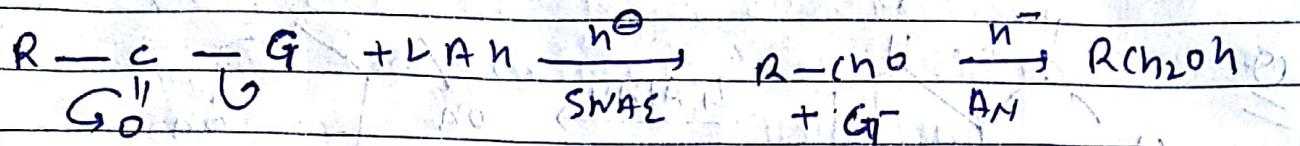
$\xrightarrow{\text{acid halide}}$ $\xrightarrow{\text{so alcohol}}$ $\xrightarrow{\text{H}_2\text{O}}$



acid halide

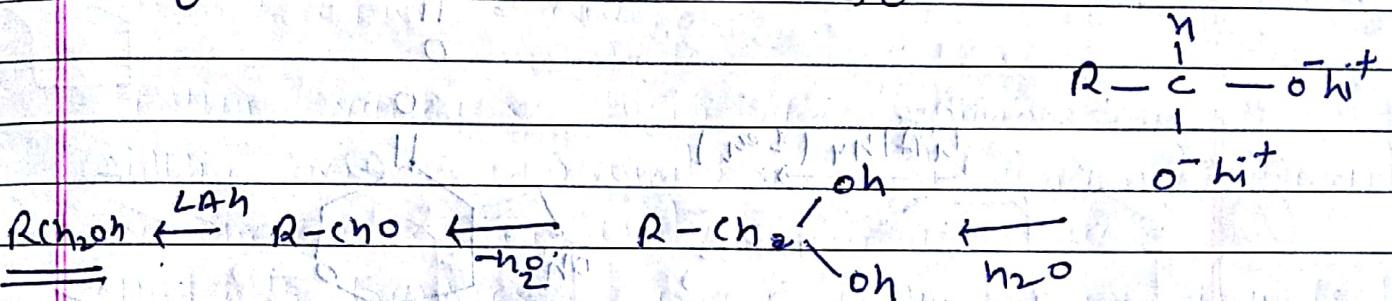
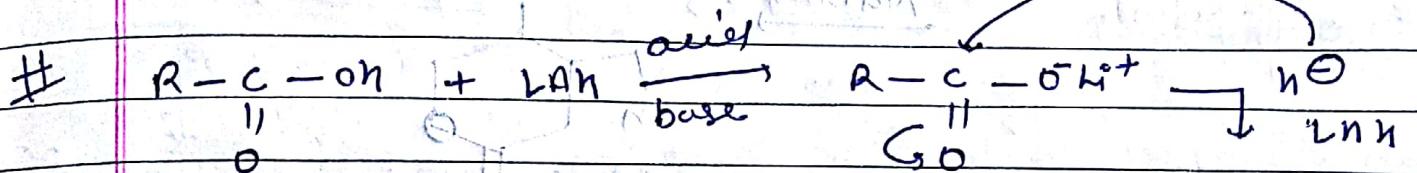
RCH_2OH

$\xleftarrow[\text{H}_2\text{O}]{\text{Teacher's Signature}}$

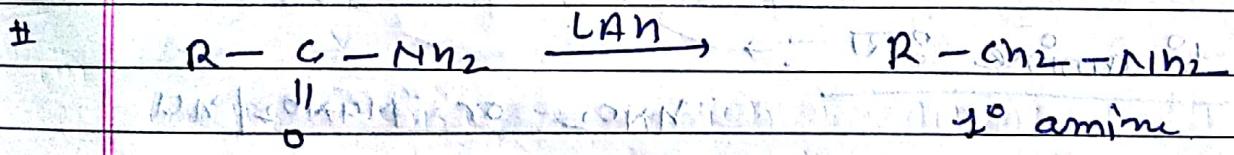


acid anhydride

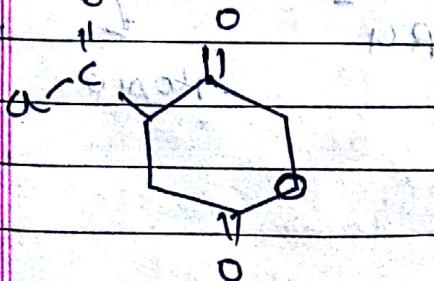
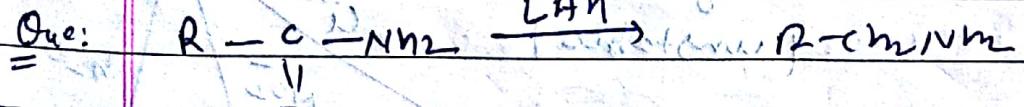
or ester



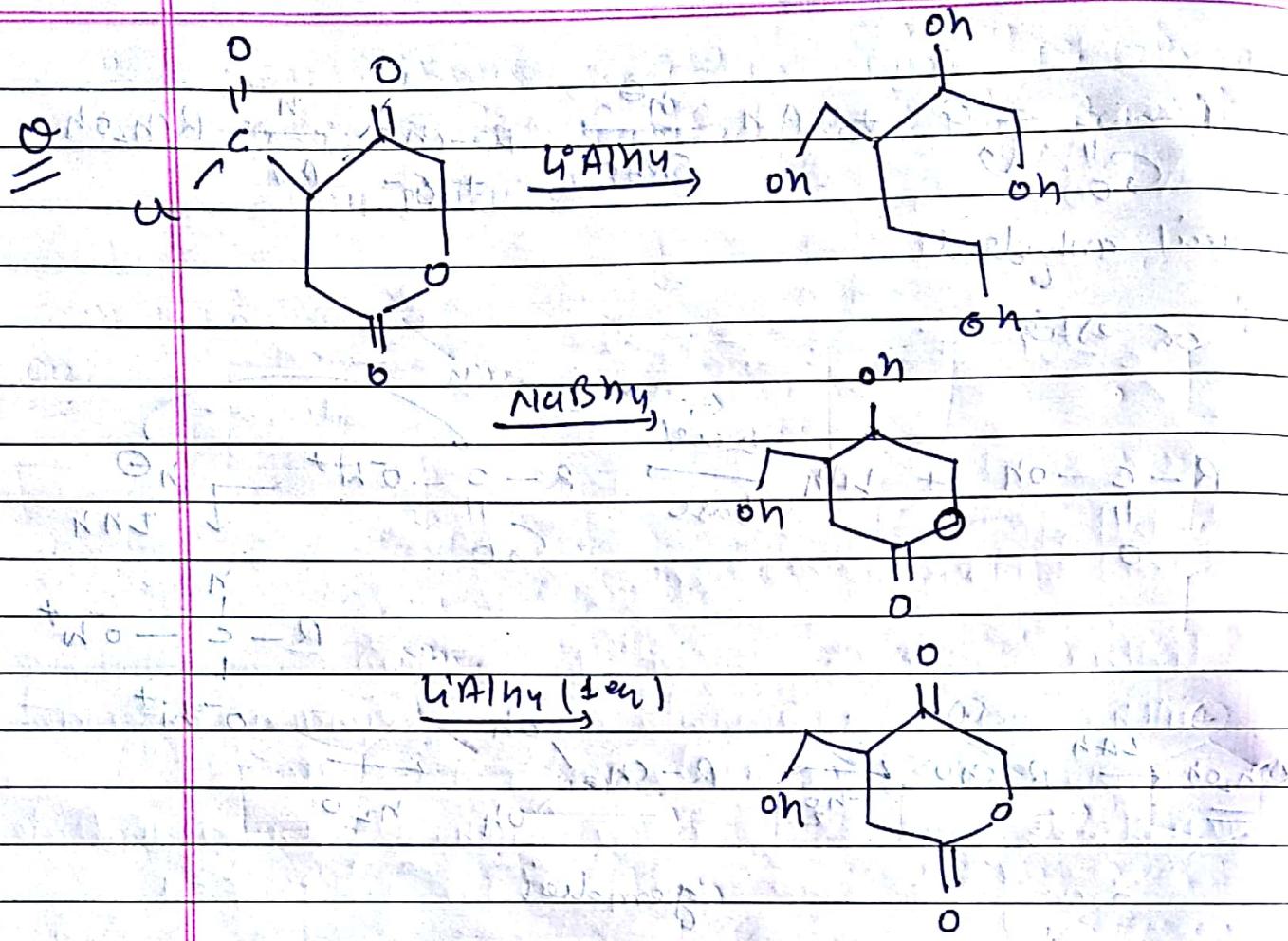
gemdiol



acid amide



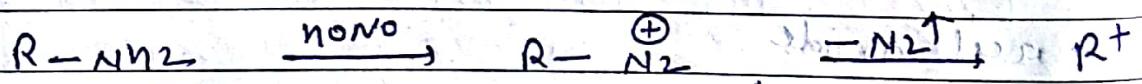
Teacher's Signature



②

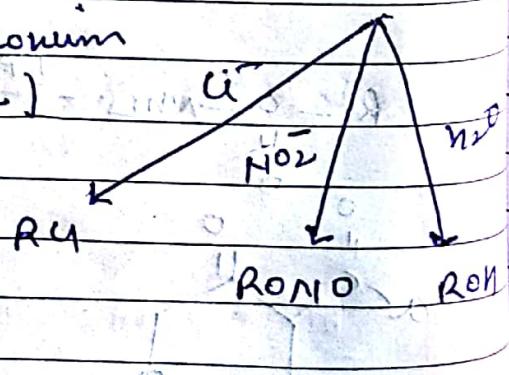
1° amine - एर्टी : \rightarrow

HNO_2 or $\text{NaNO}_2/\text{NH}_3$

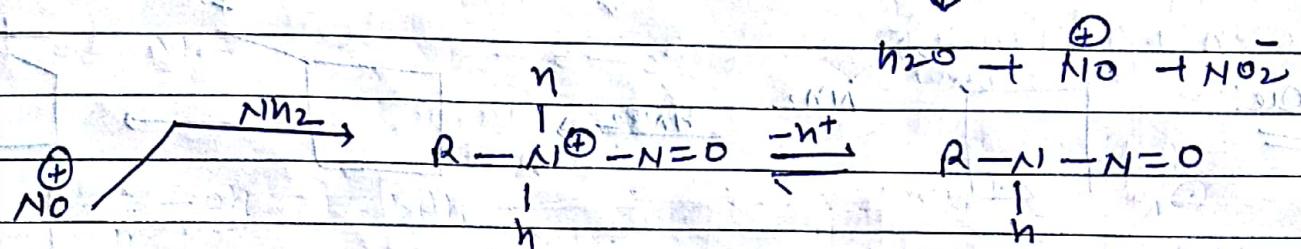
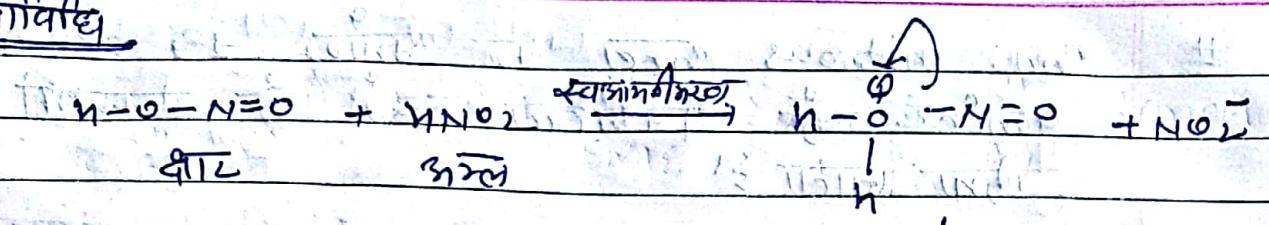
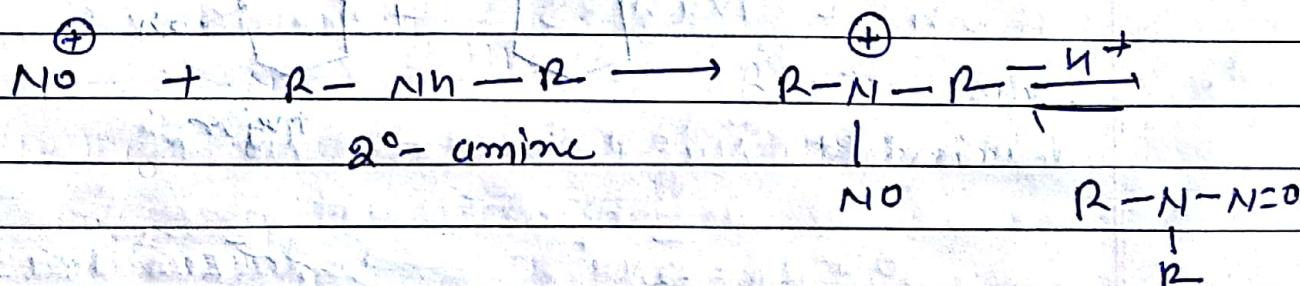
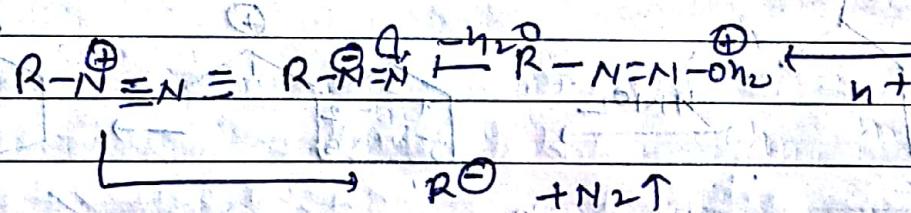
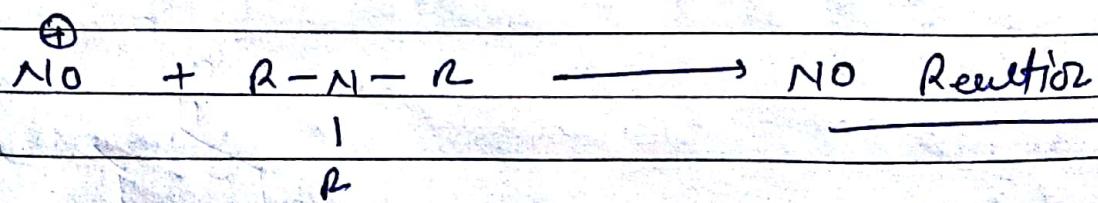


1° amine

alkyl diazonium
(unstable)

