

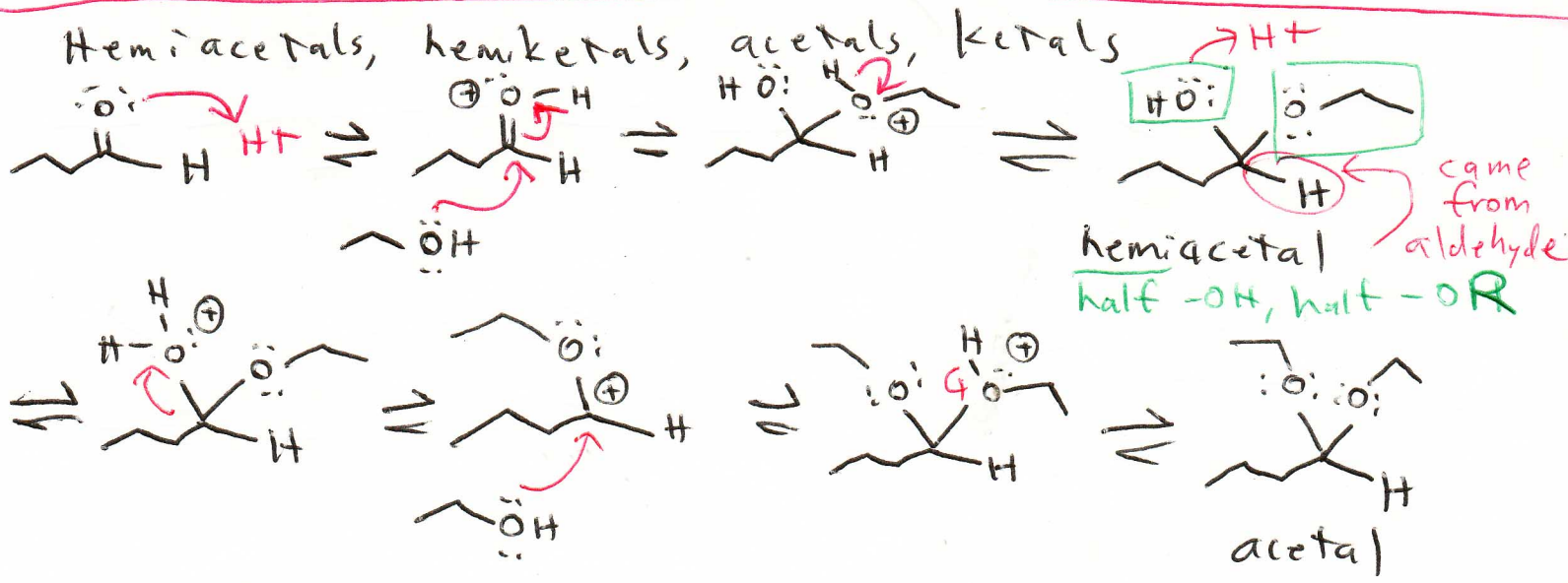
Exam #1

- alcohols \rightarrow chlorides, bromides, iodides, sulfonates
- \rightarrow dehydration (HX, Δ)
- \rightarrow oxidation - selective [O] of 1° alcohols
 - overoxidation of 1° alcohols (PDAO)
 - oxidation of 2°
- \rightarrow Williamson ether synthesis; alkoxides
- reduction of aldehydes + ketones (LiAlH_4 vs. NaBH_4)
- epoxides - formation and opening
- reactivity of aldehydes vs ketones
- pinacol rearrangement
- formal charge vs oxidation state

