Quiz - April 3, 2001

There is 1 page and 15 pts on this quiz. Please read each question carefully before answering.

1. (4 pts) Predict the favored direction of the equilibrium for each of the following reactions. 

   \[ \text{CIRCLE ONE} \]

   (a) \[ \text{C}_3\text{H}_7\text{CO}_2\text{CH}_3 + \text{NaOH} \rightleftharpoons \text{C}_3\text{H}_7\text{CO}_2\text{CH}_2\text{OH} + \text{H}_2\text{O} \]

   (b) \[ \text{C}_3\text{H}_7\text{CO}_2\text{CH}_3 + \text{Li} \text{N(CH}_3\text{)}_2 \rightleftharpoons \text{C}_3\text{H}_7\text{CO}_2\text{CH}_2\text{Li}^+ + \text{HN(CH}_3\text{)}_2 \]

2. (6 pts) Provide the products of the following reactions. If there is more than one product, predict which will be major.

   (a) \[ \text{a}) \]

   (b) \[ \text{b}) \]

   (c) \[ \text{c}) \]

3. (5 pts) Provide a mechanism for the following transformation.

   \[ \text{O} \text{CH}_3 \text{CH}_2 \text{H}^+ \]