## Chemistry 2542

## Fall 2012

## Quiz 3

(25 points)

Printed Name (Last, First)

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

3. (6) Circle the major product in each of the following reactions (3 pts each):
? 2-methylpentanoic acid 2-methyl butanoate 4-oxo-2-methylbutanoic acid

$\mathrm{CH}_{3} \mathrm{CO}_{2} \mathrm{H} \xrightarrow{1 . \mathrm{SOCl}_{2}} \xrightarrow{2 . \sim \mathrm{NH}_{2} \text { (excess) }} ?$| $N$-methylacetamide |
| :--- |
| propanoyl chloride | | ethyl acetate $N$-ethylacetamide $\quad N$-ethyl 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):

A

B

C

D

least reactive


## Overall Score:

$\qquad$