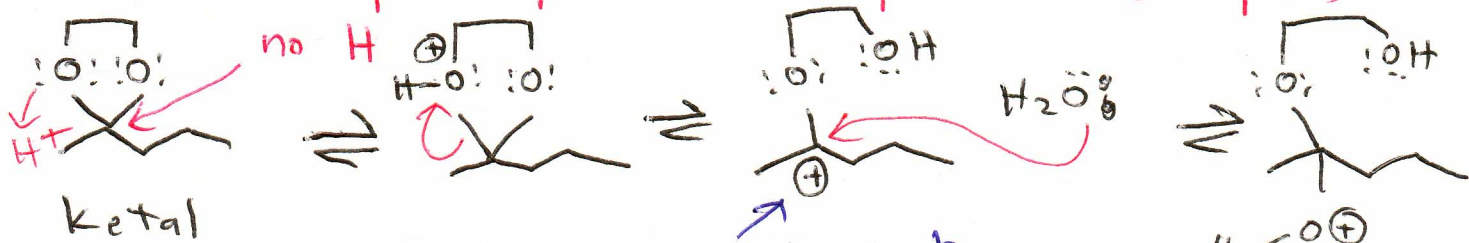
Problems

- Nomenclature
- Fill-in-the-blank
- Mechanism
- Synthesis
- Theory

End of Exam 1

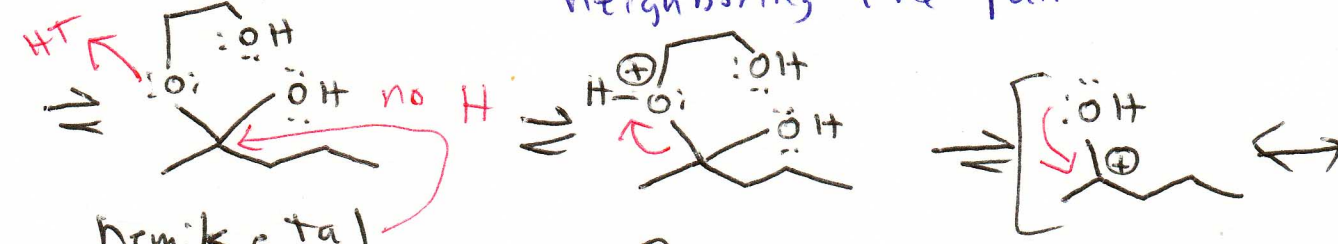


(Next example separate from previous example)



[two -OR, no -OH]

\oplus stabilized by neighboring lone pair

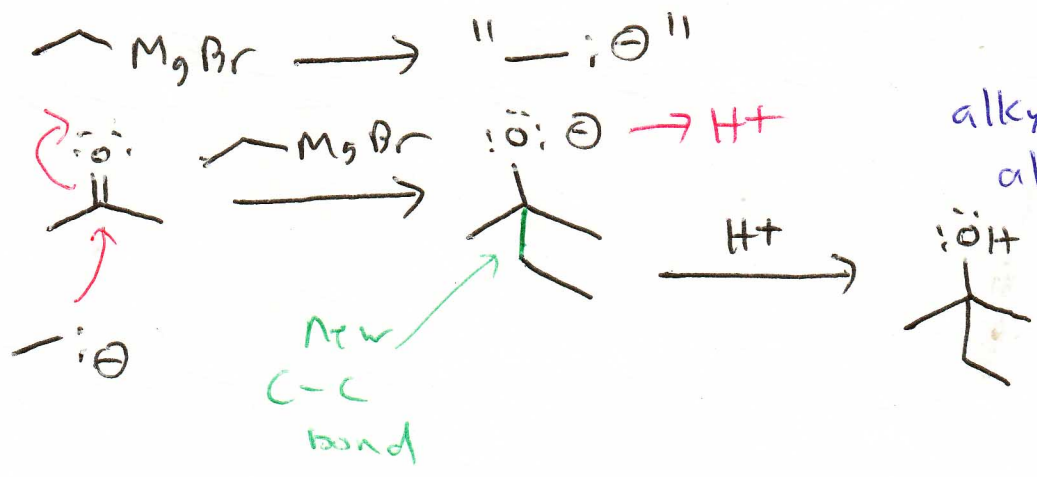
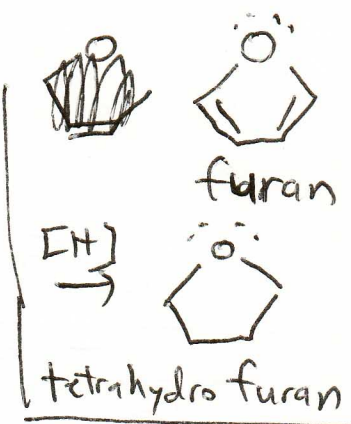
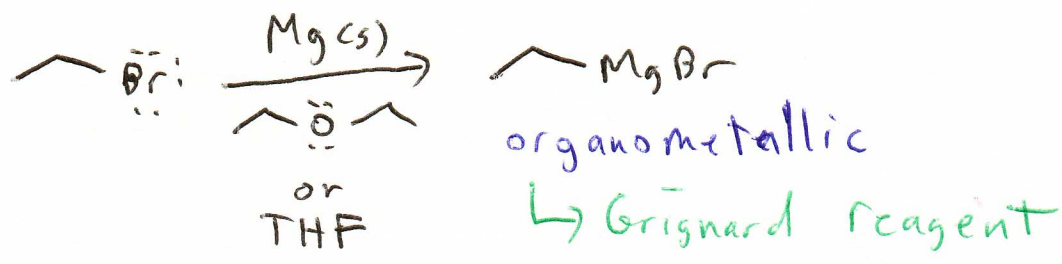


