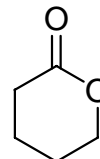
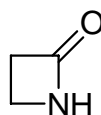
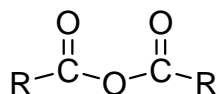
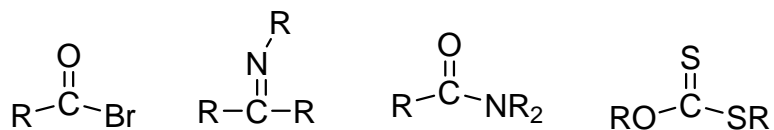
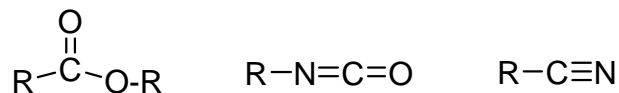


NAME: _____

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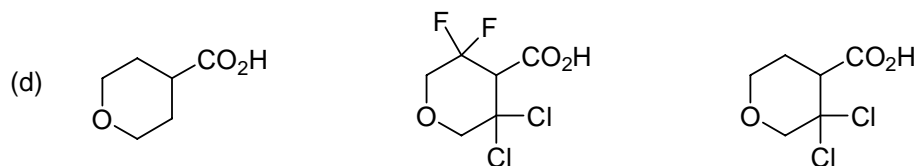
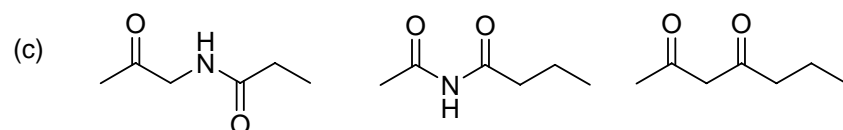
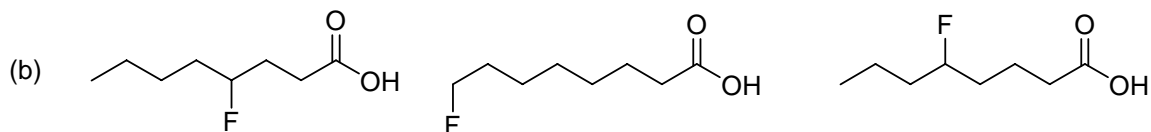
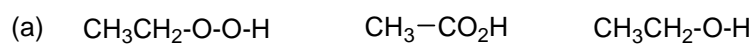
- 1) Name the general class of organic compounds that each of these molecules belong to. (15pts)



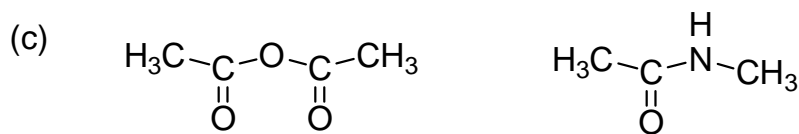
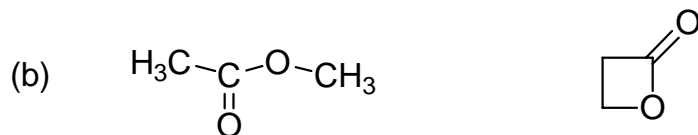
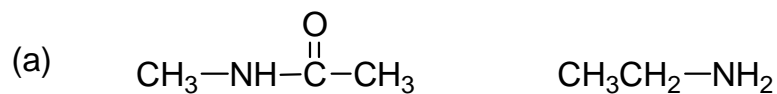
- 2) Put a cross through a molecule which is also called a Schiff Base (2pts)

Circle the molecule with the active functionality of Penicillins. (2pts)

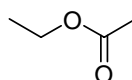
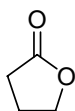
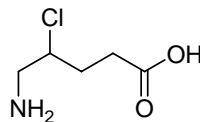
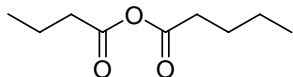
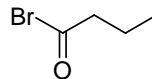
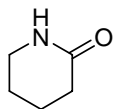
3) Circle the strongest acid in the following sets. (12pts)



