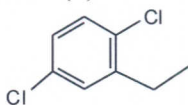
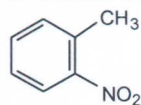
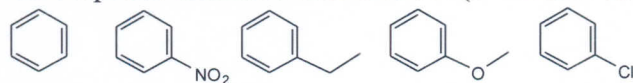


Organic Chemistry-2342-Quiz 2

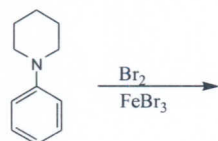
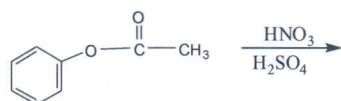
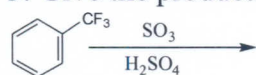
1. Name the following compounds. (2)



2. Arrange the following compounds in order of decreasing reactivity towards electrophilic aromatic substitution. (1 = most reactive) (5)



3. Give the products of the following reactions.(3)



4. Describe how the following groups donate and/or withdraw.(3)

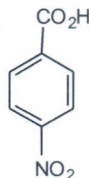
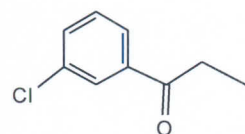
CH₃

OH

NO₂

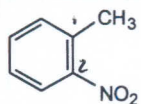
5. Why do activating groups speed up electrophilic aromatic substitution reactions relative to benzene? (2)

6. Show how the following compounds from benzene (5).

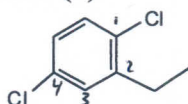


Organic Chemistry-2342-Quiz 2

1. Name the following compounds. (2)



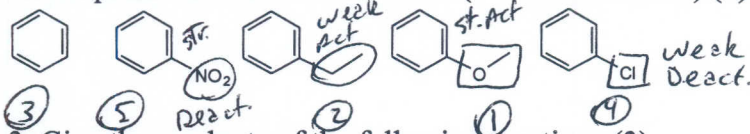
ortho-nitrotoluene
2-nitrotoluene



1,4-dichloro-2-ethylbenzene

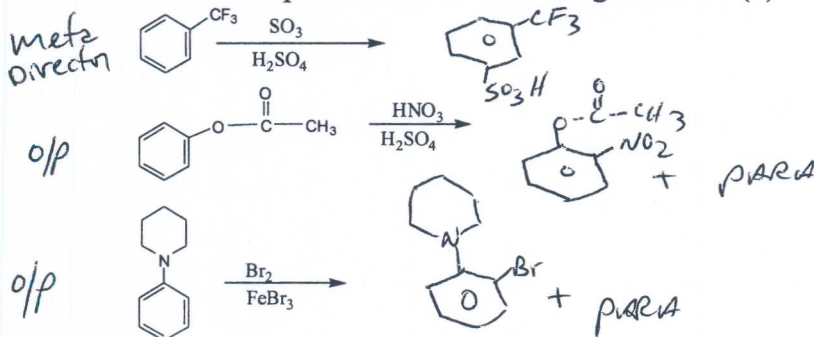
1 pt ea.

2. Arrange the following compounds in order of decreasing reactivity towards electrophilic aromatic substitution. (1 = most reactive) (5)



1 pt for ea. correct.

3. Give the products of the following reactions. (3)



4. Describe how the following groups donate and/or withdraw. (3)

CH₃ donates e⁻ by induction

OH donates e⁻ by resonance, withdraws e⁻ by induction

NO₂ withdraws e⁻ by resonance + induction.

5. Why do activating groups speed up electrophilic aromatic substitution reactions relative to benzene? (2)

Activating grps are electron donating and stabilize the cation intermediate. A more stable intermediate will lead to a lower activation barrier and faster rxn.

6. Show how the following compounds from benzene (5).