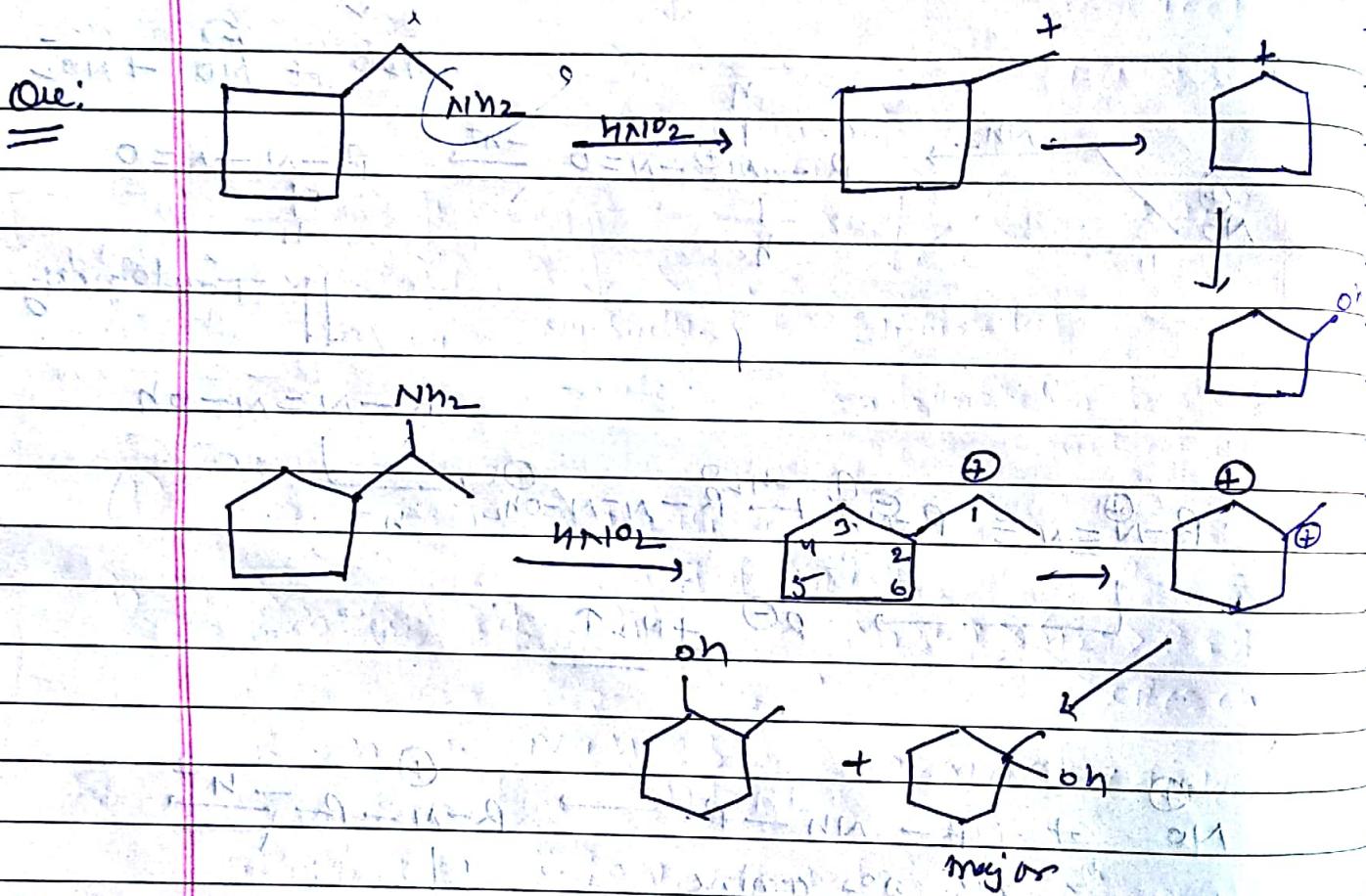


Teacher's Signature

Properties↓
Tautomerization N-nitroso amine  3° amine

Teacher's Signature

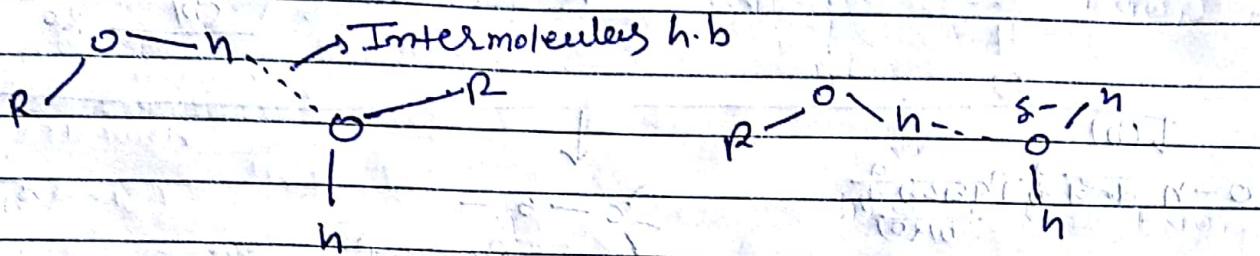
37. i. nitrous acid का याहूं 30, 20 और 30
amine का विवरण करो और लिखो।



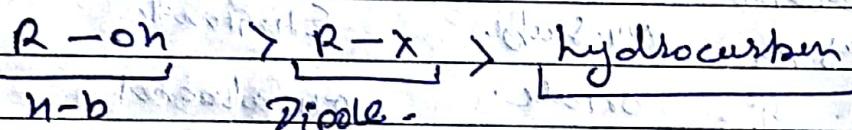
for hydration of alkyne ^{use} heavy metal ions Hg^{2+} ,
 Re^{3+} act as catalyst

SHREE
DATE: / /
PAGE NO.:

alcohol $\xrightarrow{\text{H}_2\text{O}}$ अल्कोहॉल $\xrightarrow{\text{H}_2\text{O}}$

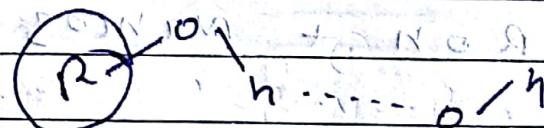


प्रतीक्षित अवधारणा (संभवतः नीले चिह्निंग)



Dipole London dispersion force

* alcohol की अवधारणा नीले चिह्निंग से कुलमत्ता होती है क्योंकि अल्कोहॉल द्वारा विद्युतीय विपरीत लोड देती जाती है।



बाल परिणाम

* Isomeric alcohol

B.o.P. of branch isomers < Straight isomers

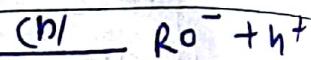
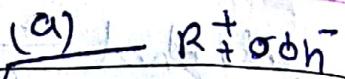
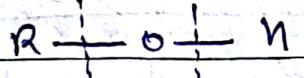
Solubility in H_2O branch iso. $>$ St. iso.

दर्शक चिह्न, इन अल्कोहॉलों में अल्फाप्रिंटिंग का उपयोग किया जाता है।
इस क्षेत्र में दोनों कोर्ट के दर्शक चिह्न दिखते हैं।

Teacher's Signature

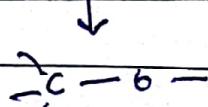
रसायनिक त्रैयों

(a) (b)



i(b)

O-N अणु के प्रियता की
क्रमांक



प्रियता की
क्रमांक

alcohol
as acid

alcohol

as NH

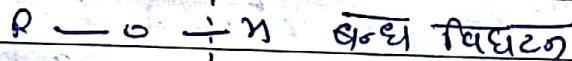
NH-Sub.

Eliminated

amine

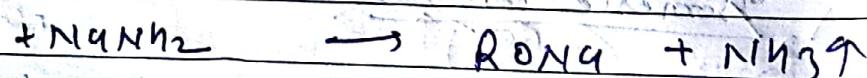
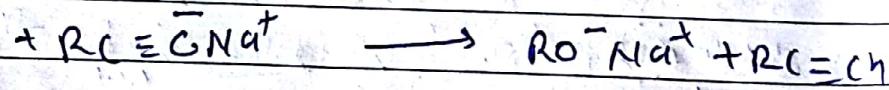
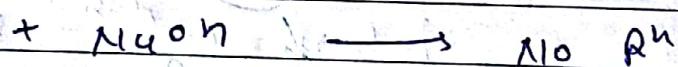
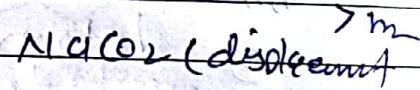
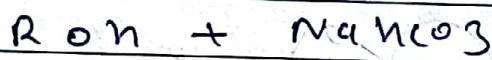
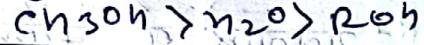
on alcohol

①



Acidic strength

RON as acid



20 min. + dilution \rightarrow basic alc.

Step 2: Dilution \rightarrow basic alc. \rightarrow neutral

∴ first row is optimum this

Teacher's Signature

ii) ROH as nucleophile

$\xrightarrow{\text{Nucleophile}}$ अल्कोहॉल \Rightarrow aldehyde or ketone OR

NH

स्ट्रक्चरालॉजी

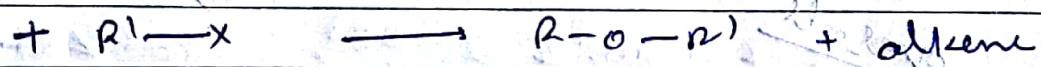
alyl

acetyl or SNAr or SNAE

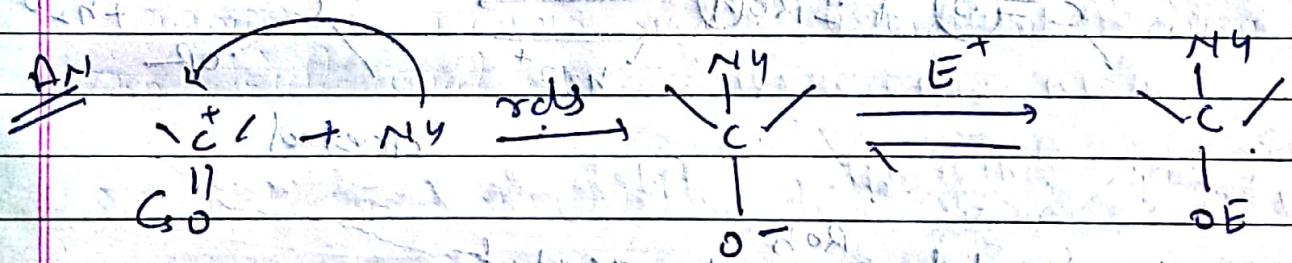
NU-nucleophile Substitution



व्हेल्यून $2^\circ - 3^\circ$ $\xrightarrow{\text{SN}^1}$ E_1



$\xrightarrow{\text{SN}^2}$ E_2



tetrahedral

Intermediate

अल्कोहॉल समिश्र

alcohol के तुलने में अल्कोहॉल का नियन्त्रण असंभव है

आकृति पर्याय रूप से विस्थापित होता है

alcohol की राह पर (Carbonyl स्ट्रक्चर पर आकृति का)

hemi acetyl तृप्यादि जैसा संरचना होता है

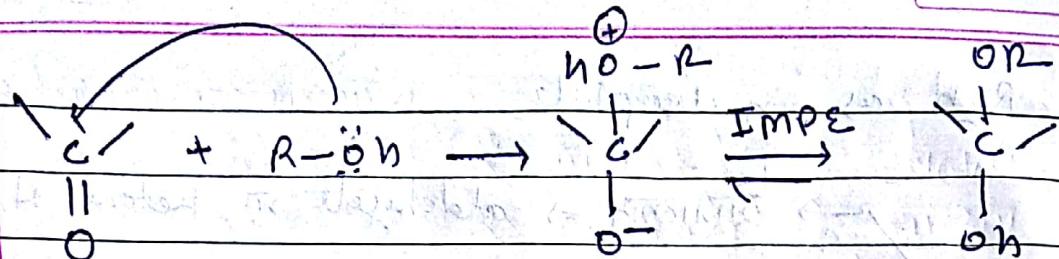
तरीके नहीं hemi acetyl पर alcohol का तरीका

नहीं आकृति करने एवं acetyle जैसा संरचना होता है

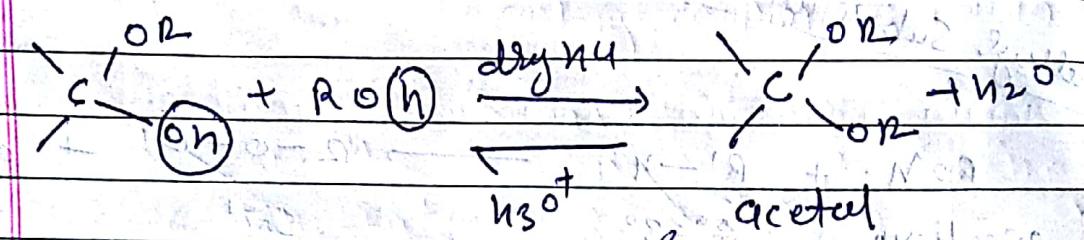
मिलता है अब इसे पर्याय रूप से बदलना

मिलता है अब इसे पर्याय रूप से

Teacher's Signature

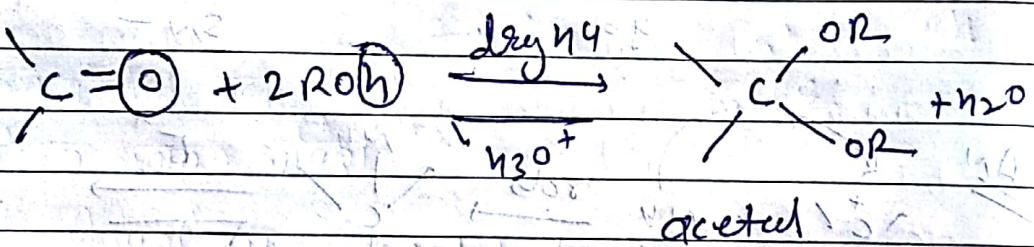


Hemiacetol
(3I + OH⁻)

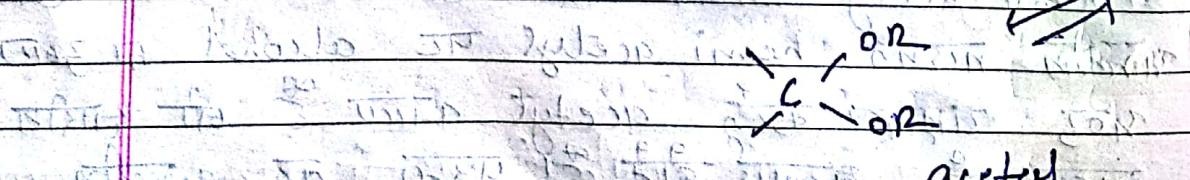
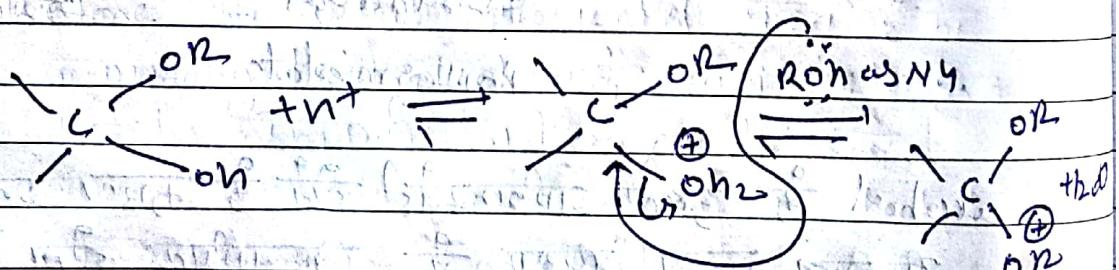