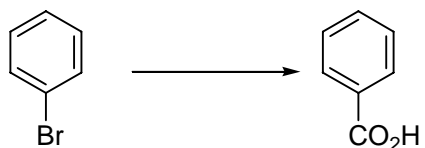
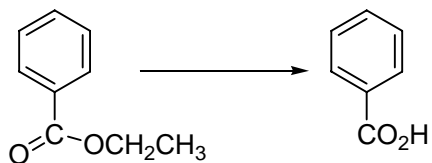
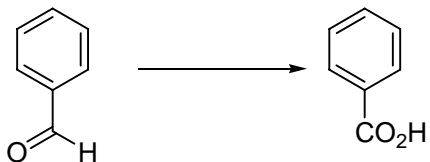
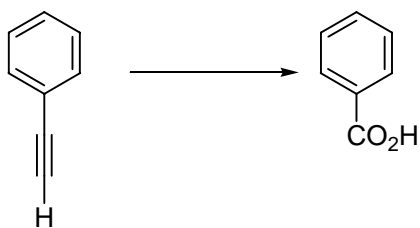
4) Circle the more reactive molecule with respect to nucleophilic acyl substitution. (6pts)



5) Name the following compounds in IUPAC acceptable terms. (20pts)

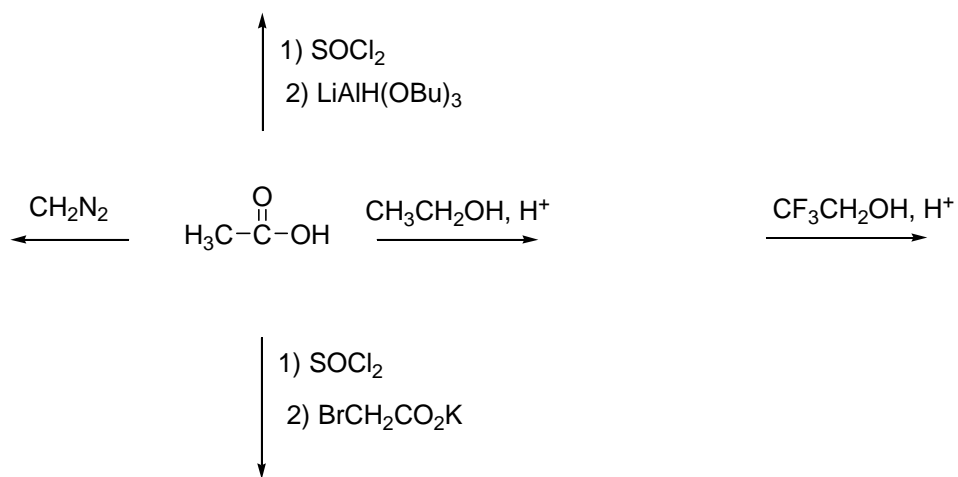


6) Benzoic acid can be made from a wide variety of benzene derivatives. Fill in the missing reagents. (12pts)

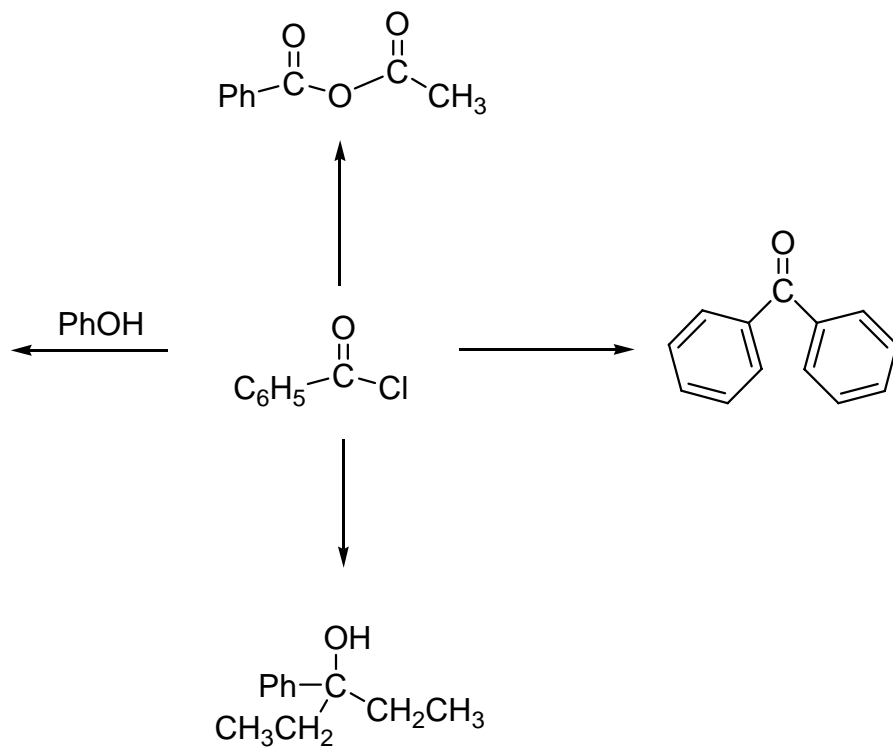


(7) Write the mechanism for the reaction of ammonia with an ester, yielding a primary amide. (7pts)

