C. CHEMISTRY 122
    CHAPTER #10 QUIZ
    CARBOXYLIC ACIDS

1. Draw structural formulas for each of the following:
   a. 4-Nitrophénylacetic acid
      \[ \text{structure image} \]
   b. 4-Aminobutanoic acid
      \[ \text{structure image} \]
   c. Cis-3-Hexendioic acid
      \[ \text{structure image} \]
   d. Ammonium acetate
      \[ \text{structure image} \]
   e. Sodium valerate
      \[ \text{structure image} \]
   f. Cyclohexane carboxylic acid
      \[ \text{structure image} \]
   g. p-dibromobenzoic acid
      \[ \text{structure image} \]
   h. o-aminobenzoic acid
      \[ \text{structure image} \]

2. Give acceptable names for the following:
   a. \[ \text{structure image} \] 2-aminobutanedioic acid
   b. \[ \text{structure image} \] trans-4-methyl-2-pentenoic acid
   c. \[ \text{structure image} \] 3-carboxylic acid

3. The following compounds have approximately the same molecular weight: propanoic acid, 1-butanol, and diethyl ether. Arrange them in order of increasing boiling point. Give reasons for your order, including the intermolecular forces involved.

4. Arrange these compounds in order of increasing acidity:
   \[ \text{structures image} \]
5. Give products for the following reactions.

a. \[
\text{[Structure] + NaOH} \rightarrow \text{[Product]}
\]

b. \[
\text{[Structure] + LiAlH}_4 \rightarrow \text{[Product]}
\]

c. \[
\text{[Structure] + HCl} \rightarrow \text{[Product]}
\]

d. \[
\text{[Structure] + CH}_3\text{OH} \rightarrow \text{[Product]}
\]