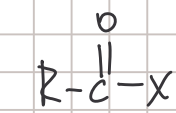


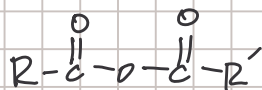
Ch 21 Carboxylic acid derivatives

Note Title

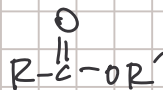
4/12/2006



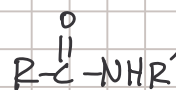
acid halide



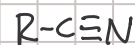
anhydride



ester

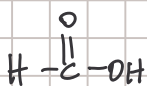
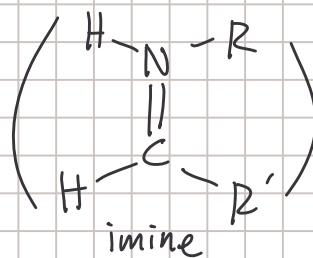


amide

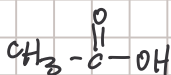


nitrile

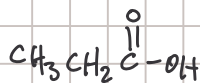
Common names of Carboxylic acids



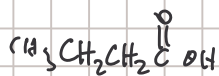
formic acid



acetic acid



propionic acid



butyric acid

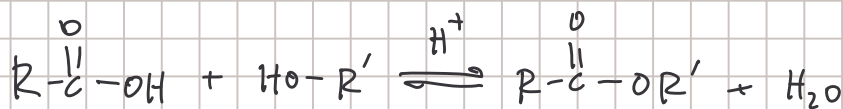
5C

valeric acid

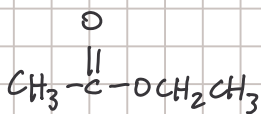
6C

caproic acid

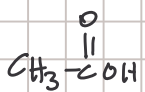
esters



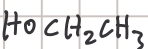
Fischer esterification



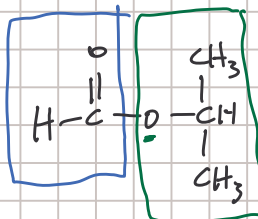
= ethyl acetate



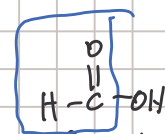
acetic acid



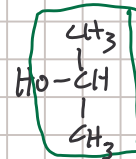
ethanol



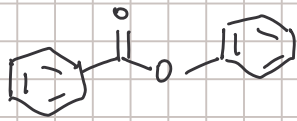
isopropyl formate



formic acid

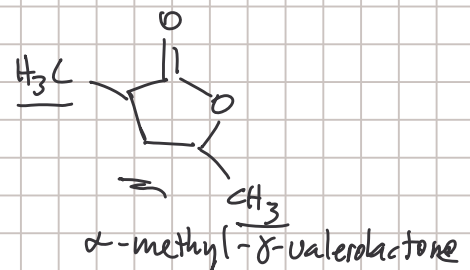
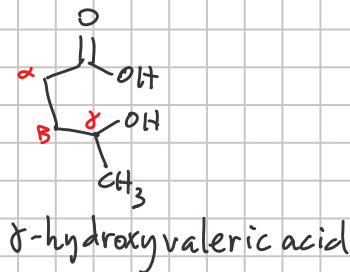
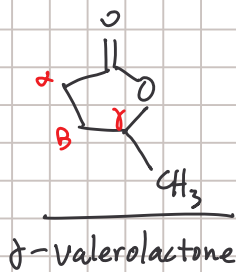
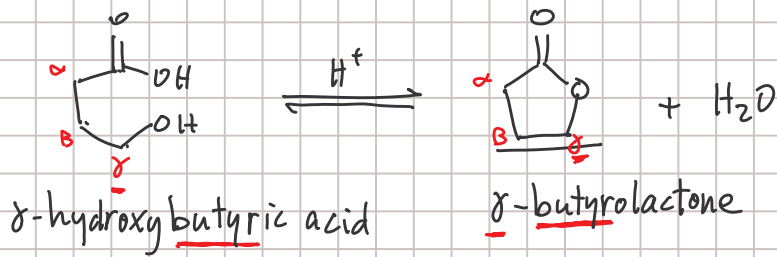


