

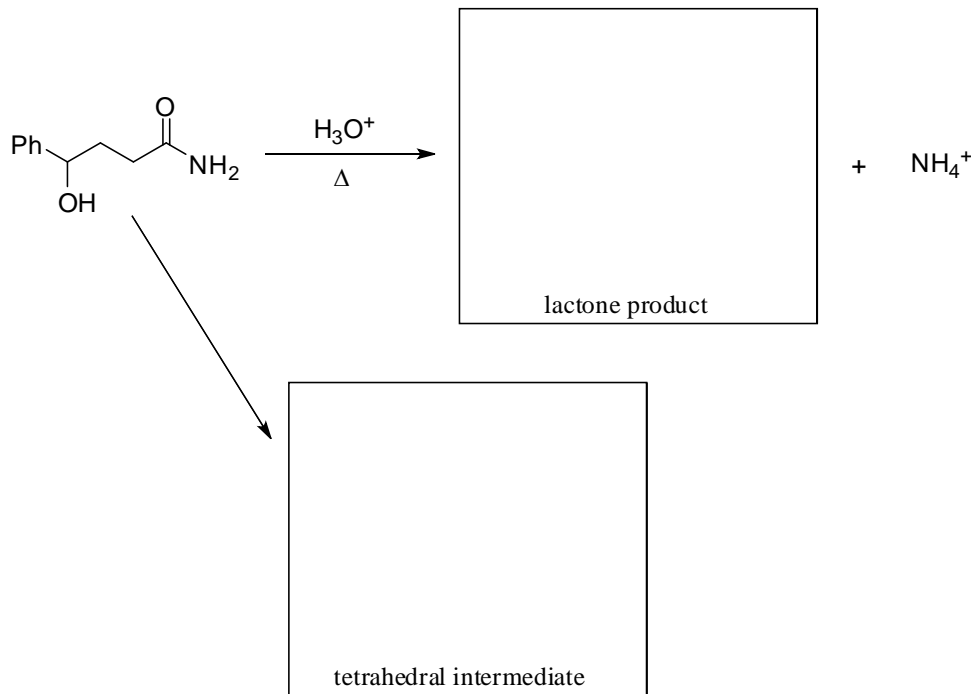
**Organic Chemistry 2**

Quiz #8

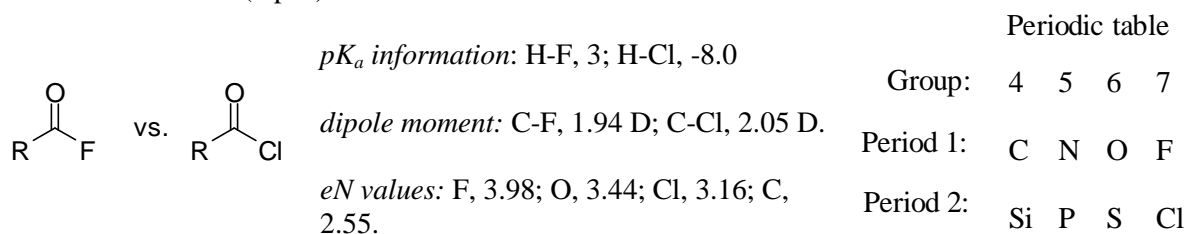
April 6, 2012

Name: \_\_\_\_\_

1. a) Draw the product of the following reaction in the box labeled 'lactone product'.  
 b) Draw the electron flow arrows that lead to the tetrahedral intermediate on the path to the lactone product in the second box. (3 pts.)



2. Select all the reasons that support the conclusion that acid fluorides are **less** reactive acid derivatives than acid chlorides. (3 pts.)



- a) Fluoride ion is a weaker base than chloride ion and therefore F<sup>-</sup> is a better leaving group.
- b) Cl has a weaker bond overlap with C than F due to its valence electrons being in a higher energy level.
- c) F is more electronegative than Cl and that makes it less likely to contribute electrons to a stabilizing resonance form.
- d) C-F is a longer bond than C-Cl and that makes for a greater reactivity.
- e) The greater dipole moment of the C-Cl bond makes the C more electrophilic.