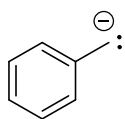


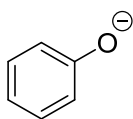
Name: \_\_\_\_\_

1. Circle the letter corresponding to the **weakest base**? (1 point)

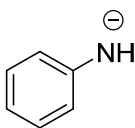
a.



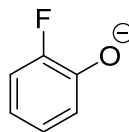
b.



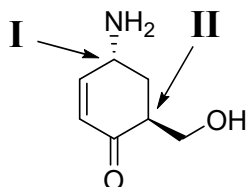
c.



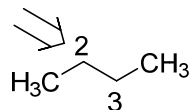
d.



2. Identify the absolute configuration (R or S) for each stereocenter. (1 point)

a. **I** = S and **II** = Sb. **I** = R and **II** = Rc. **I** = S and **II** = Rd. **I** = R and **II** = S

3. a. Draw a Newman projections looking down the C2-C3 bond of butane corresponding to the **highest** and **lowest** energy conformations.  
b. Label each Newman projection as **eclipsed**, **gauche** or **anti**. (4 points)



4. a. Draw both chair conformations for the following molecule.  
b. Label the lower energy conformation and briefly explain your choice. (4 points)

