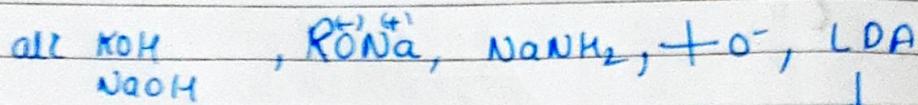


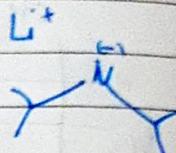
LECT-2

NOTE:

During E_2 Reaction strong base is required.

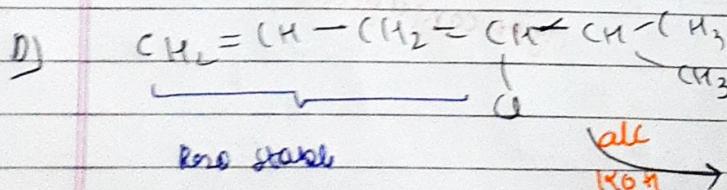
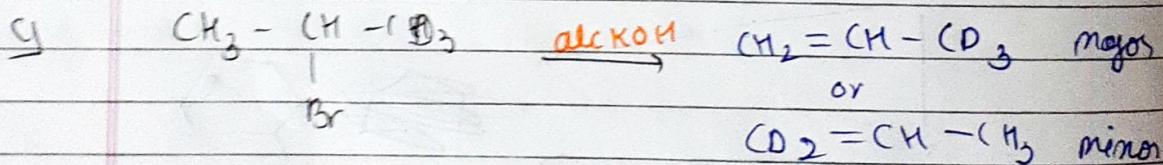
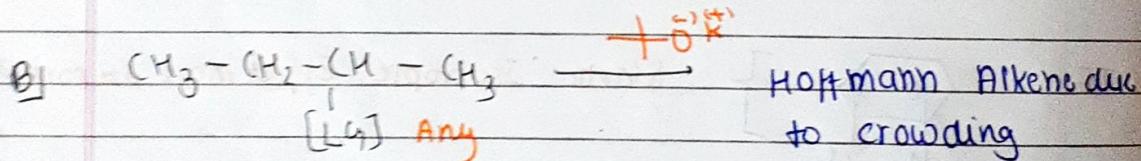
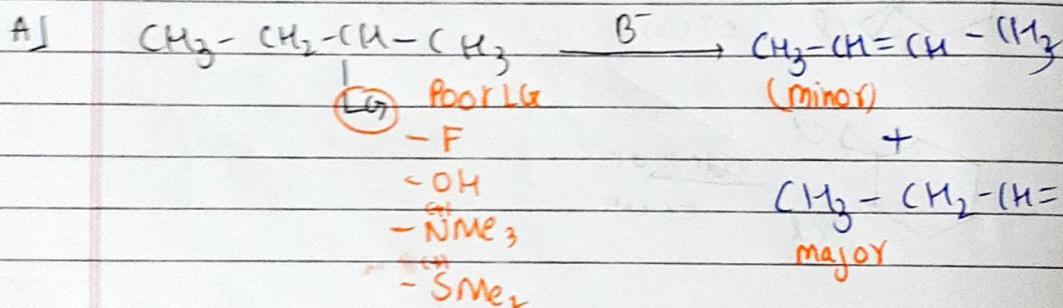


