Name

Chem. 122, Sect 007,

Quiz 2, 50 pts, Spring, 2012

1. Give the product of the following reactions and in each case give the full reaction mechanism, showing all of the steps. (20 pts)

L.I.U.

(a)
$$H_{U,C} - C_{CH_3} + H_2SO_4 + HOCH_3$$

(b)
$$CH_3CH_2UCCCCCH_H$$

 $CH_3CH_2H_H$
 $HOCH_2CH_3$
 $HOCH_2CH_3$

2. Which molecule would have a larger equilibrium for hydration? Explain briefly and show the reaction that would occur for the base (NaOH/ H_2O) catalyzed hydration reaction. (10 pts)

$$\begin{array}{cccc}
CI & O & O \\
I & II & II \\
A & CH_3 - C - C - H & B & CH_3CH_2 - C - CH_3 \\
I & CI & CI
\end{array}$$

3. Which of the molecules shown below would give (a) a positive test with Ag^+ ? (b) a negative test with 2,4-DNP? (c) a positive test with chromic acid? (15 pts) (There may be more than one correct answer in each case.)



4. One student isolated a 2,4-DNP derivative for her unknown ketone that had a melting point of 128-136°C. Which is a better match for her unknown, acetone (m.p. 126°C) or Cyclopentanone 9M.P. 142°C)? Explain briefly.