(8) Provide the five products. (10pts)



9) (i) Fill in all the missing products or reagents. (8pts)



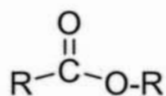
(ii) Draw the mechanism for one of the above reactions in part (9i). (6pts)

BONUS QUESTION (2 points)

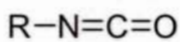
Last weekend Dr. Roche bought a new car - what color is it?
(*one word answer*)

NAME: TERRY FIYEDTo **not** have your graded script placed outside my office please check this box

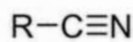
- 1) Name the general class of organic compounds that each of these molecules belong to. (15pts)



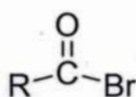
Ester



Isocyanate



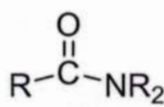
Nitrile



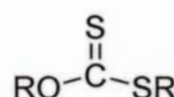
Acid Bromide



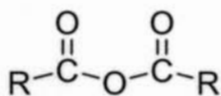
Imine



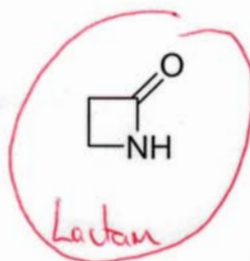
Amide



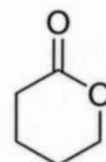
Xanthate



Anhydride



Lactam

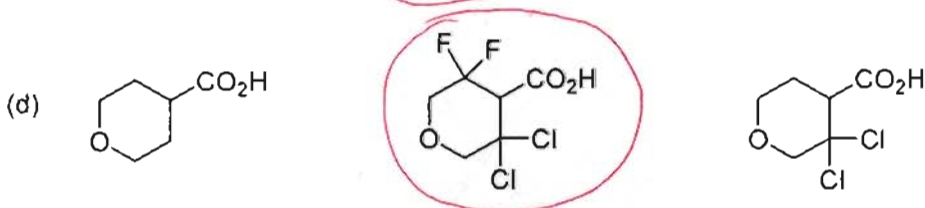
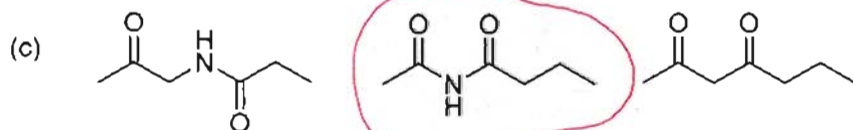
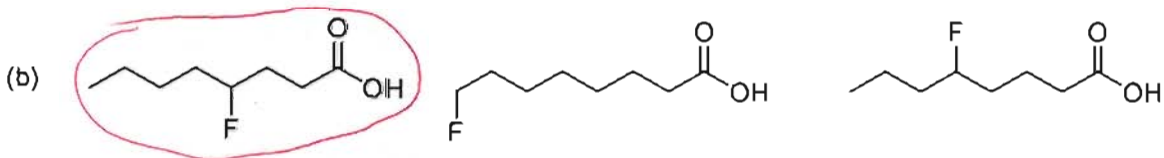


Lactone

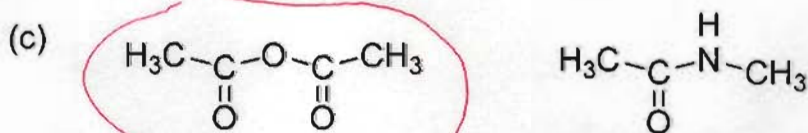
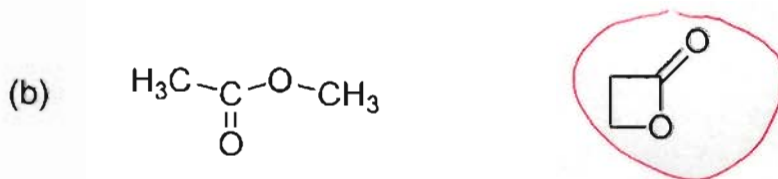
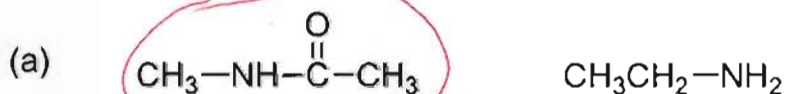
- 2) Put a cross through a molecule which is also called a Schiff Base (2pts)