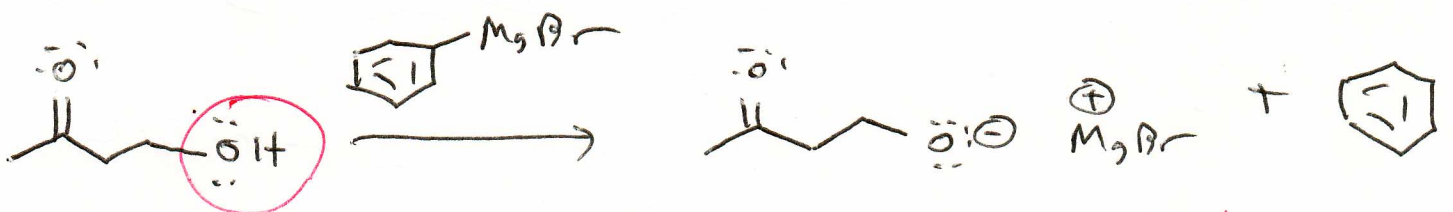
[one -OH, one -OR]



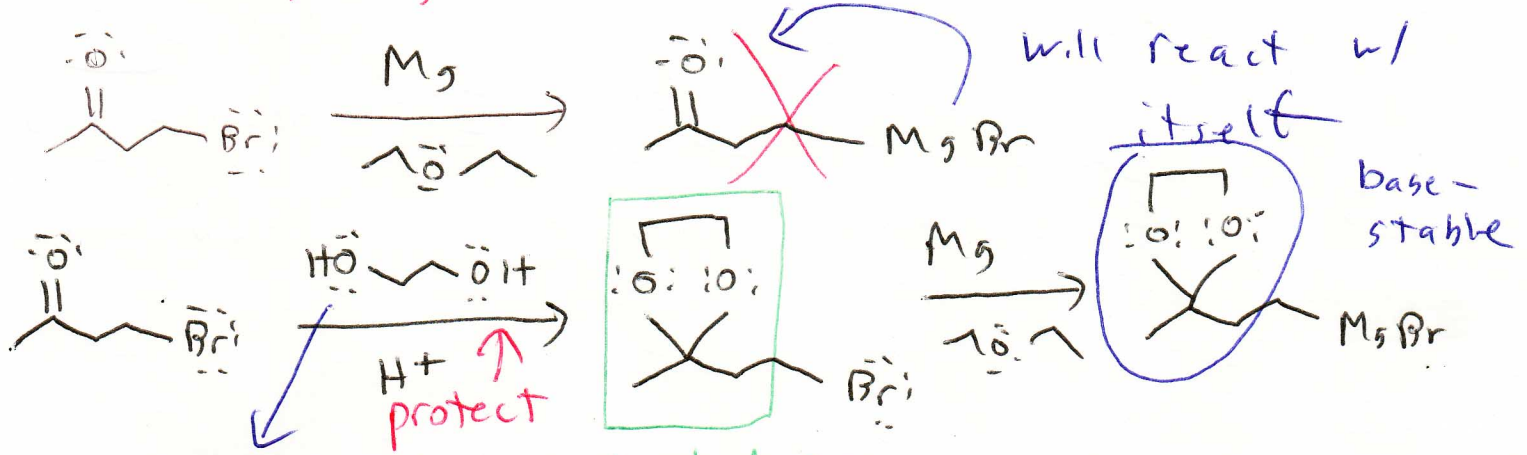
Although a hydrate could potentially form from the product ketone since water is present, ~~unstable~~ ~~since~~ hydrates are normally thermodynamic unstable, so only the ketone will be isolated from solution.

Grignard (grin-yard) reaction

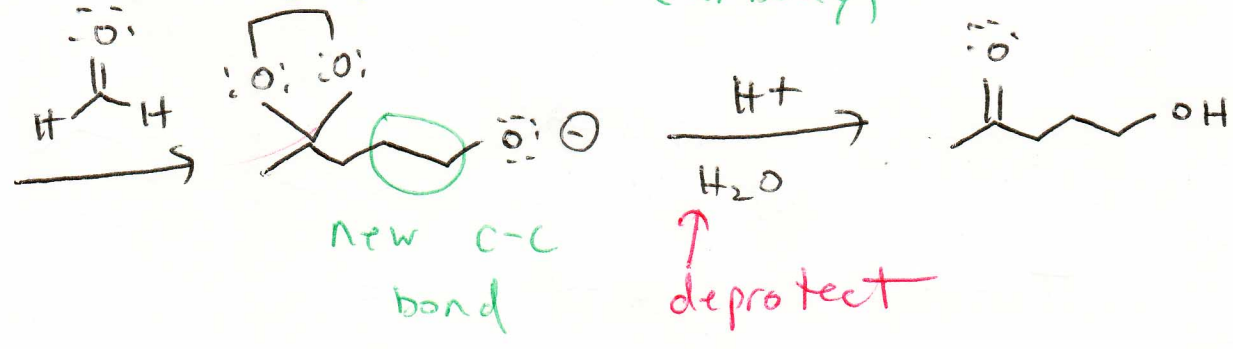




Grignard reagents will be destroyed by O_2 , CO_2 , H_2O , or protic molecules



ethane-1,2-diol
ethylene glycol



will react w/ itself
base-stable

masked or "protected" carbonyl

new C-C bond

deprotect