$\cancel{\text{Hg}}$ (stable in basic & neutral medium)

overall

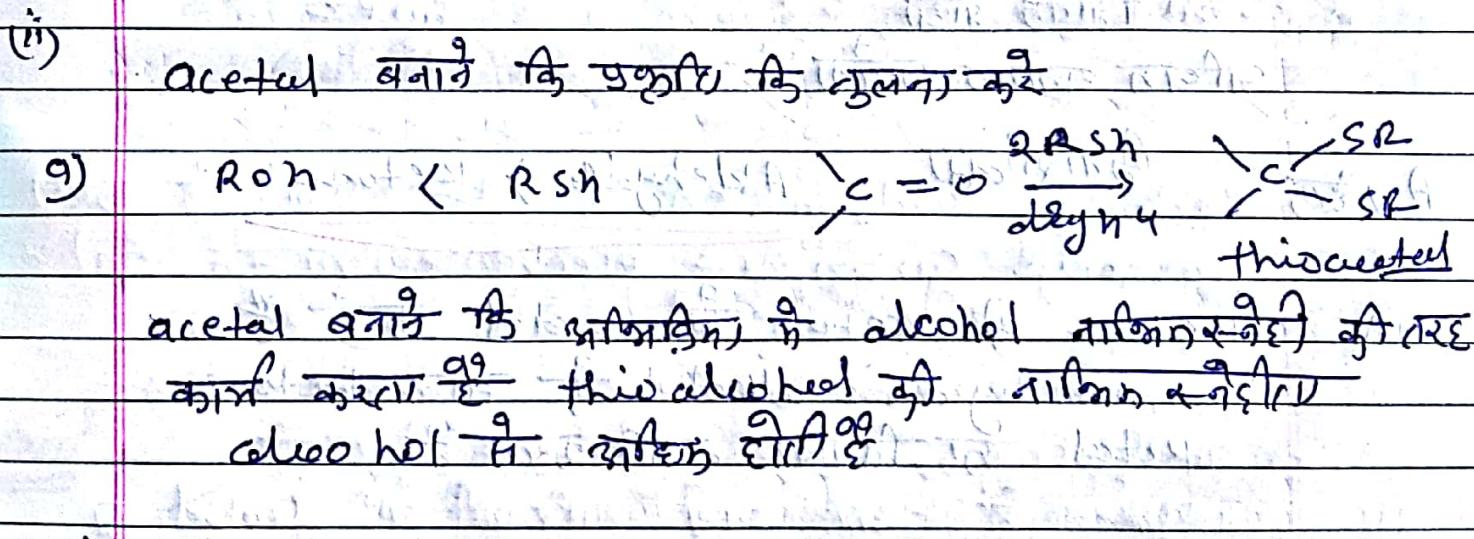
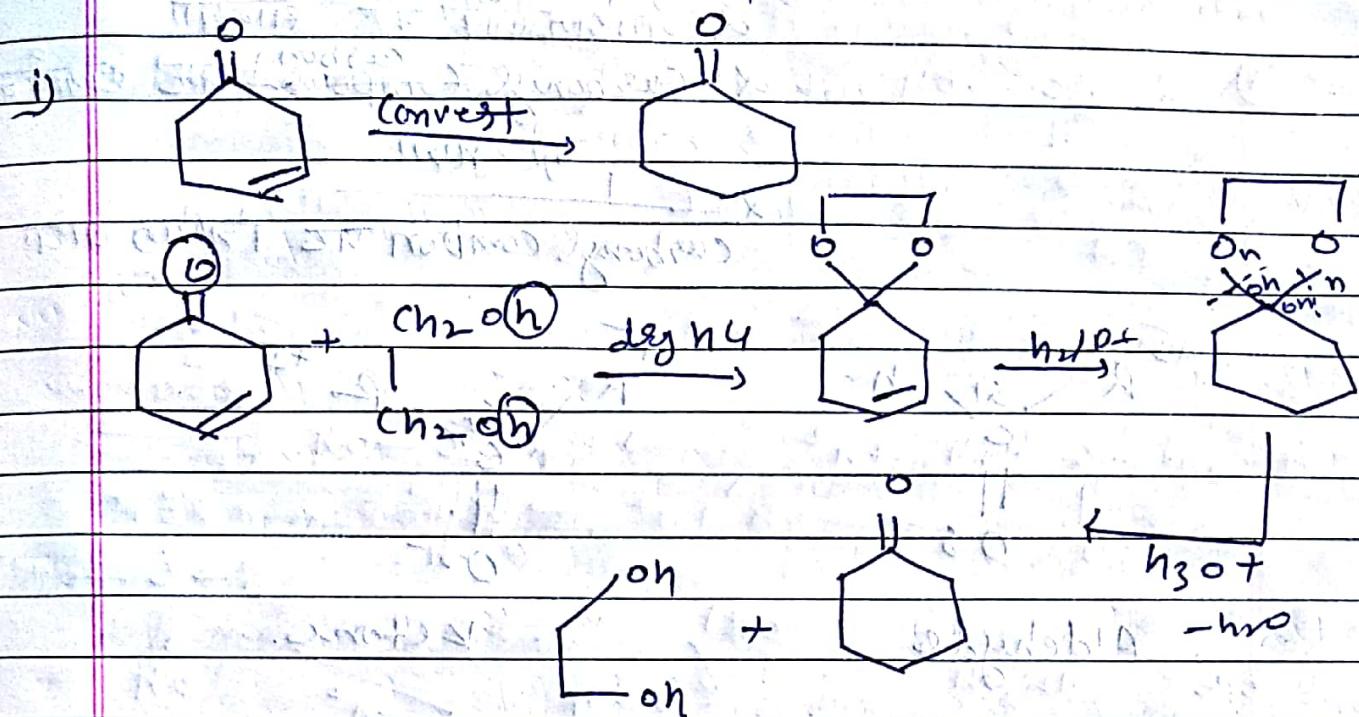


Hemiacetal $\xrightarrow{\text{R-OH}}$ acetol

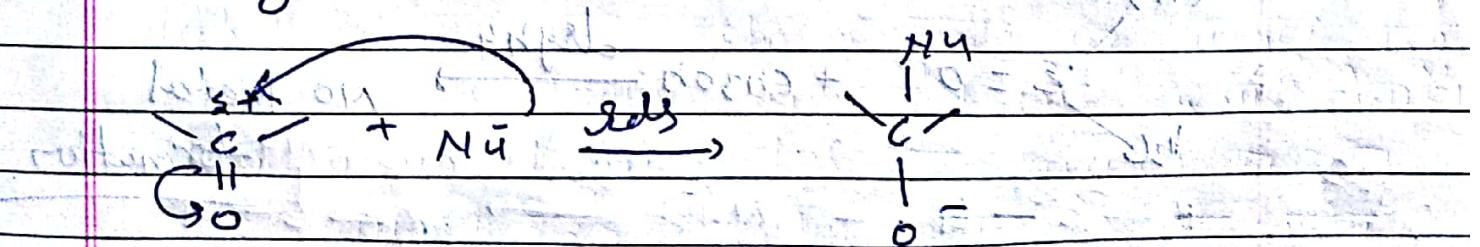


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अद्य अभियान (अभियानकारी से कंपनी) द्वारा समृद्धि द्वारा Protection (प्रधान)



b) aldehyde & ketone



$\text{R} = 1 \leftarrow [\text{Carbonyl compound}] [\text{Nu}^-]$

Teacher's Signature

AN अमिनो की गति

ग्राफिकलीय

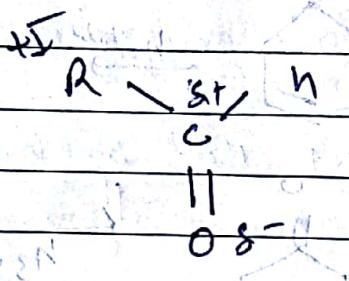
α अमिनोकी प्रवृत्ति

α नामिनोकी सांस्कारिकी

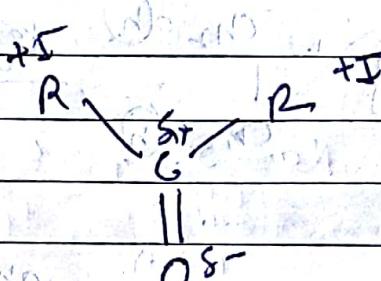
α carbonyl compound $\xrightarrow{\text{carbon}}$ CH_3O

α - 1

carbonyl carbon पर ग्राफिक वादा



Aldehyde



Ketone

कर नियन्त्रित वादा

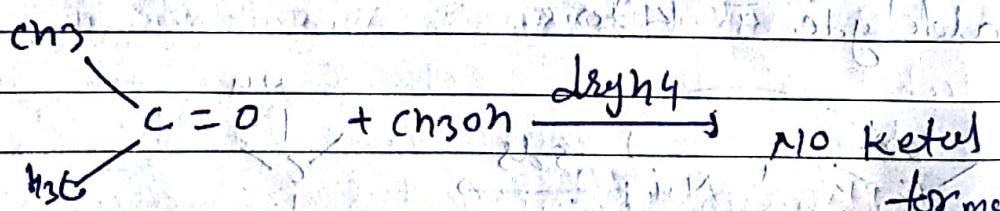
नियन्त्रित वादा (अपेक्षा)

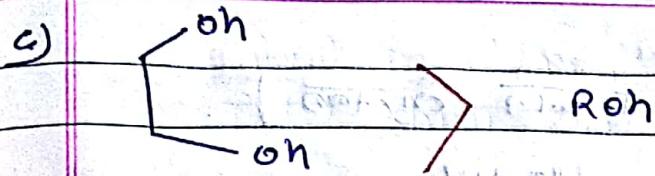
AN

नियन्त्रित

Aldehyde \rightarrow Ketone

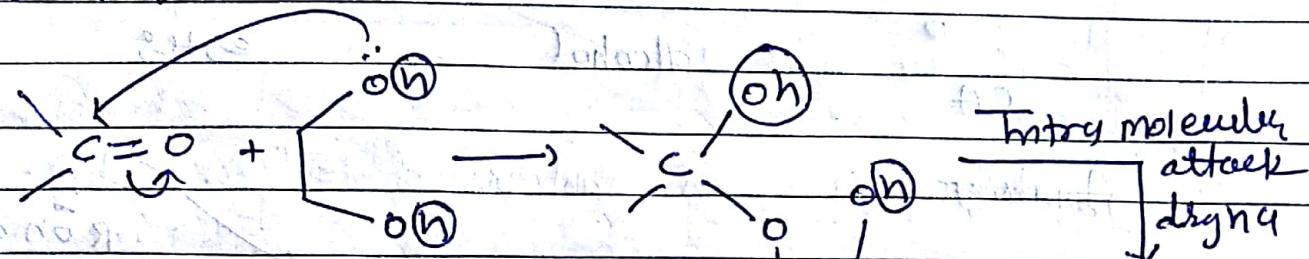
उत्तर # Ketone के दो तरीके में बनते हैं।
मुख्य एकल और अन्यका द्वितीय केटोन।
केटोन के दो तरीके में बनते हैं।





dihydric alcohol

mono hydric alcohol

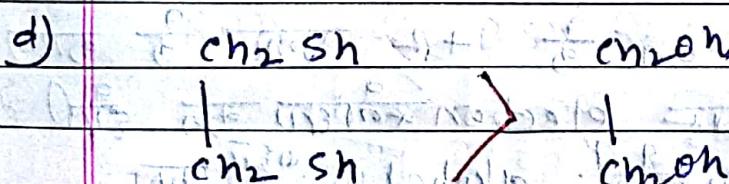


Intra molecular reaction

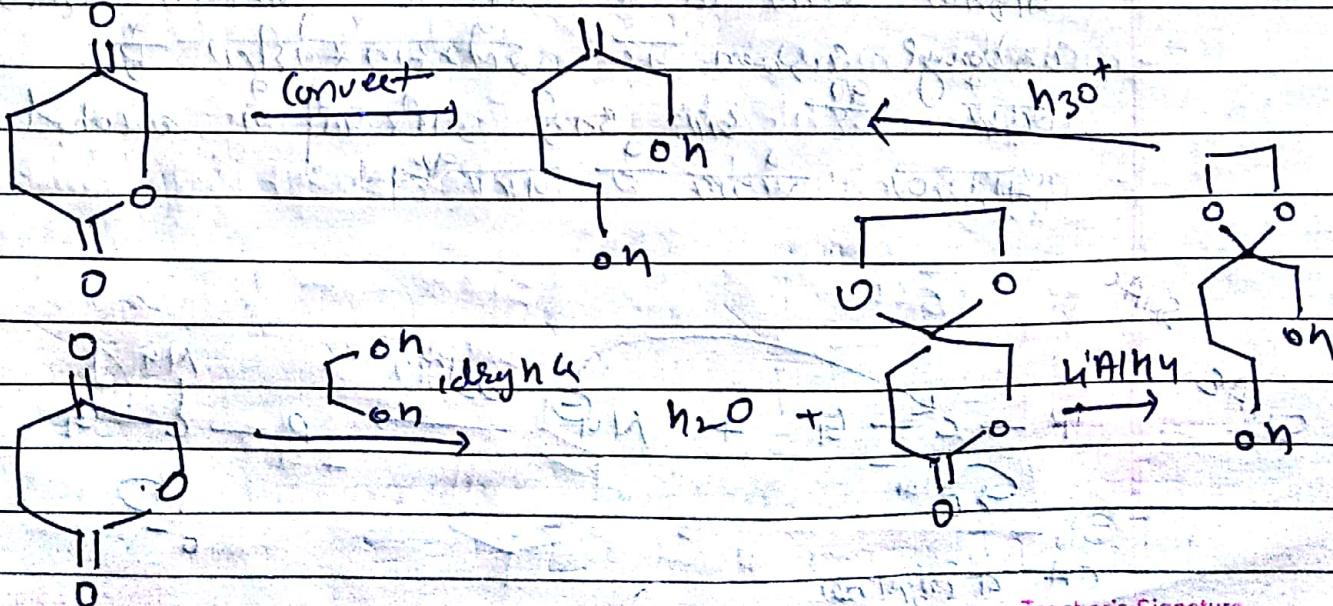
formed one intermolecular

acetal

मिली करने वाली केटो समूह की द्वारा द्विहydric alcohol में एक अंतर्मोलेकुलर केटल गठित होता है।



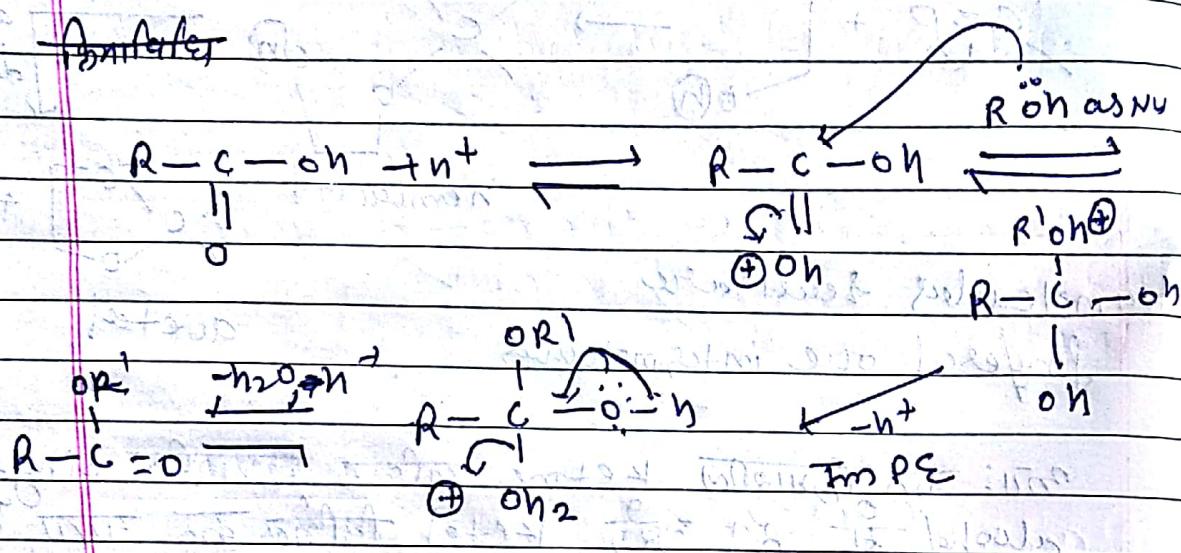
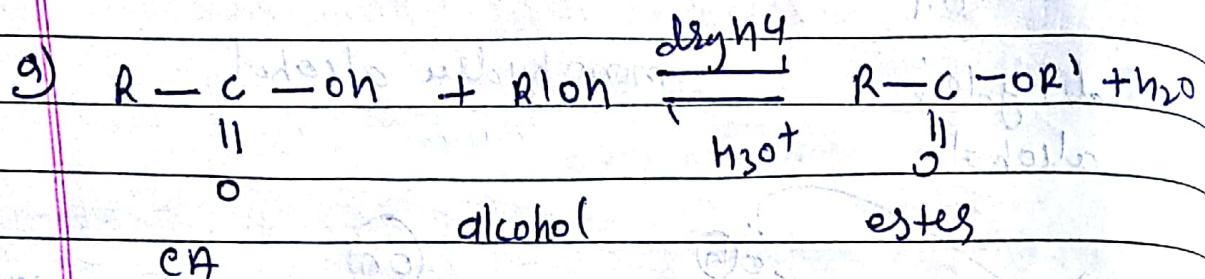
Ques:



Teacher's Signature

S_AAE or S_NAC

(CA അ ടെക്നാൾജിസ്)



Carboxylic acid \xrightarrow{n} on $\xrightarrow{k_2}$ +R यांत्रिक $\xrightarrow{k_1}$ करण

Carbonyl (Carbon \equiv electron π system) \rightarrow $\text{C}=\text{O}$

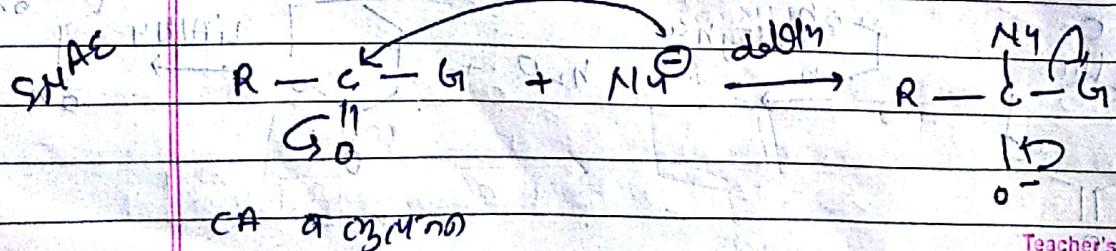
371) $\text{34 cm} \rightarrow \text{alcohol}$

आकृति संग्रह नदी द्वा पार्ख नदी अस्तीन उत्तर

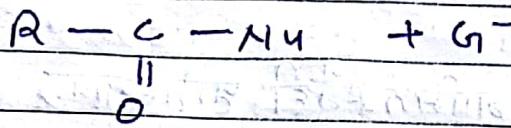
ଅଶ୍ରୁ ୩୦୧୨ ମେଟ୍ ପାଇସିଲ୍ ଏଣ୍ ଏଲିକୋଲ୍

અનુભૂતિ સાથે એવી જીવનની વિધાની પરિસ્થિતિ કેવી રીતે હોય તે આપણે જીવનની અનુભૂતિ કરી શકી હોય.

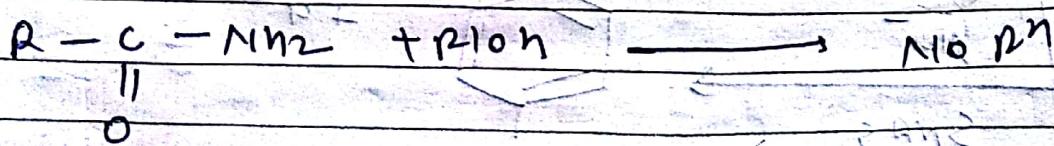
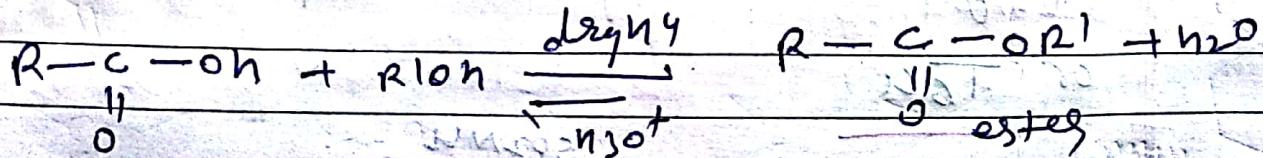
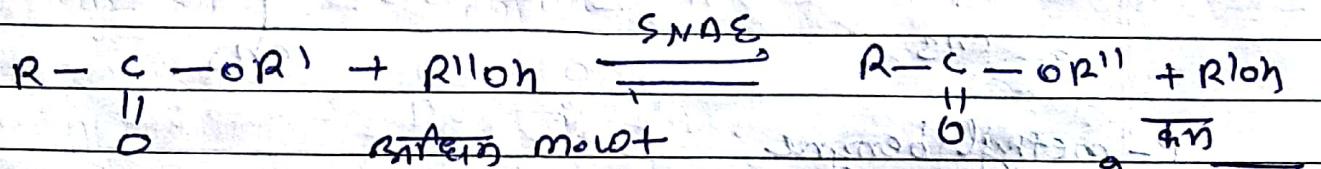
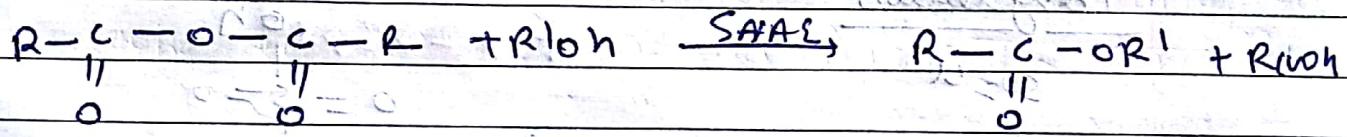
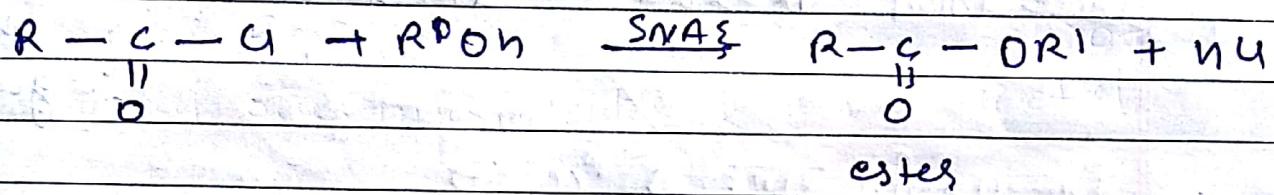
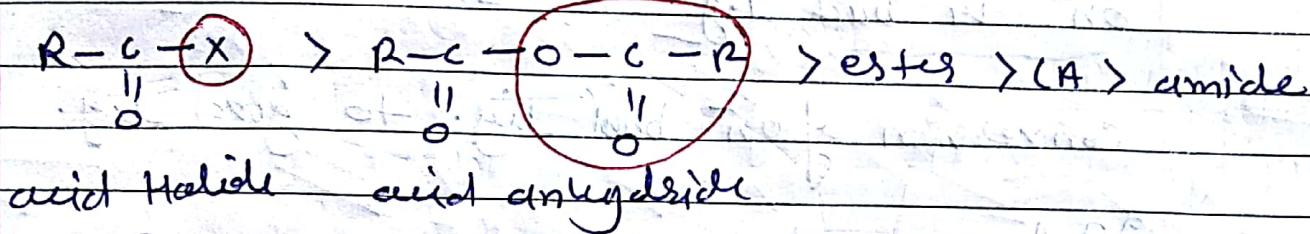
Synt



Elimination

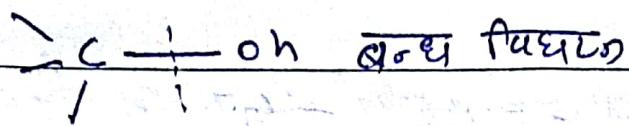


SNAE \xrightarrow{g} Aceto Anhydride



Teacher Signature

(2)

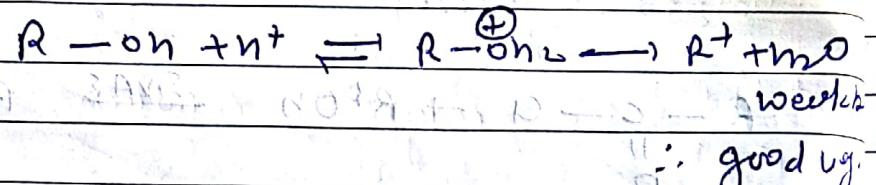


→ सामग्री की पूरितयापन
→ फैसला

ON⁻ in bad lig.

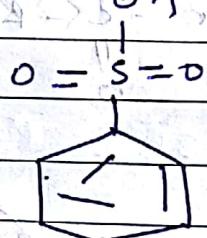
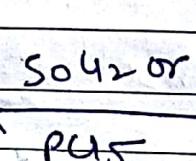
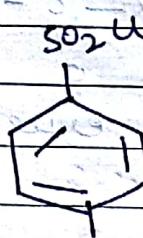
Conversion of ON⁻ bad lig. to good lig.

i) हाइटोक्सेन



ii)

Tosylation

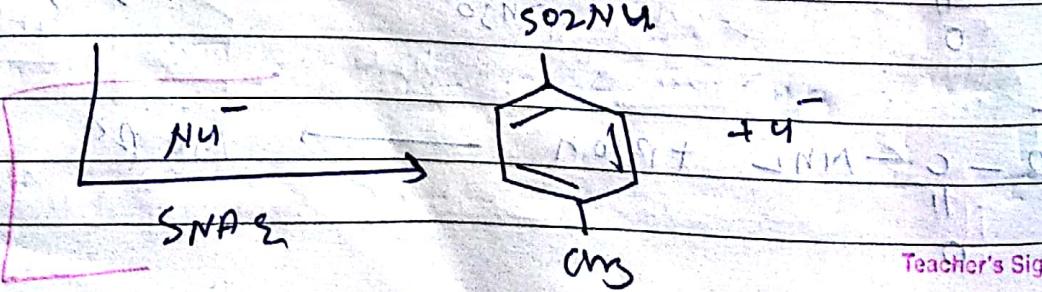


P-methyl benzene

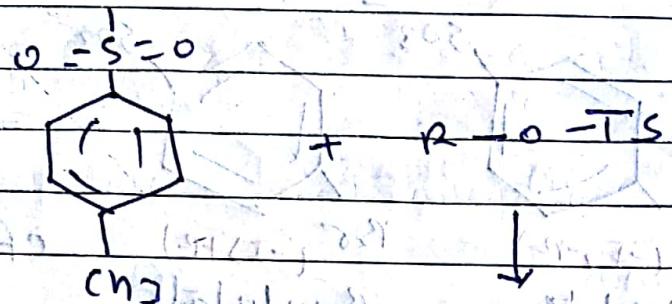
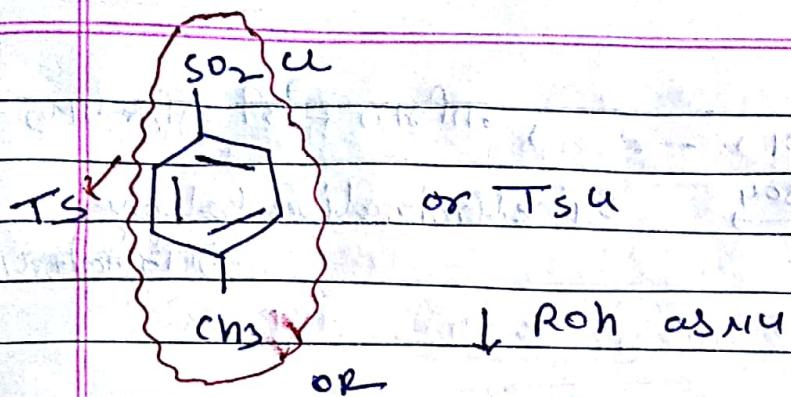
Sulphonium chloride
or Tosyl chloride

or TSCU

P-methyl benzene
Sulphonic acid



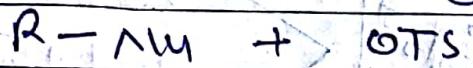
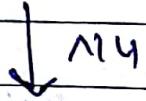
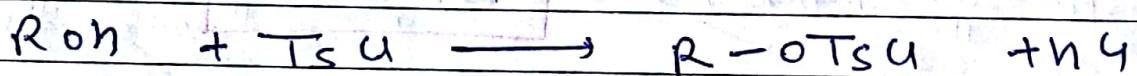
Teacher's Signature



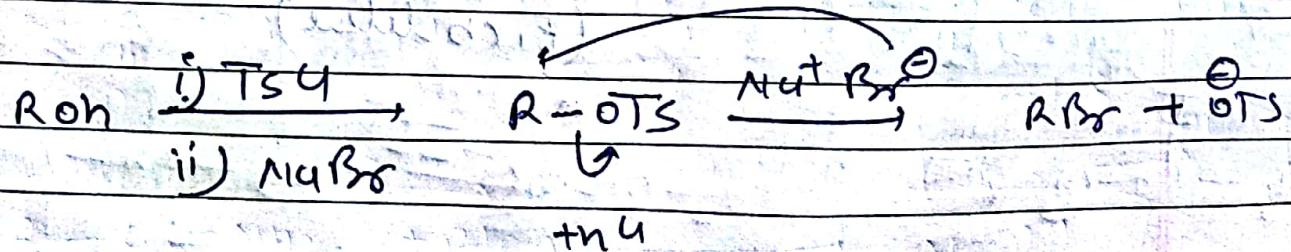
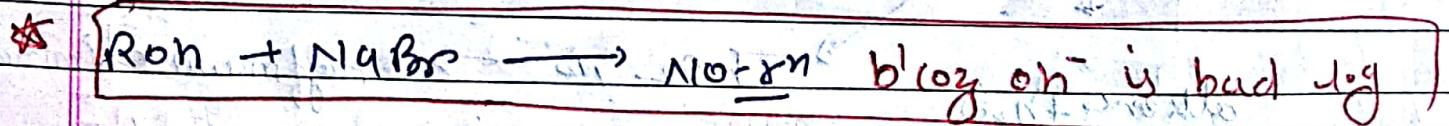
p-methoxy Benzene

Sulphonate ester

good l.g.

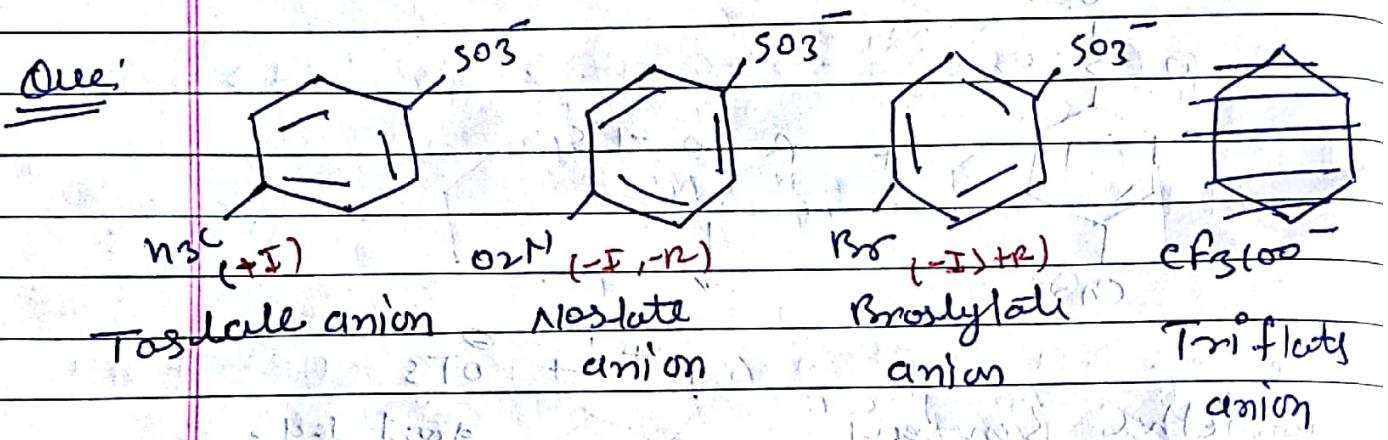


good l.g.



