

CHM 228 Final Exam

Points of emphasis

Mechanisms

Nucleophilic addition to carbonyls (Grignards, aldol)
Nucleophilic acyl substitution (enolates, as well as acid derivatives)
1,2 vs 1,4 addition (allylic systems) (Michael addition)
Electrophilic aromatic substitution
 S_N2

Syntheses

Aromatics with o,m,p directors.
Alcohols from carbonyls (Grignards)
Carbonyl compounds (acetals for protecting)
Cyclizations (aldols, lactones, lactams, Diels-Alder)
Reductions and oxidations
Wittig for alkenes
Carbon-carbon bond formation

Aromaticity
Acidity of acids
Oxidations and reductions
Robinson annulation
Reactions of aldehydes and ketones (condensation with amines)
Nomenclature of esters
Naming multifunctional compounds
Diazo reactions

Interconversion of acid derivatives

Spectroscopy (NMR, IR, Mass)