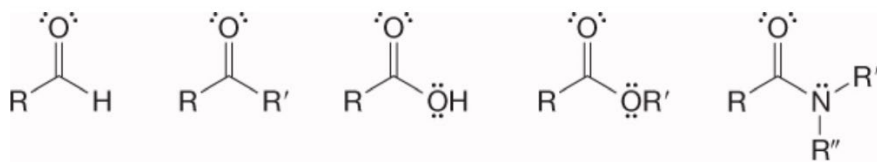
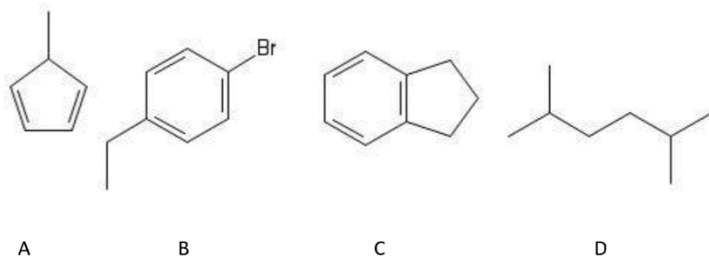


Topics 3 and 4 Review

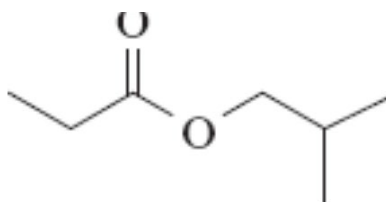
1. Classify these carbonyl compounds:



3. Which of the following molecules would give 4 signals on an ^1H NMR and a ^{13}C NMR?



2.



3. Name the following compound:
4. What compounds can be reduced by NaBH_4 ?
 5. Is DIBAL-H used for reduction or oxidation?
 6. What does LAH reduce esters to?
 7. What does LAH reduce nitriles to?
 8. What does K_2CrO_4 oxidize primary alcohols to?

9. T/F K_2CrO_4 can oxidize tertiary alcohols to carboxylic acids.
10. T/F PCC is a great reductant.
11. T/F DMP can oxidize a secondary alcohol to a ketone.
12. T/F acyl chlorides and anhydrides can be reacted to form amides without a catalyst.
13. T/F Anhydrides are the most reactive carboxylic acid derivative.
14. T/F Hemiacetals are a great protecting group for ketones.
15. T/F Organocuprates usually add an ethyl group to the compound of interest.
16. T/F The Wittig Reaction uses ylides to form an alkene from a carbonyl.