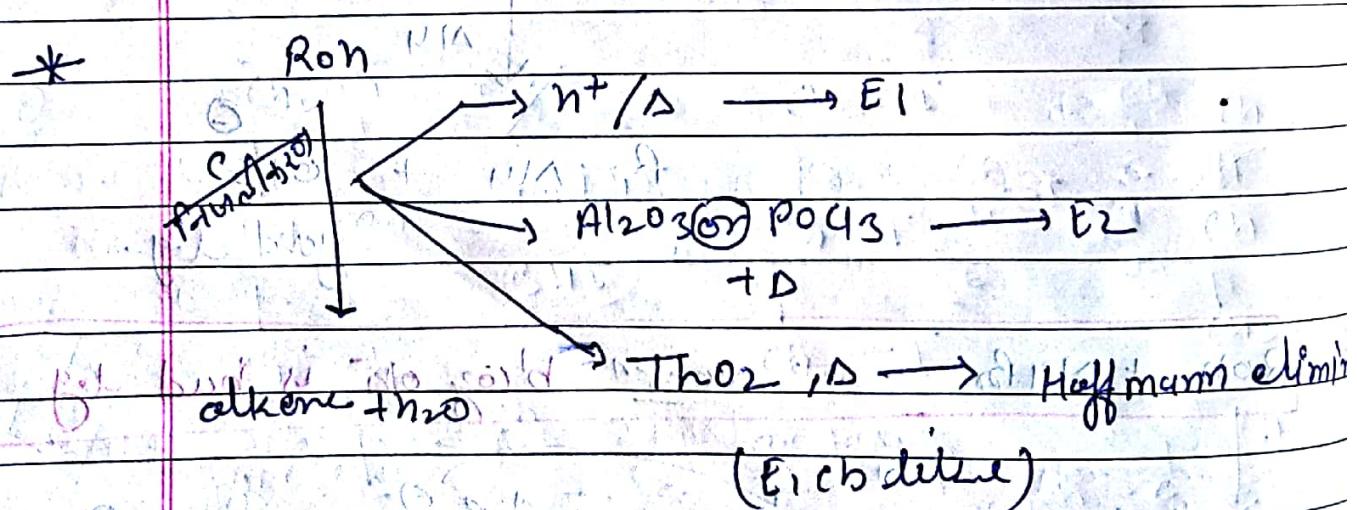
Teacher's Signature

for ex { i) $Ron + nn \rightarrow$ नामिकरण स्थिरपात्र
 " done ii) $Ron \xrightarrow[\Delta]{\text{con } H_2SO_4}$ E1 elimination (alcohol के नियम)

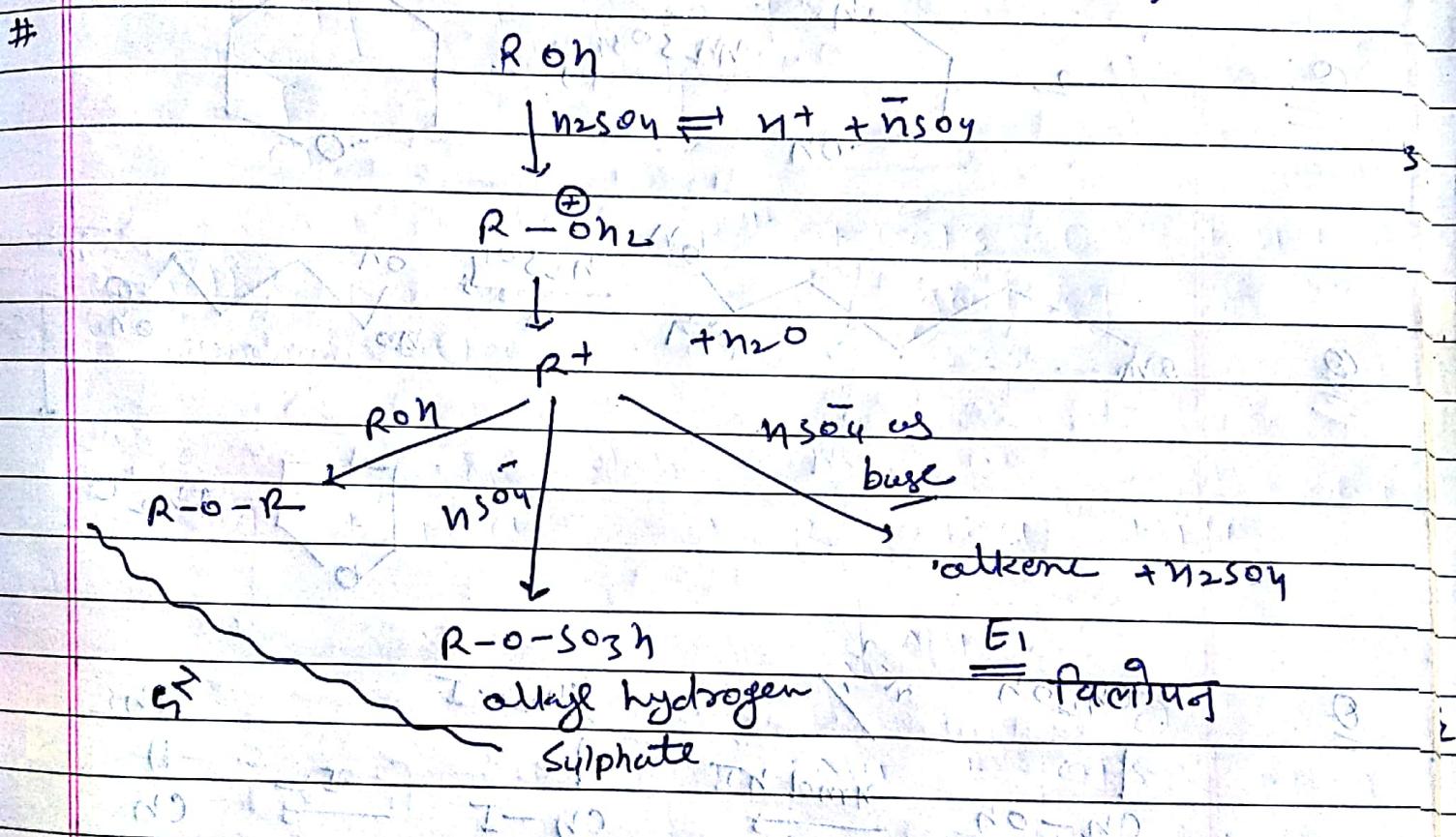
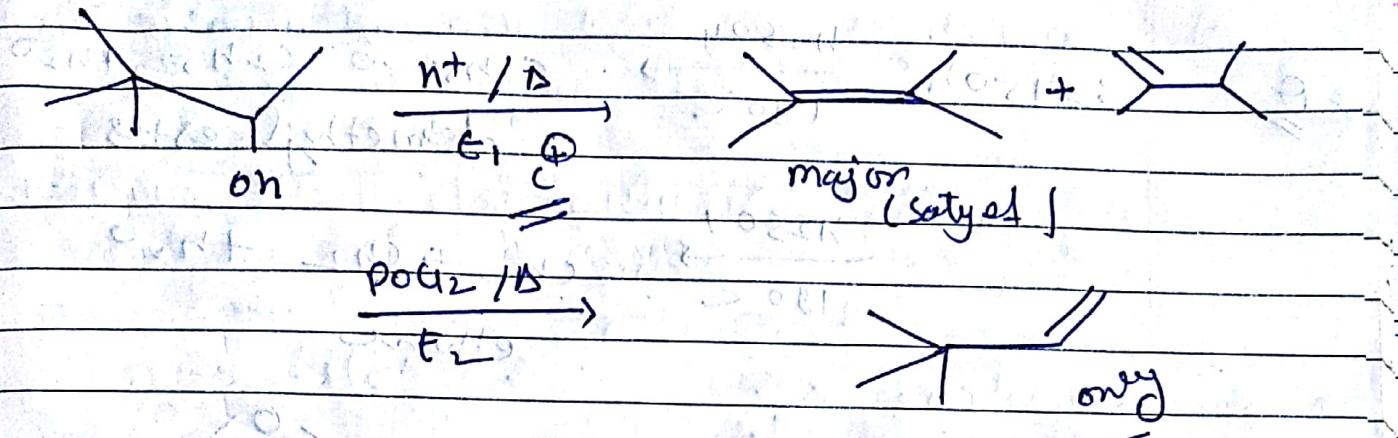


फलानामी अनुद गति :>

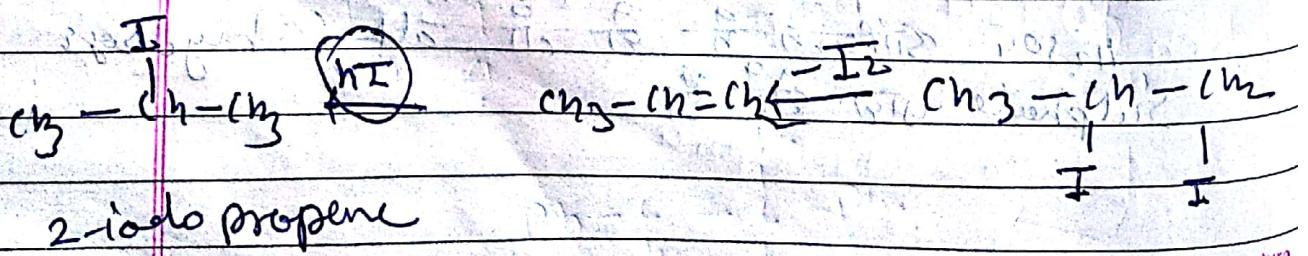
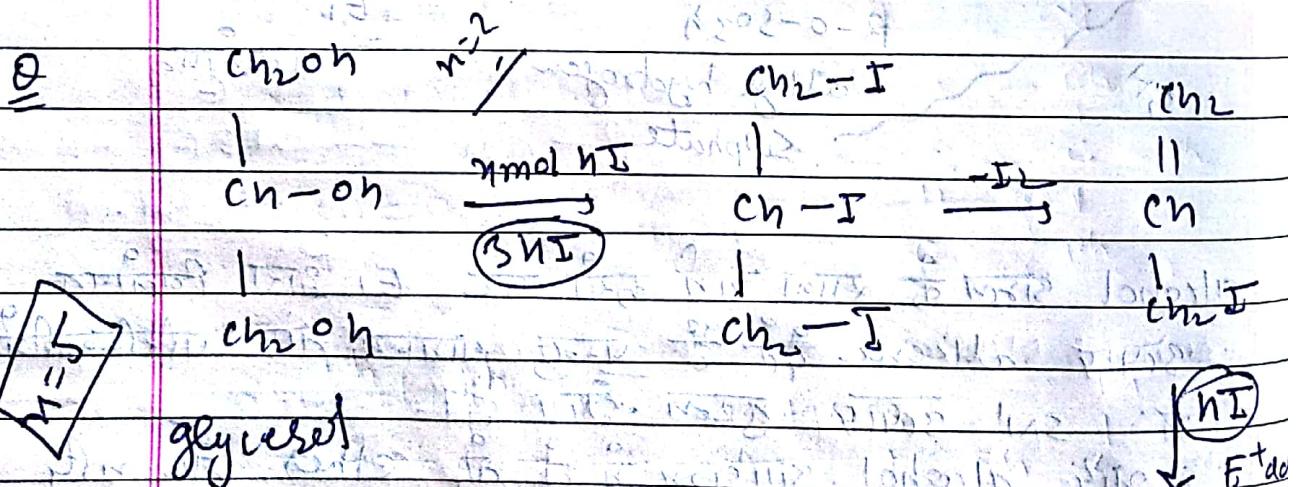
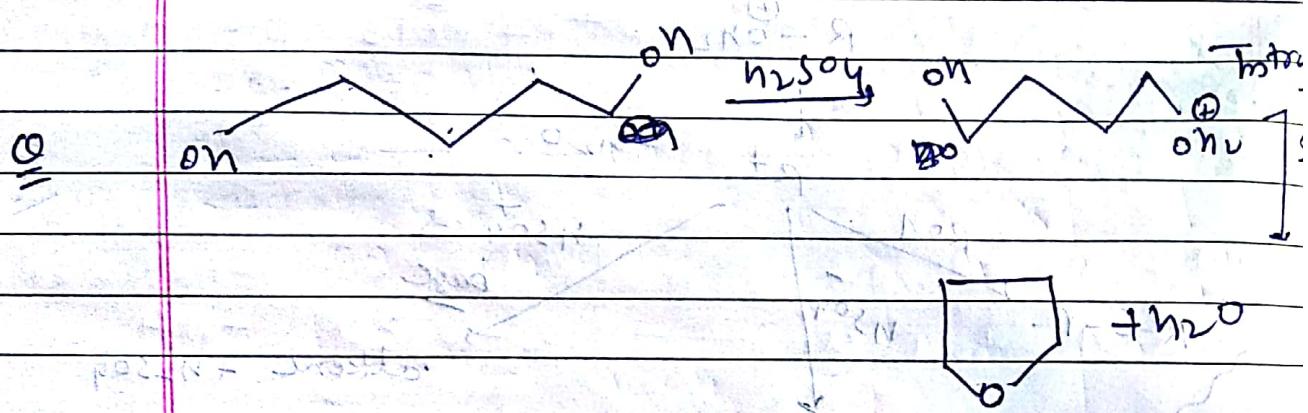
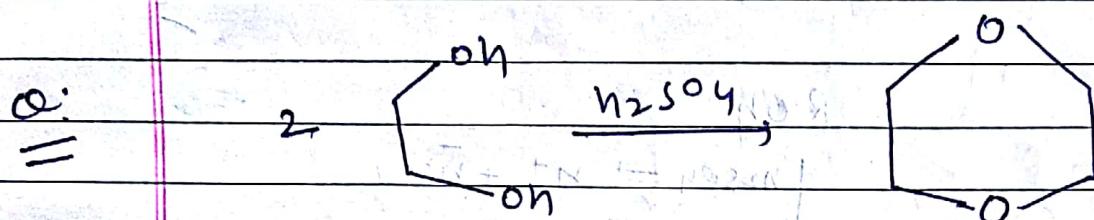
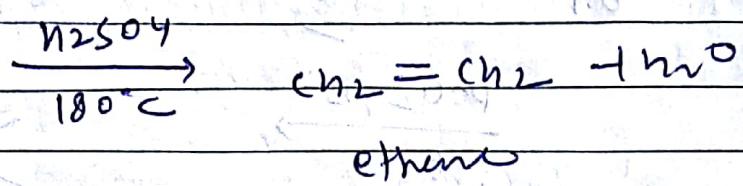
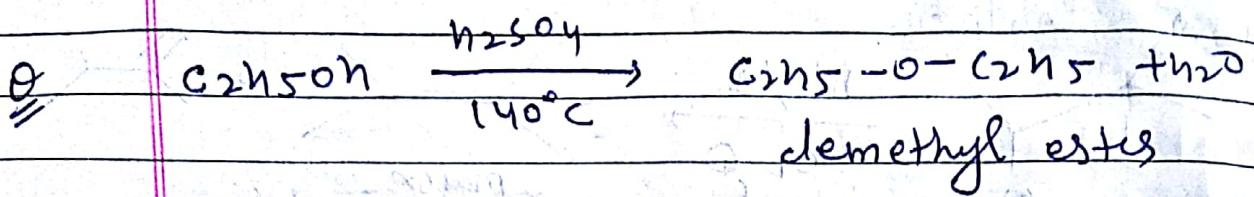
$$4 > 2 > 3 > 1$$



