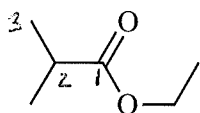


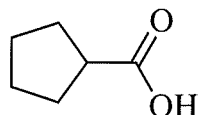
Quiz 3 Key, Chem 2542 F12

1. (3) Circle the correct **IUPAC name** of the following compound:

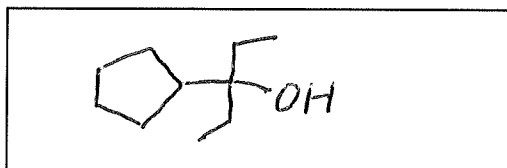


ethyl 2-propanoate ethyl 2-butanoate isopropyl ethanoate
 ethyl 2-methylpropanoate 2-propyl propanoate ethyl isopropylate

2. (5) Draw *line-angle* formula of the **product** in the following reaction (no partial credit):

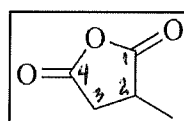


1. CH_3OH (excess), H^+ , heat
 2. $2\text{CH}_3\text{CH}_2\text{MgBr}$; 3. H_2O , HCl



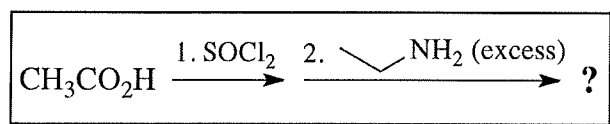
+ CH_3OH

3. (6) Circle the **major product** in each of the following reactions (3 pts each):



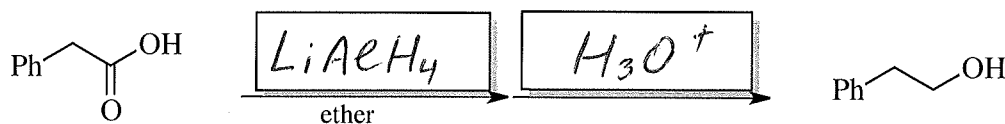
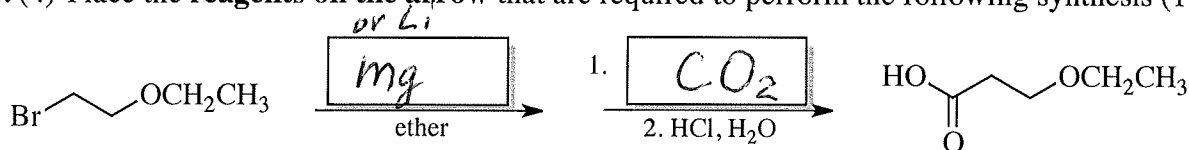
$\xrightarrow{\text{H}_2\text{O}}$?

2-methylpentanoic acid 2-methyl butanoate 4-oxo-2-methylbutanoic acid
 2-methylcyclopentanecarboxylic acid 2-methylbutanedioic acid

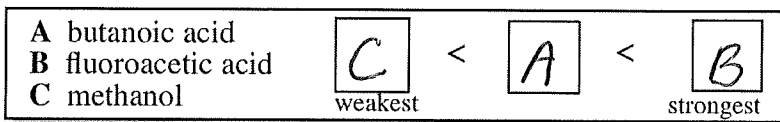


N-methylacetamide ethyl acetate *N*-ethyl acetate
 propanoyl chloride *N*-ethylacetamide methyl acetate

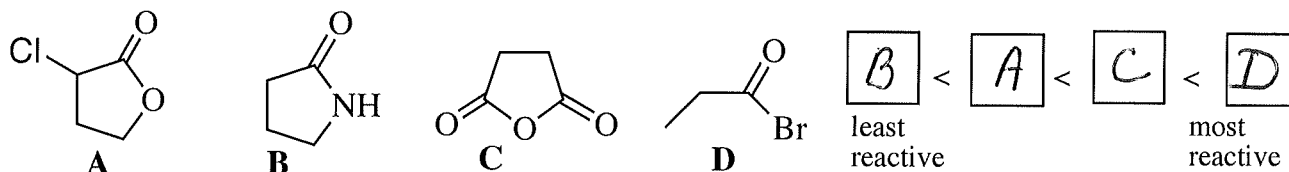
4. (4) Place the **reagents on the arrow** that are required to perform the following synthesis (1 pt each):



5. (3) Arrange the following compounds in order of increasing **acidity** (put letters in the box; 1 pt each box):



6. (4) Arrange the following compounds in order of reactivity for **nucleophilic acyl substitution reaction** (put letters in the box; 1 pt each box):



Overall Score: 25