& generally stable alkene is formed



#

Hoffmann Alkene form in the following

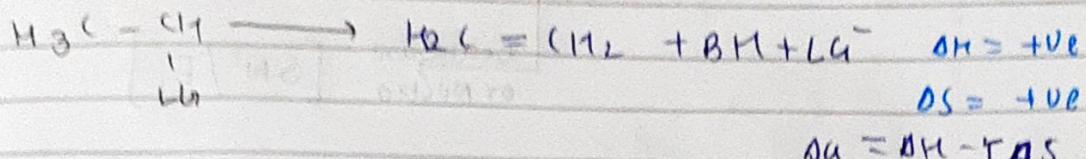


$\Delta \rightarrow$ distinguishes b/w E1 & S_N1

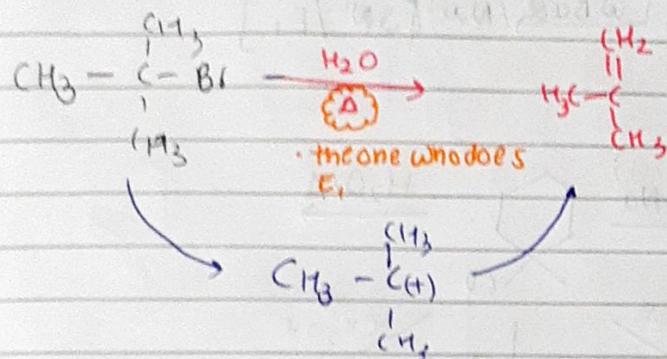
Date _____
Page _____

NOTE:

Elimination required high Temp



E₁ Reactions



① Double step process

② Weak Base required [R-OH]₂ (H₂O) but with Δ

③ Rate = $k[R-X]$ order = 1, molecularity = 1

④ Rate = $3^\circ > 2^\circ > 1^\circ$

↑ as 3° carbocation will be formed
will be more stable.