Teacher's Signature



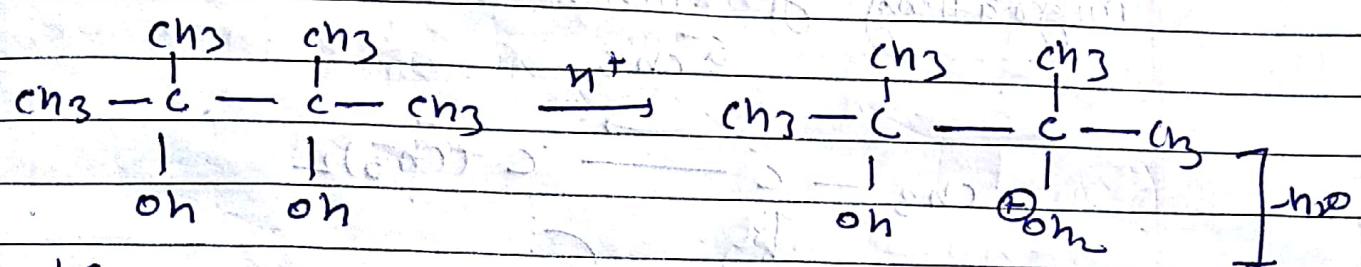
alcohol अमल के साथ गर्भ करने पर E_1 हारा फैलापन
उत्पाद अल्केन है परन्तु माना तो प्रतिस्पर्शी
में Sn^+ उत्पाद होता है।
अतः alcohol और Sn^+ तो ether जैसे एक
 H_2SO_4 और उत्पाद होता है।
Sulphate याद रखें।



Teacher's Signature

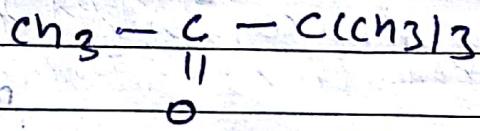
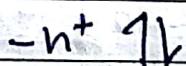
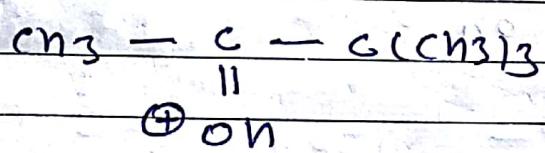
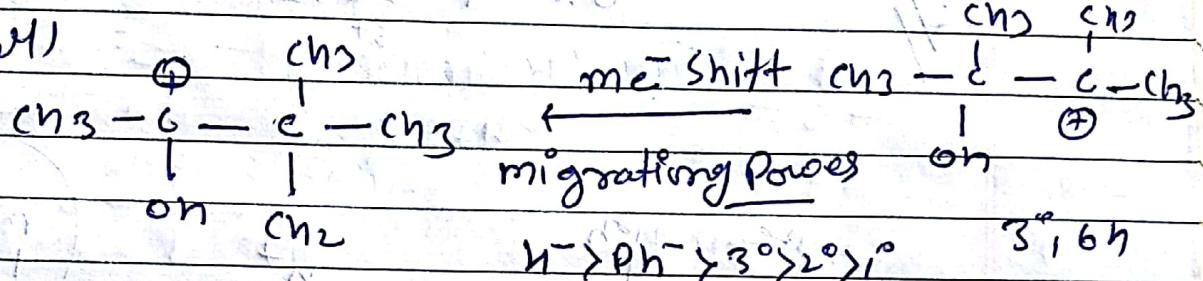
③ अन्स अंगिरि पाठ्य

9) Pinacole - Pinacolone Rearrangement



Pincole

(vicing diet)



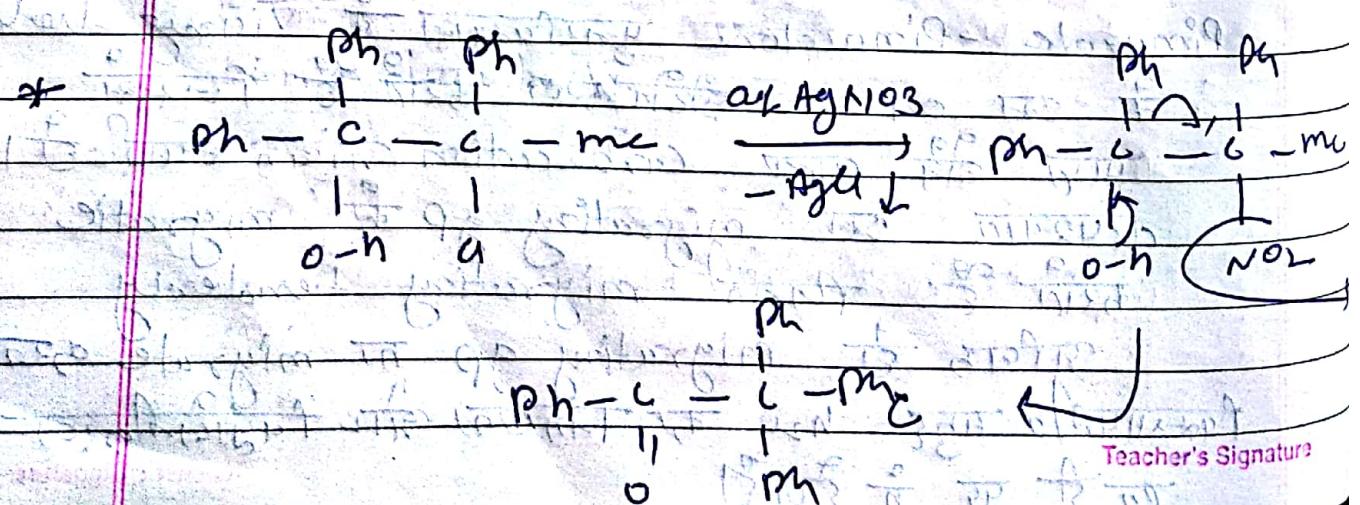
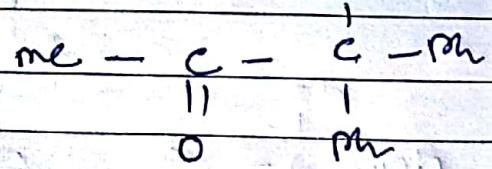
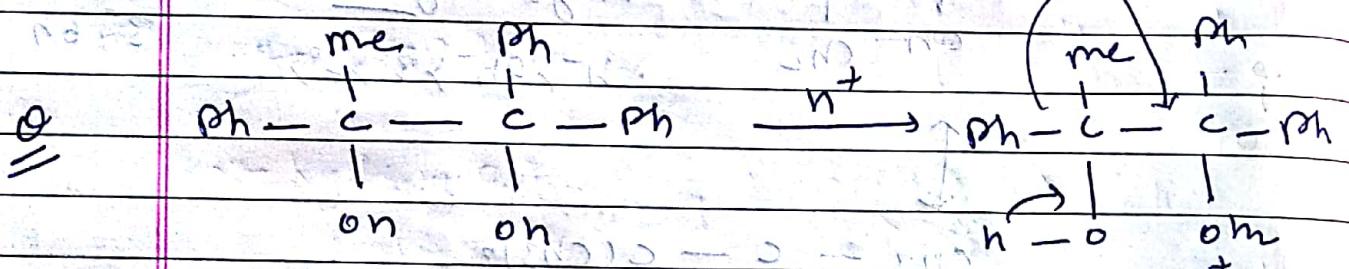
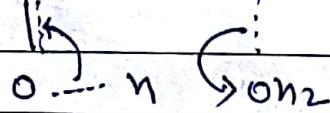
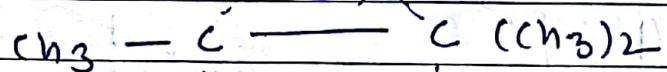
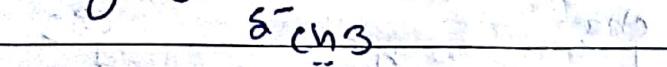
Pinqcolon

Pimacole - Pimacolone पुनरीप्रकाश के vicinal diele
 के तेज ओका का चूटेप्रिकरण कराये हैं जिसमें
 प्रथम द्वितीय दाता carbocation अधिक स्थार्थ हो
 तथा प्रथम द्वितीय दाता migrating group के migrate
 कराये हैं जिसके migrating tendency
 अधिक हो migrating group ना migrate करा
 प्रथम द्वितीय दाता H₂O का निष्ठा और अनुप्रिकरण
 एवं ही पद ही देता है

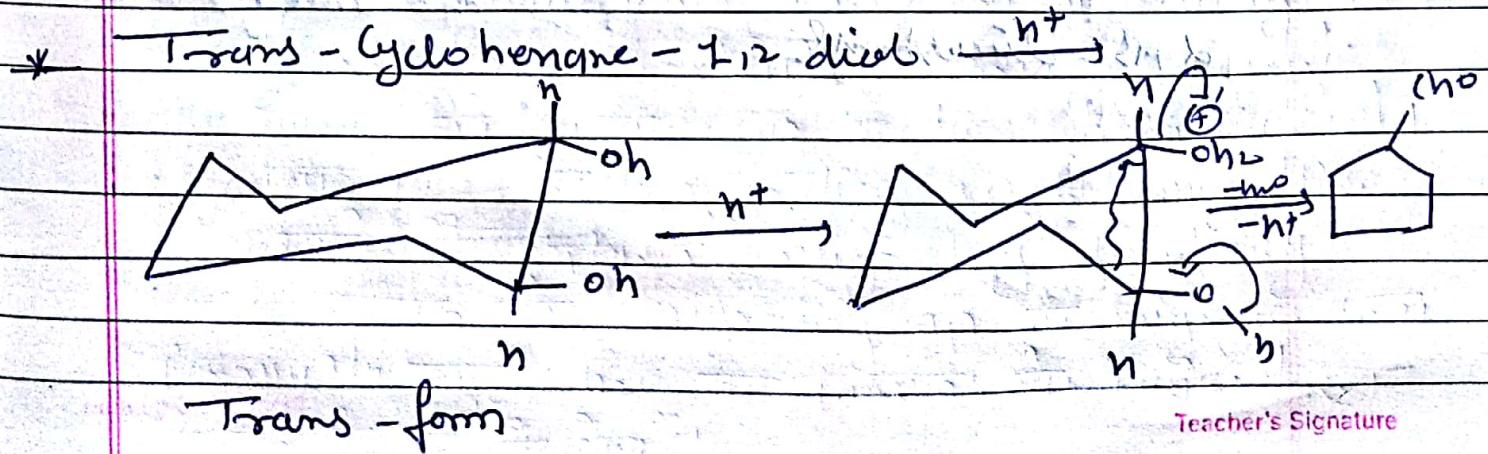
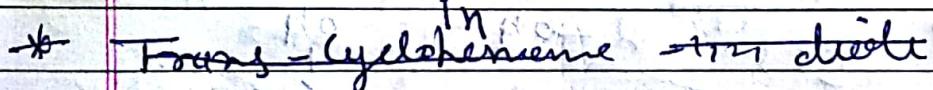
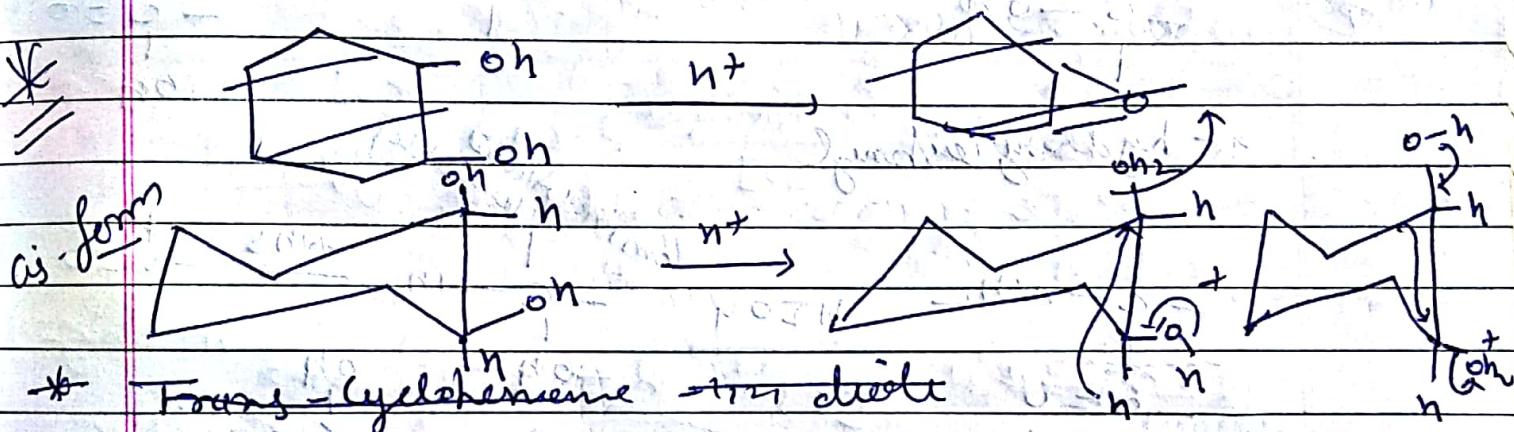
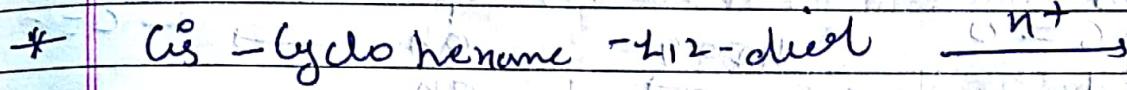
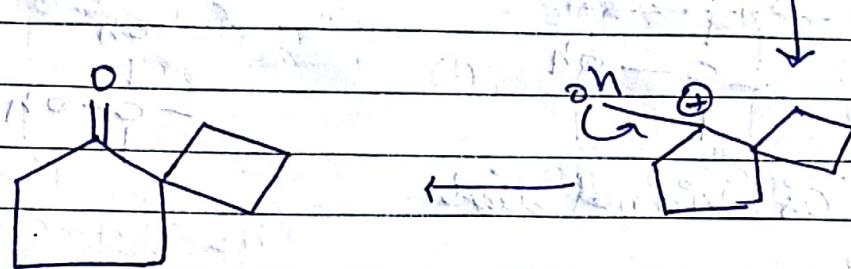
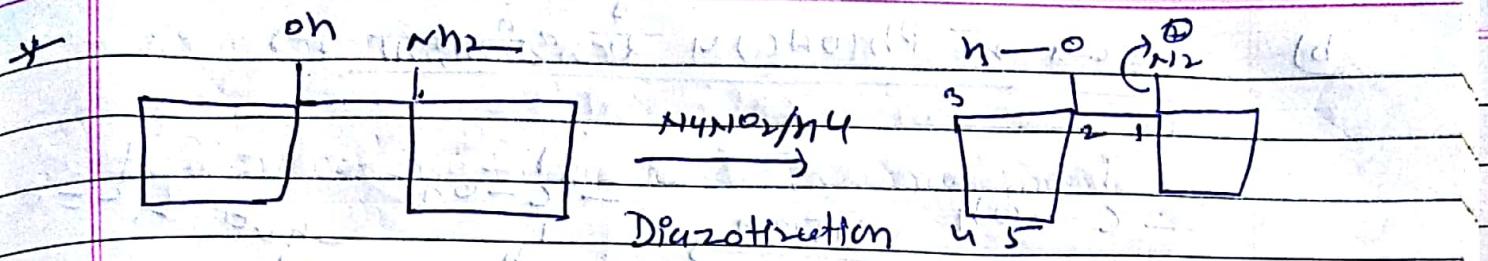
Teacher's Signature

