Exercise 11: Resonance and Diels-Alder

1. Draw the resonance structures for the following. There may be more than one resonance structure. For each compound, circle the resonance structure that is the most stable; circle all of them if they are all stable.

   a.

   b.

   c.

   d.
2. Predict the product and draw the mechanism for the following reactions:

a. 

\[ \text{Hint: There are two products (constitutional isomers).} \]

b. 

\[ \text{30°C} \]