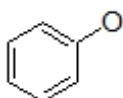


Name: \_\_\_\_\_

**Organic I Lecture**  
**Spring 2012**  
**Quiz #3**  
(10 points)

1. Draw all important resonance structures for the following radical species. (3 points, problem 4-44)



2. If a one step reaction has a late transition state is it endothermic or exothermic? (1 points)
3. Based on the following theoretical reaction, provide a rate equation for a reaction that is second order and bimolecular. (2 points)



4. Provide two possible termination steps resulting from treatment of methane with chlorine and light. (4 points)