migrating opp. leg. H_2O ने फूटा तो $\text{Ph}_2\text{C}-\text{CH}_2$
 $\text{Ph}_2\text{C}-\text{CH}_2$ migrate करता है।

migrating gp निकलती है तो यह मुख्य करता है।

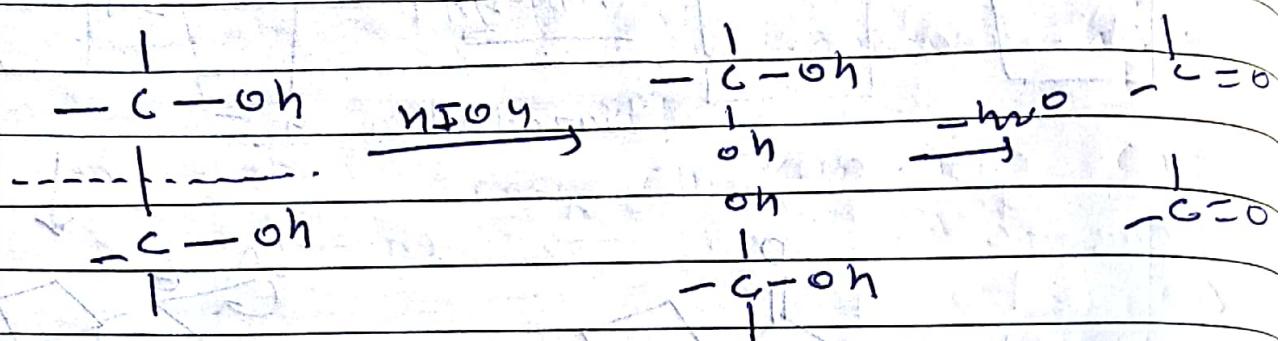


Teacher's Signature

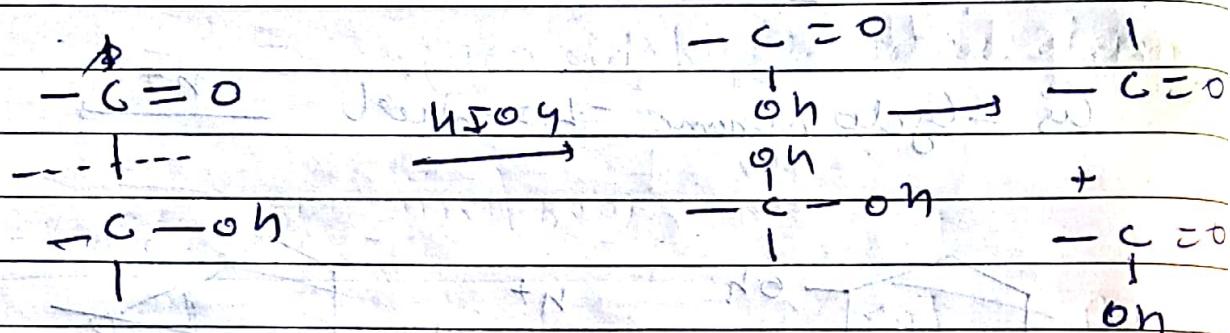


Teacher's Signature

b) $\text{HIO}_4 \text{ नि } \text{Ph}(OAc)_2 \text{ का अभिक्रिया : } \rightarrow$

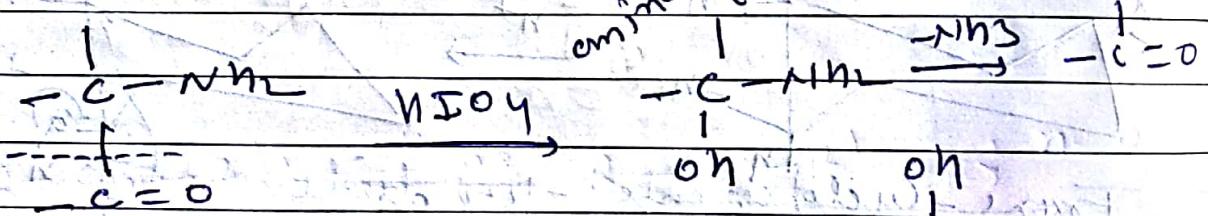


cis-vicinal diol

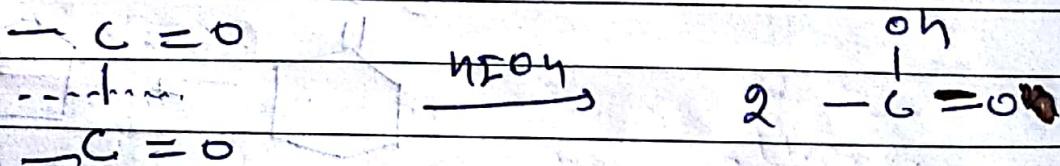


α -hydroxy carbonyl

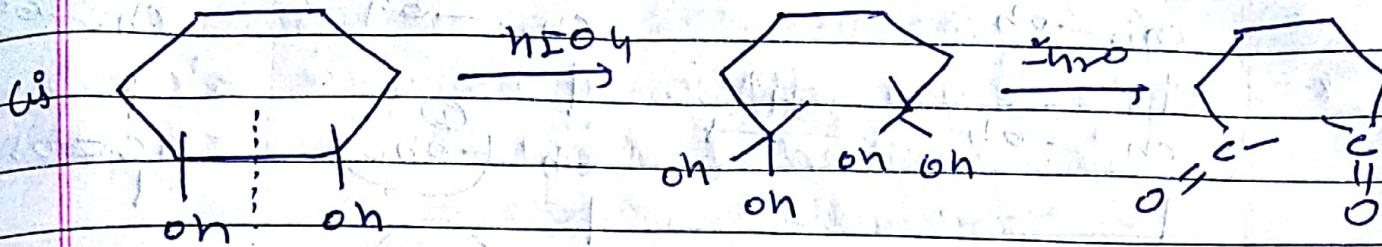
conversion (error)
(mistake)



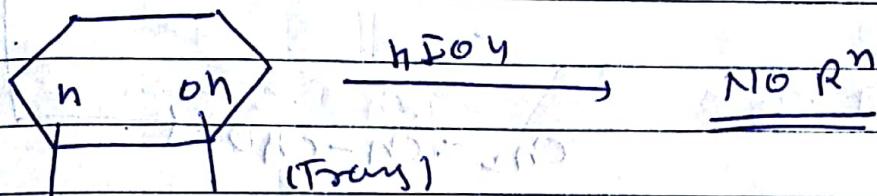
α -amino carbonyl



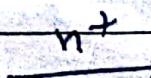
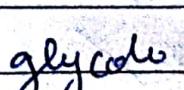
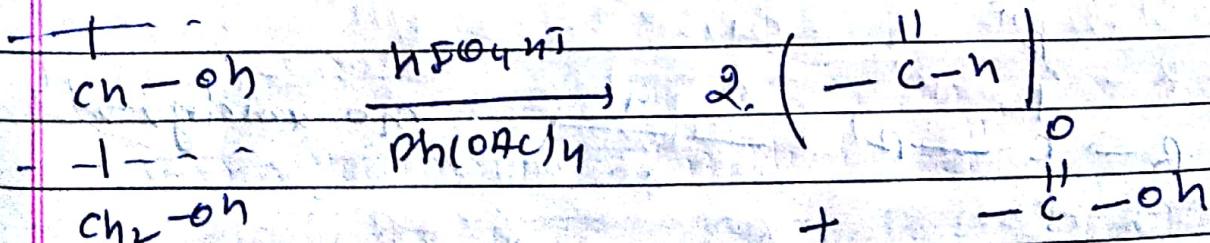
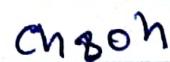
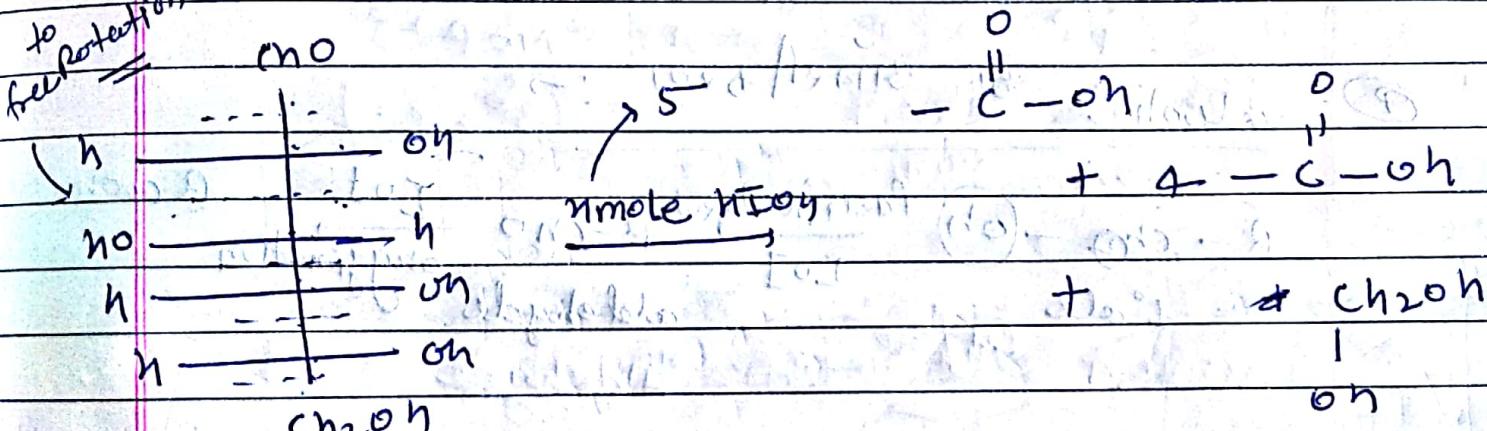
α, β -dicarbonyl

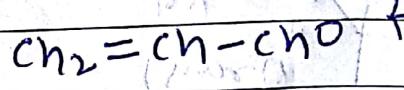
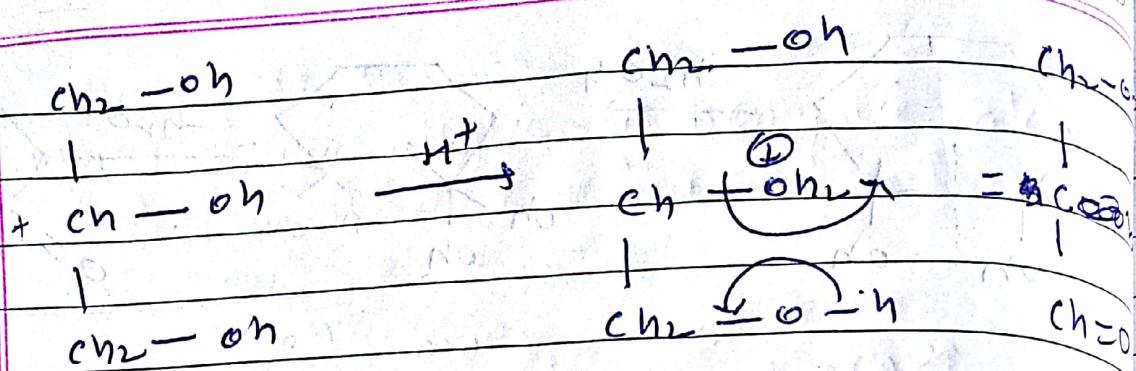


Trans



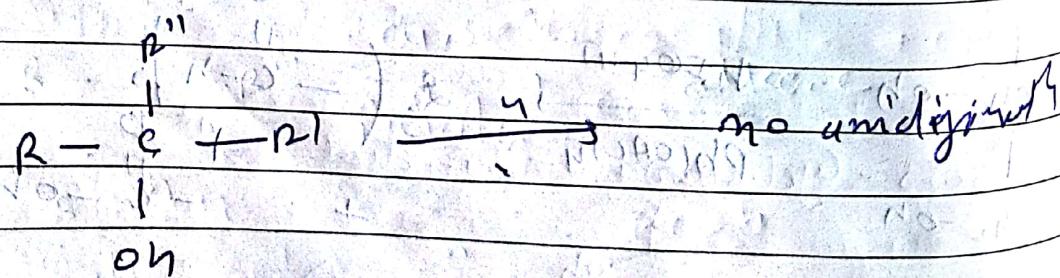
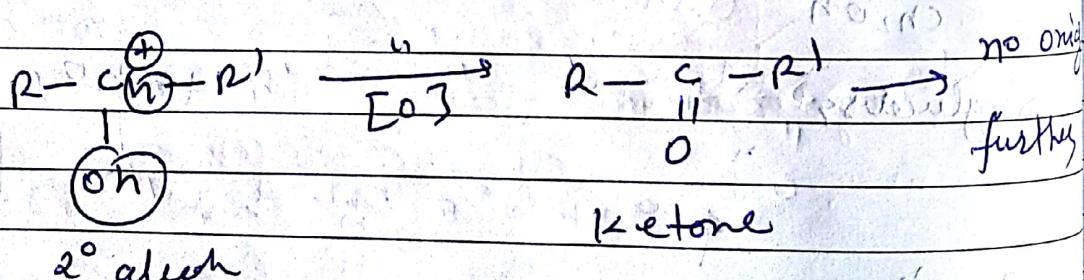
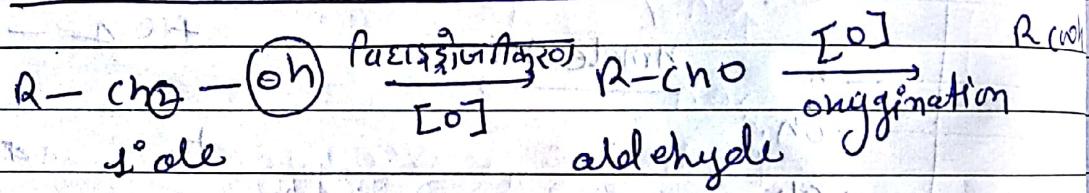
to protection
free rotation





(acetaldehyde or acrolein)

Q) alcohol $\xrightarrow{\text{Perritrof's reagent}}$ \rightarrow



Teacher's Signature

अंतर्कारण :- ① पुल अंतर्कारण

KmnO_4/H^+ , $\text{Cr}_2(\text{CrO}_7)_2/\text{H}^+$, $\text{CrO}_3 + \text{H}_2\text{O}$

or H_2CrO_4

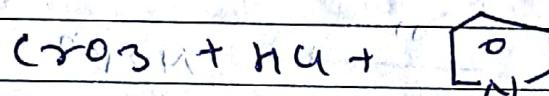
1° alcohol \rightarrow aldehyde \rightarrow CA

2° ale. \rightarrow ketone

3° ale. \rightarrow doesn't orig.