#

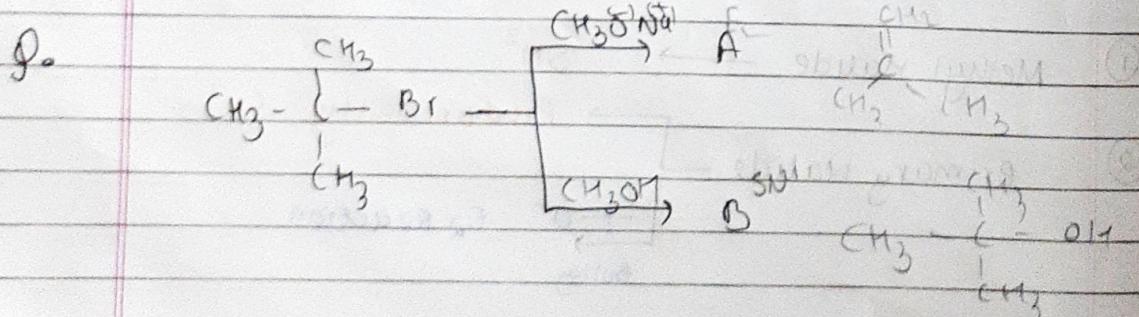
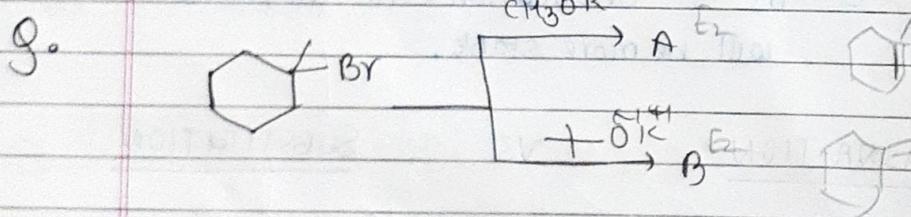
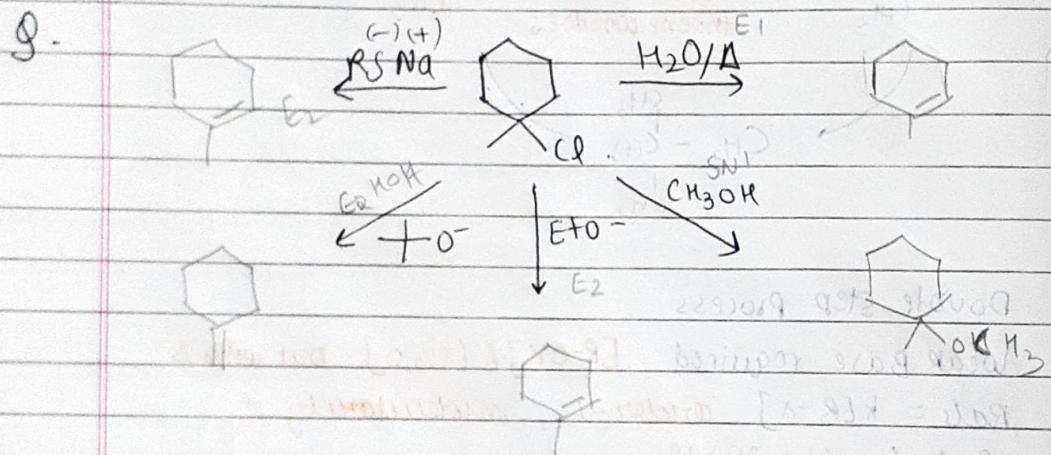
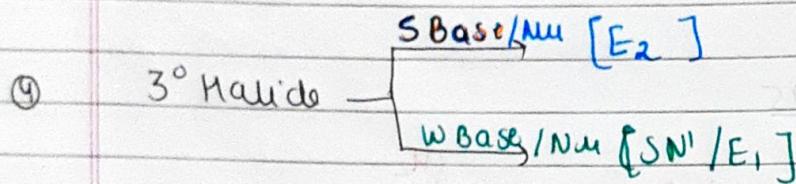
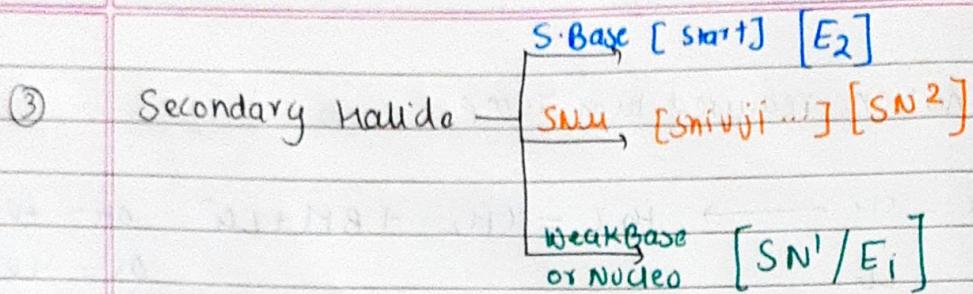
ELIMINATION