isopropyl alcohol

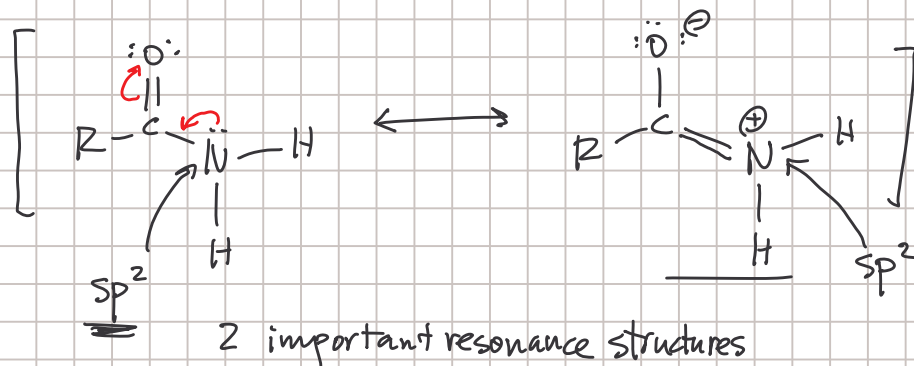
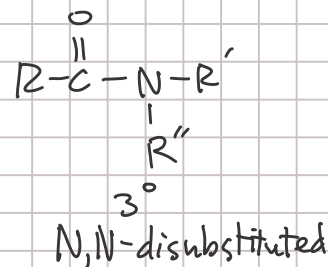
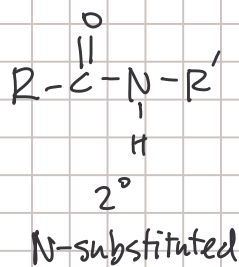
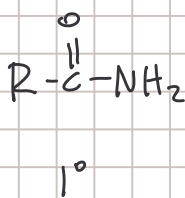


phenyl benzoate (benzoic acid)

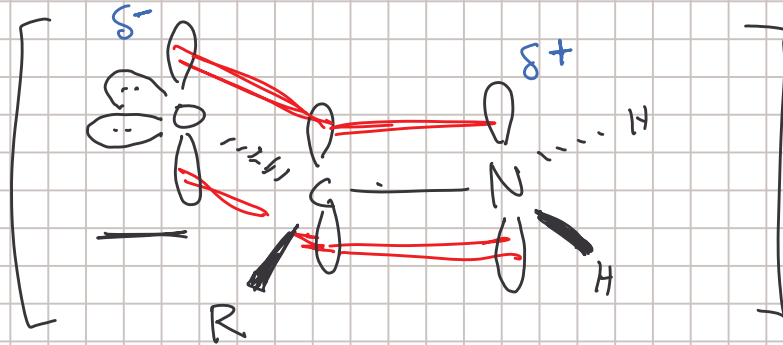
lactone cyclic ester



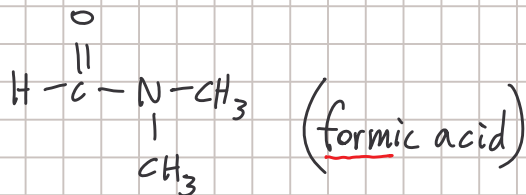
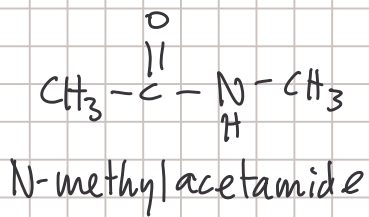
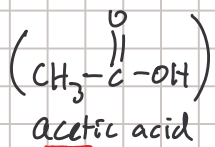
Amides



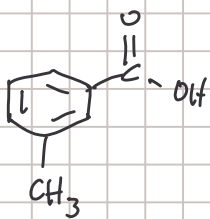
resonance hybrid



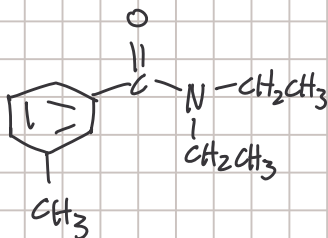
amide N is a relatively weak base



N,N-dimethylformamide

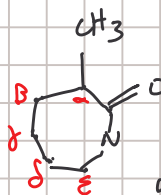


m-toluic acid



N,N-diethyl-m-toluanide (DEET)

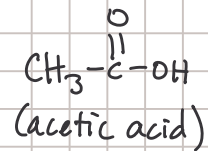
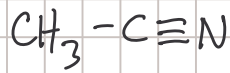
lactam cyclic amide



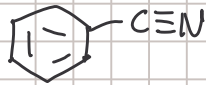
(caproic acid)

α -methyl caprolactam

Nitriles

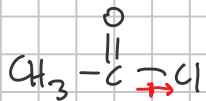


acetonitrile (polar aprotic solvent)

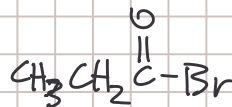


benzonitrile

Acid halides



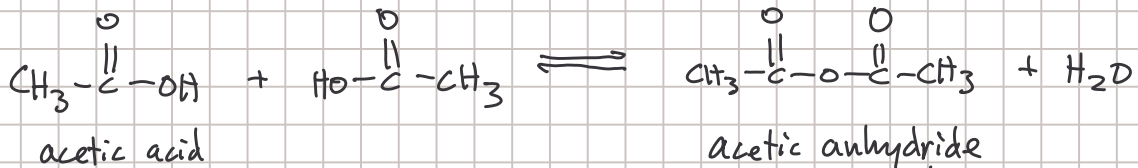
acetyl chloride



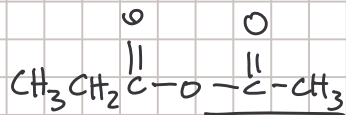
propionyl bromide

Propionic acid

Anhydrides



acetic anhydride
(symmetrical)



mixed anhydride : acetic propionic anhydride