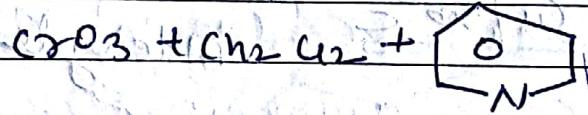
② जूबर अंतर्कारण

* PCC or Pyridinium chlorochromate



* PDC or Pyridinium dichromate

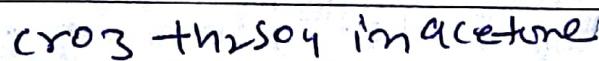
* Collins अंतर्कारण



1° ale \rightarrow Aldehyde

2° ale \rightarrow ketone

* Jones अंतर्कारण



3° ale \rightarrow No product

aldehyde $\xrightarrow{\text{H}_2\text{N}-\text{CO}-\text{NH}_2}$ CA $\xrightarrow{\text{H}_2\text{N}-\text{CO}-\text{NH}_2}$ आंतर्कारण के द्वारा उत्पन्न होता है। इसका दृष्टि समीक्षा करने से CA बनता है।

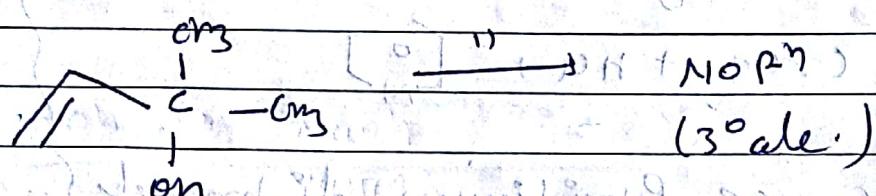
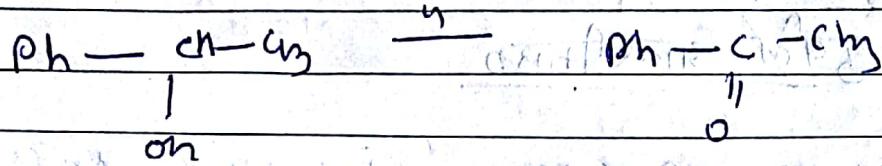
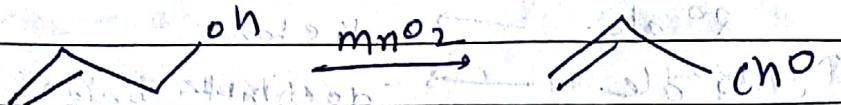
aldehyde $\xrightarrow{\text{NaBH}_4}$ Hydride $\xrightarrow{\text{NaBH}_4}$ प्रत्यक्ष दर्शाता है। यह एक उत्पन्न है।

$\frac{1}{2}$ 1° alcohol aldehyde का एक उत्पन्न है।

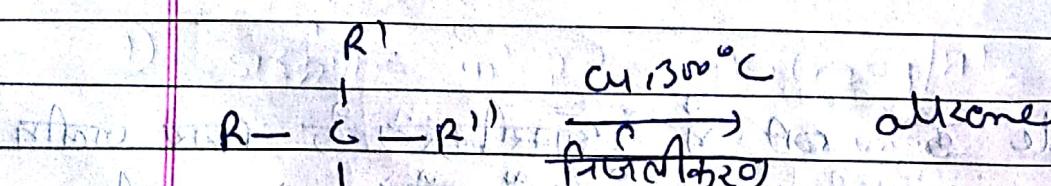
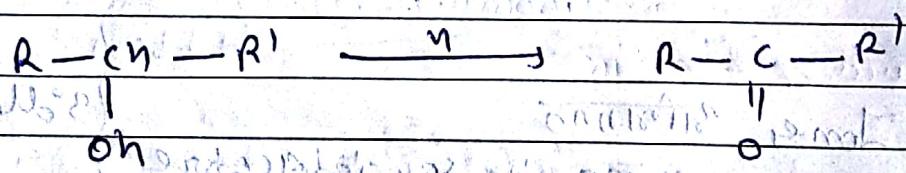
इसे

Teacher's Signature

* MnO_2 के द्वारा allylic नि-benzylic alcohol की ऑक्सीजन करता है।

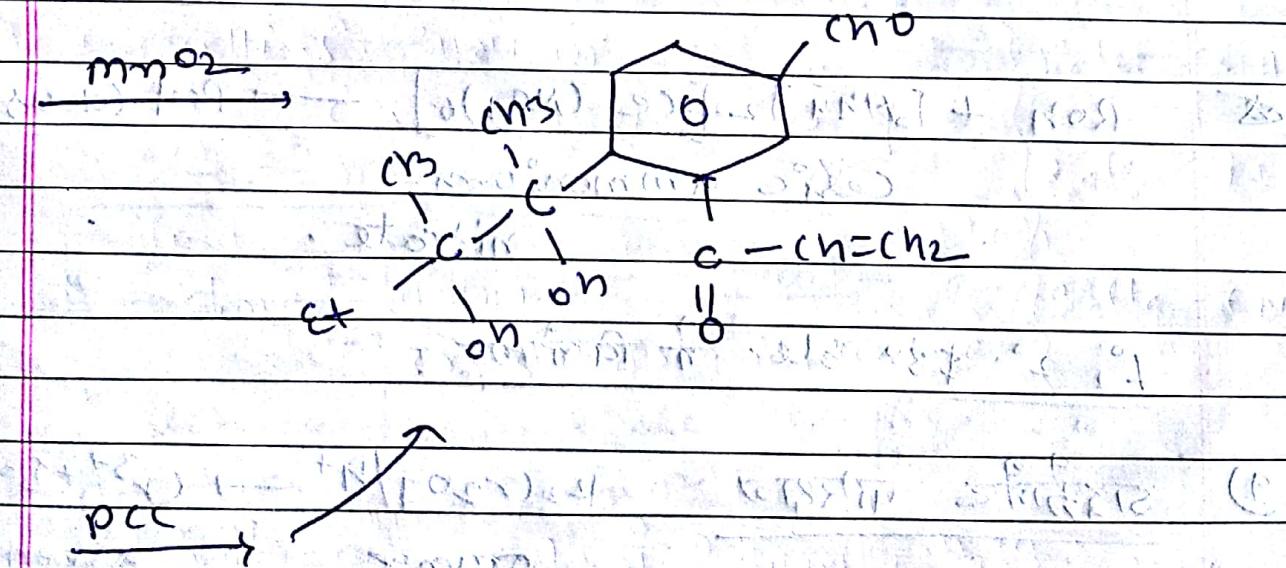
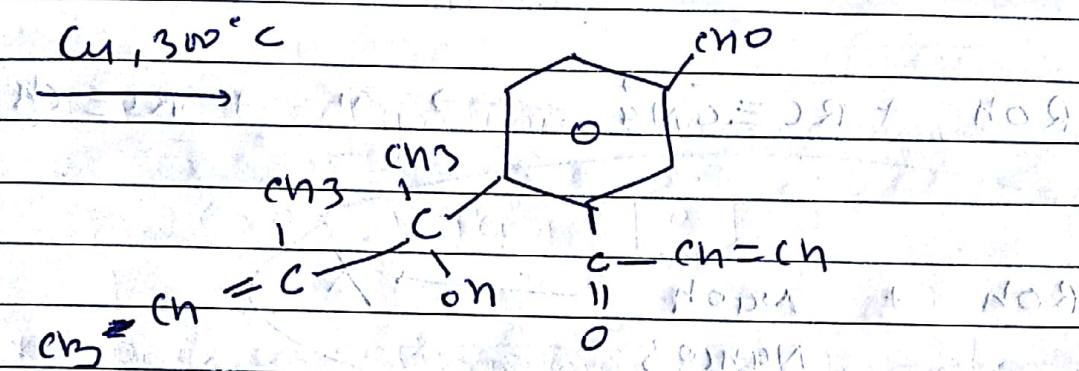
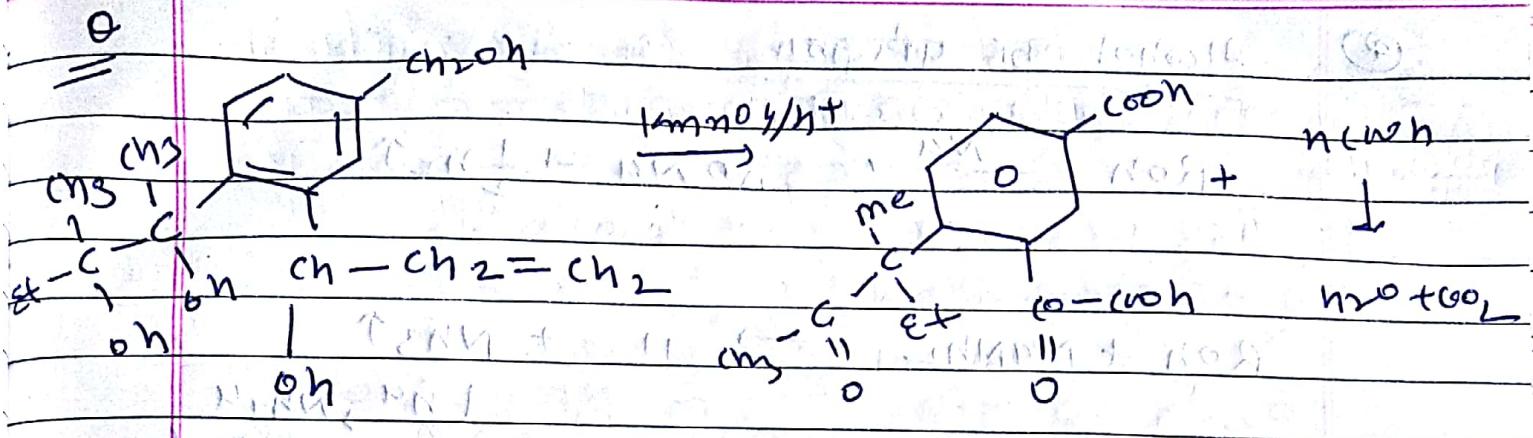


* RCH_2OH $\xrightarrow{\text{Cu}, 300^{\circ}\text{C}}$ Aldehyde



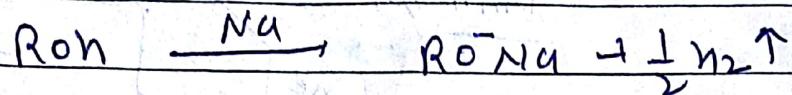
3° alc.

Teacher's Signature



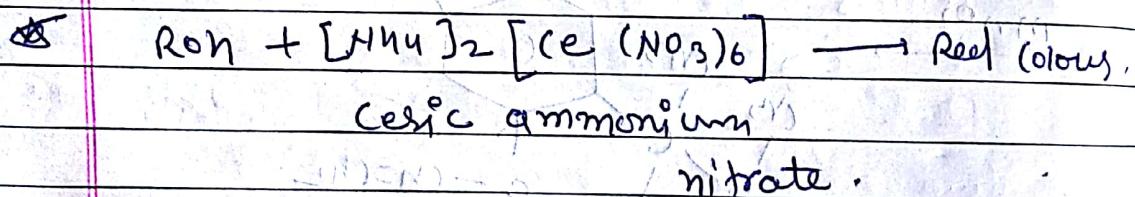
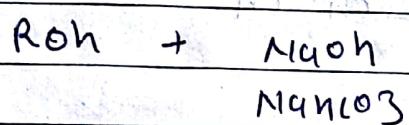
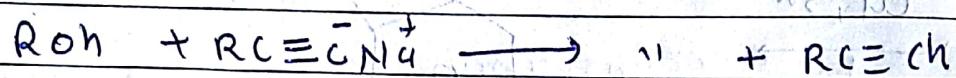
Teacher's Signature

④ Alcohol की प्रकृति

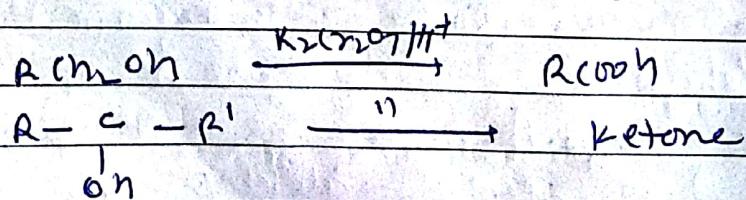
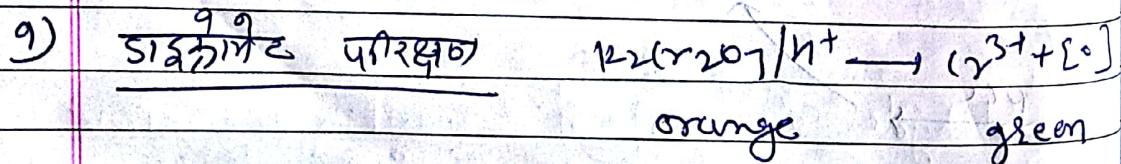


$\downarrow Na \rightarrow NH_4^+$

white fum.



$1^\circ, 2^\circ, 3^\circ$ alc. $\xrightarrow{\text{fuming}} 1^\circ, 2^\circ, 3^\circ$



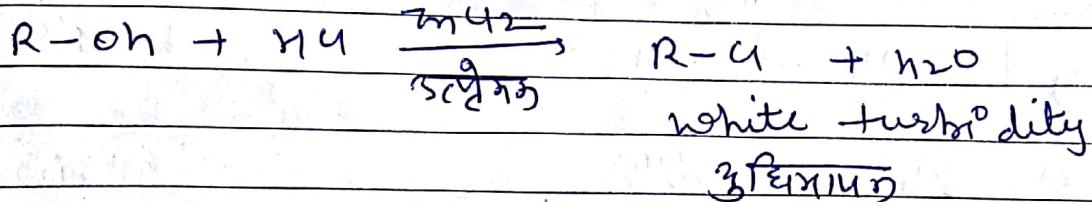
Teacher's Signature

1° व 2° alcohol $\text{K}_2(\text{C}_2\text{O}_7)$ से अम्लीकरण करते
3लक्ष दूरी से देखा कर देते हैं

3° alcohol $\text{K}_2(\text{C}_2\text{O}_7)$ से अम्लीकरण नहीं कर पाते

b) Lucas test

Lucas Reagent ($\text{ZnCl}_2 + \text{HgCl}_2$)



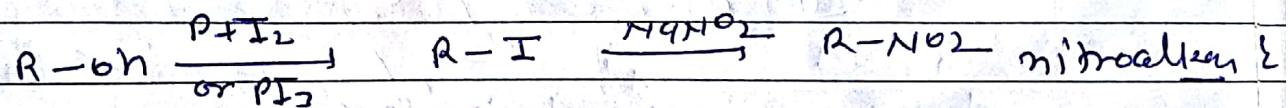
1° alk > 20 min

2° alk 5-10 min

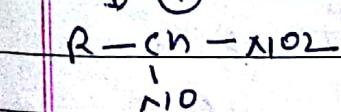
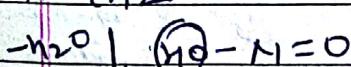
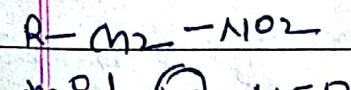
3° alk. 1 min

नोट: Lucas अविकृत से अविकृत ही रुदिशापत
3लक्ष दूरी से लगते वाले सामने अद्यतन
1° 2° व 3° alkylated ही विकृत कर लाते हैं

c) Victor-meyer

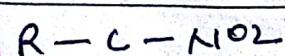


1° alk.

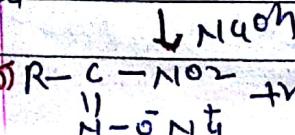
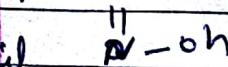


$\downarrow \text{HgO}$

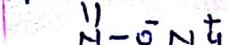
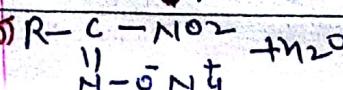
amine
or



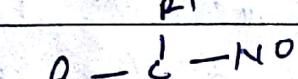
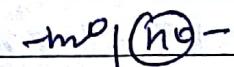
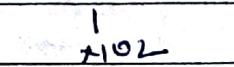
tubotrophic
acid



fact
Red



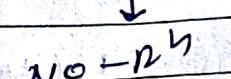
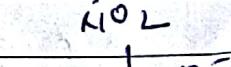
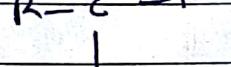
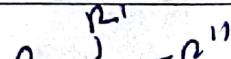
2° alk.



$\downarrow \text{HgCl}_2$

Blue colour

3° alk



colours less

Teacher's Signature