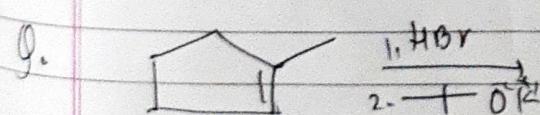
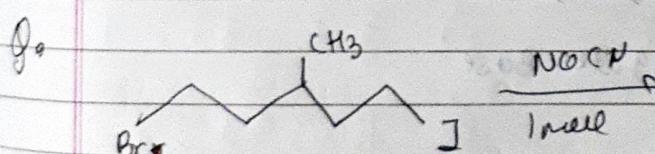
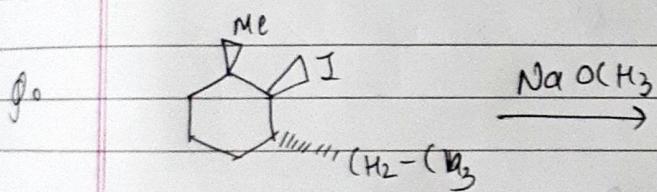
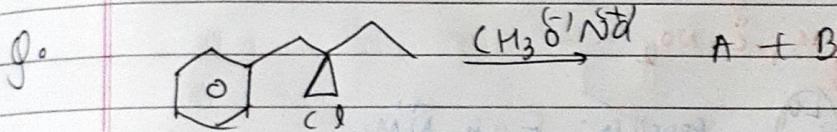
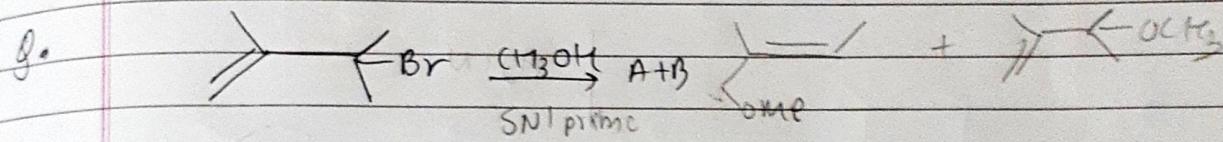
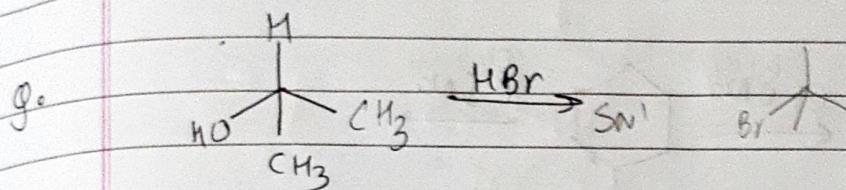
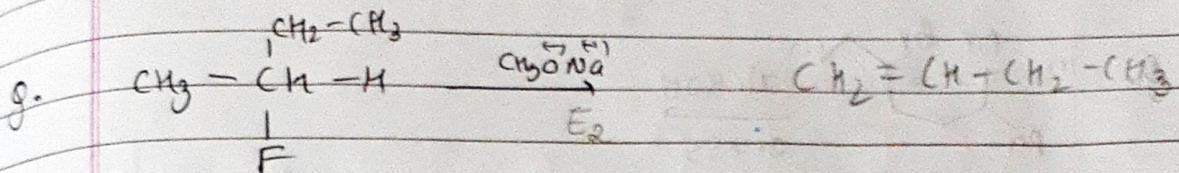
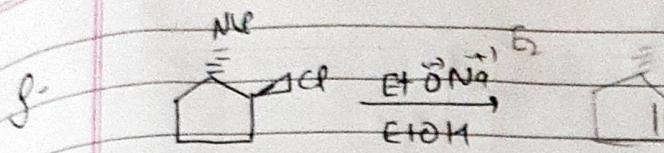
VS

SUBSTITUTION

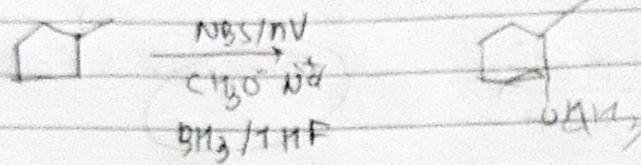
① Methyl Halide \longrightarrow S_N²

② Primary Halide $\xrightarrow[\substack{+\text{O}^- \\ \text{Butyl}}]{}$ Predominantly S_N²
 $\quad \quad \quad$ + E₂ Reaction

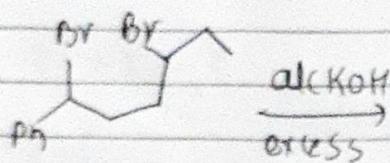




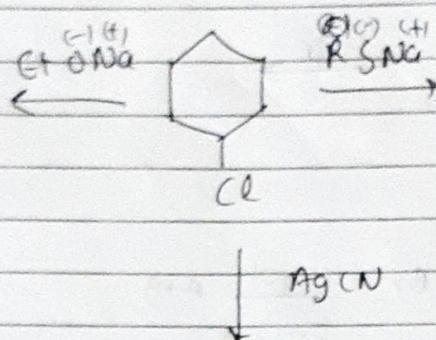
Q.



Q.



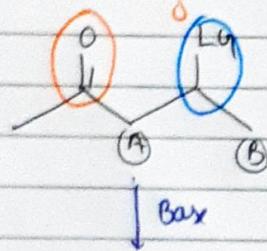
Q.



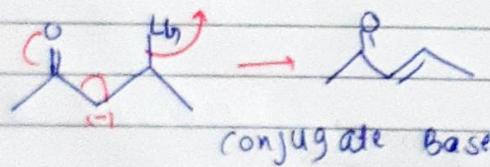
EWG: $\text{C}(=\text{O})\text{H}, -\overset{\text{O}}{\underset{\text{O}}{\text{C}}} \text{NO}_2$

NOTE:

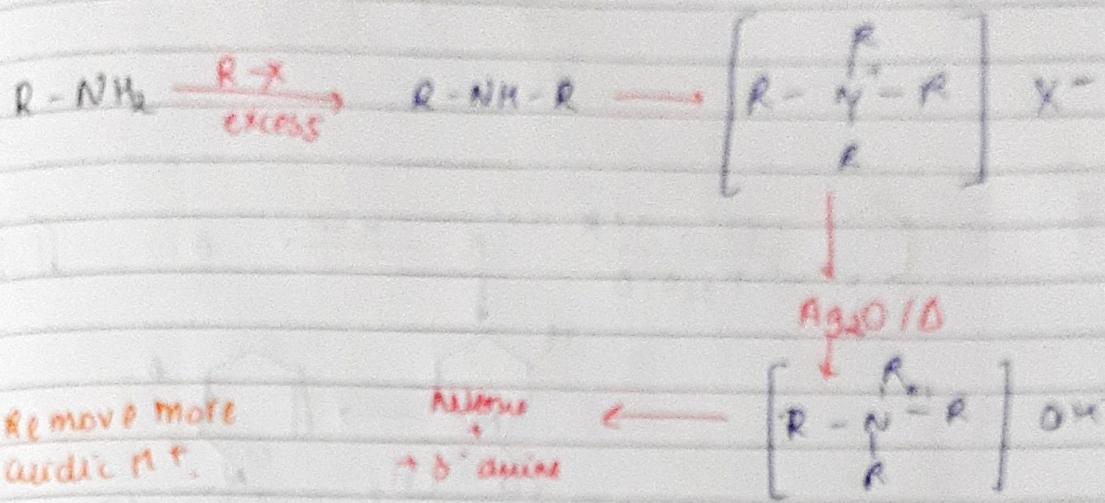
E, B



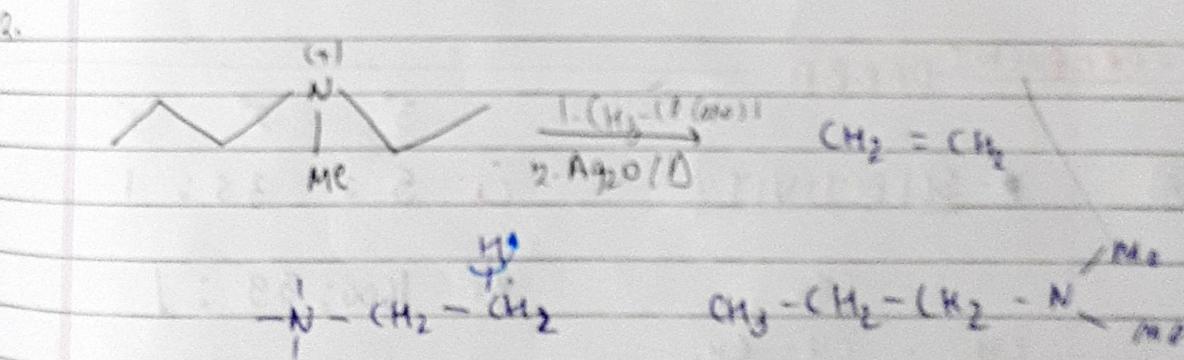
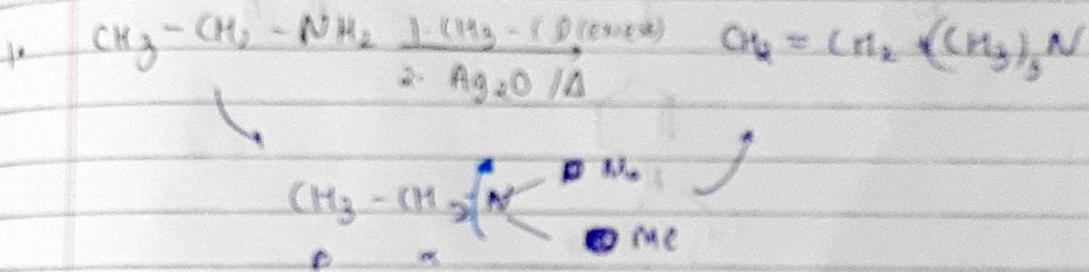
Poor Ly: F, OH, NMe_2

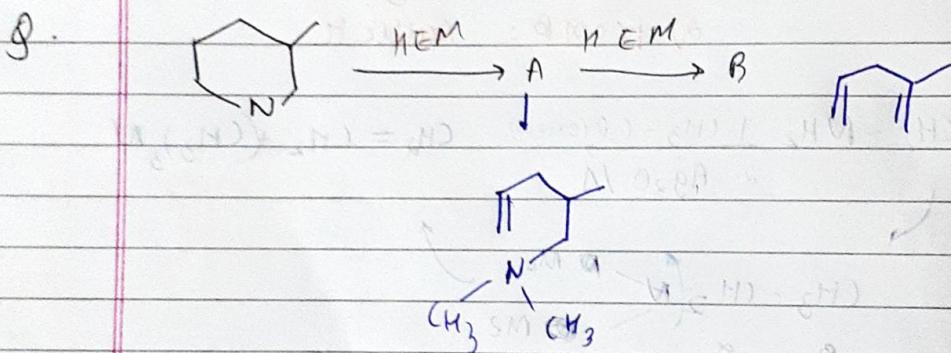
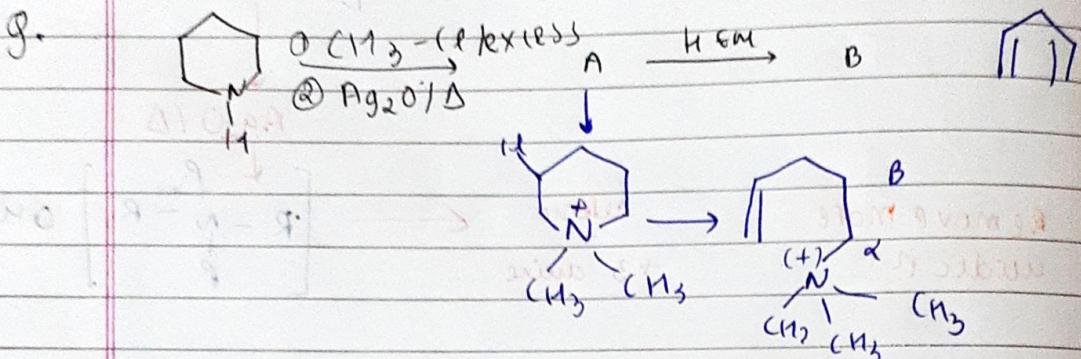
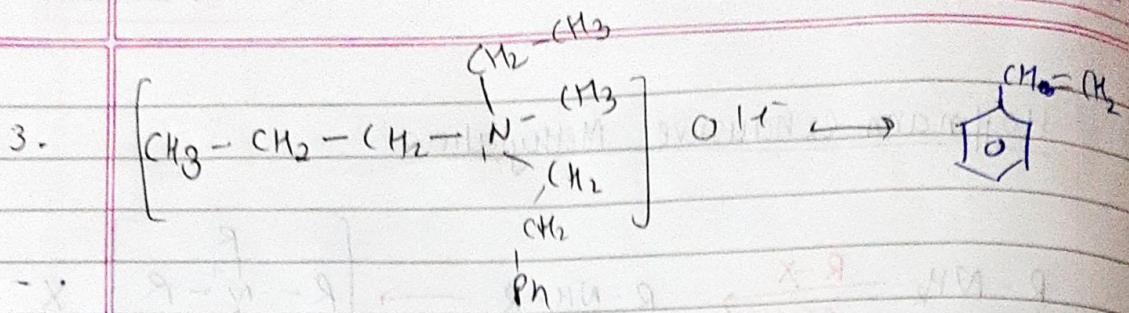


Hoffmann exhaustive Methylation



→ We will tomorrow 1) prove: NMe_3
2) from B: $NH_3 + H^+$





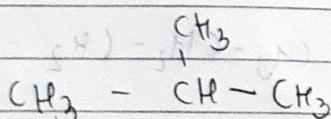
NOT SO FREQUENT DABBA

(A)

B - SELECTIVITY

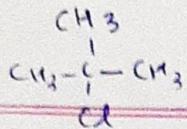
3° : 2° : 1°

c.i. 5 : 3.5 : 1



B.r. 1600 : 99 : 1

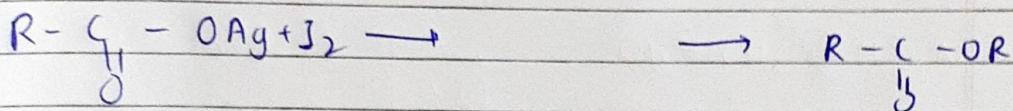
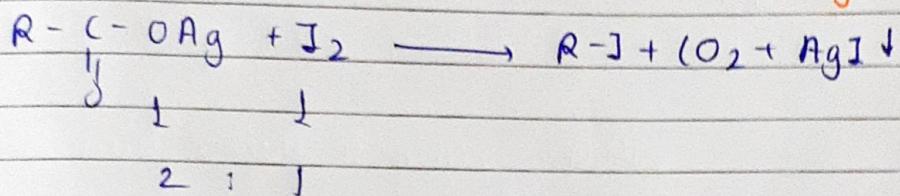
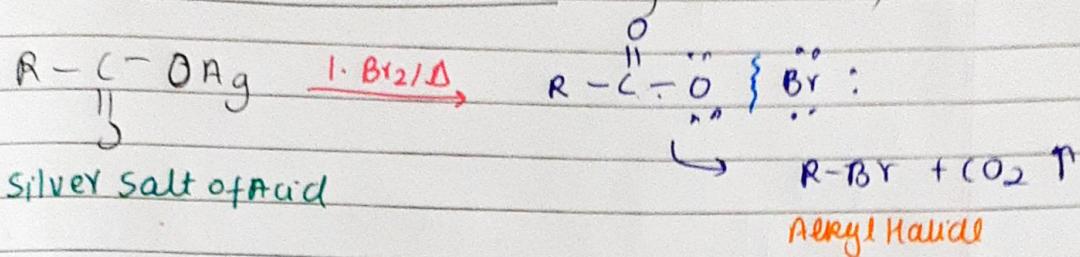
BMS



Date _____
Page _____

$$\frac{9 \times 1}{9 \times 1 + 1 \times 5} \times 100 \approx 64\%, \quad \frac{5 \times 1}{5 \times 1 + 9 \times 1} \times 100 \approx 36\%.$$

⑤ Borodine-Hunsicker Rxn (free radical)



⑥ Corey-Mouse Synthesis (Wurtz but unsymmetrical)