Circle the molecule with the active functionality of Penicillins. (2pts)

3) Circle the strongest acid in the following sets. (12pts)

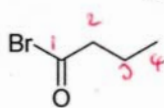
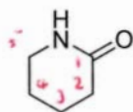


4) Circle the more reactive molecule with respect to nucleophilic acyl substitution. (6pts)



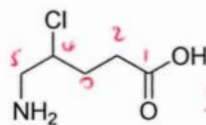
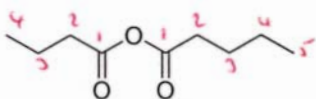
5) Name the following compounds in IUPAC acceptable terms. (20pts)

Sarino-~~pentanoic~~
acid lactam

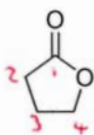


Butanoyl
bromide

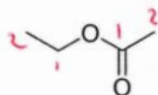
Pentanoic butanoic
anhydride



5-amino-4-chloro-pentanoic
acid

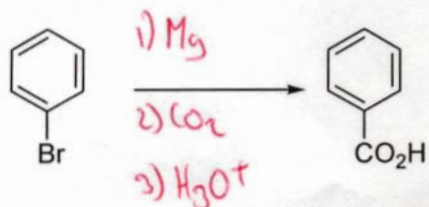
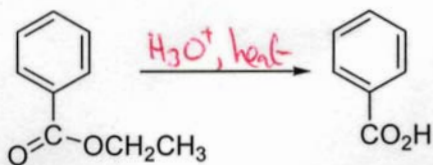
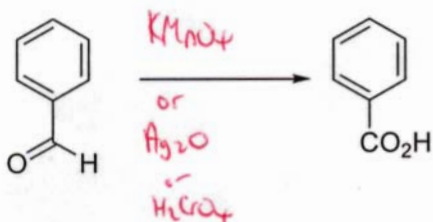
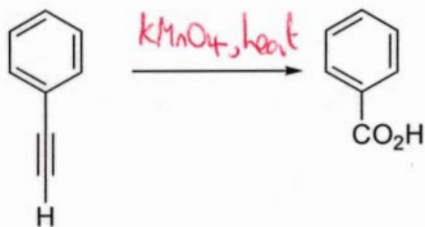


4-Hydroxybutanoic acid lactone

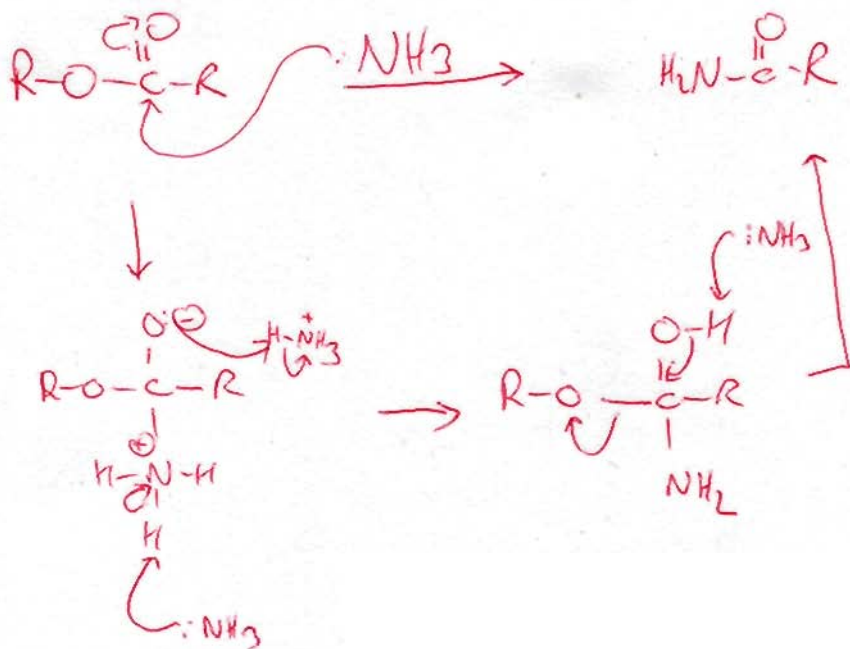


Ethylethanoate

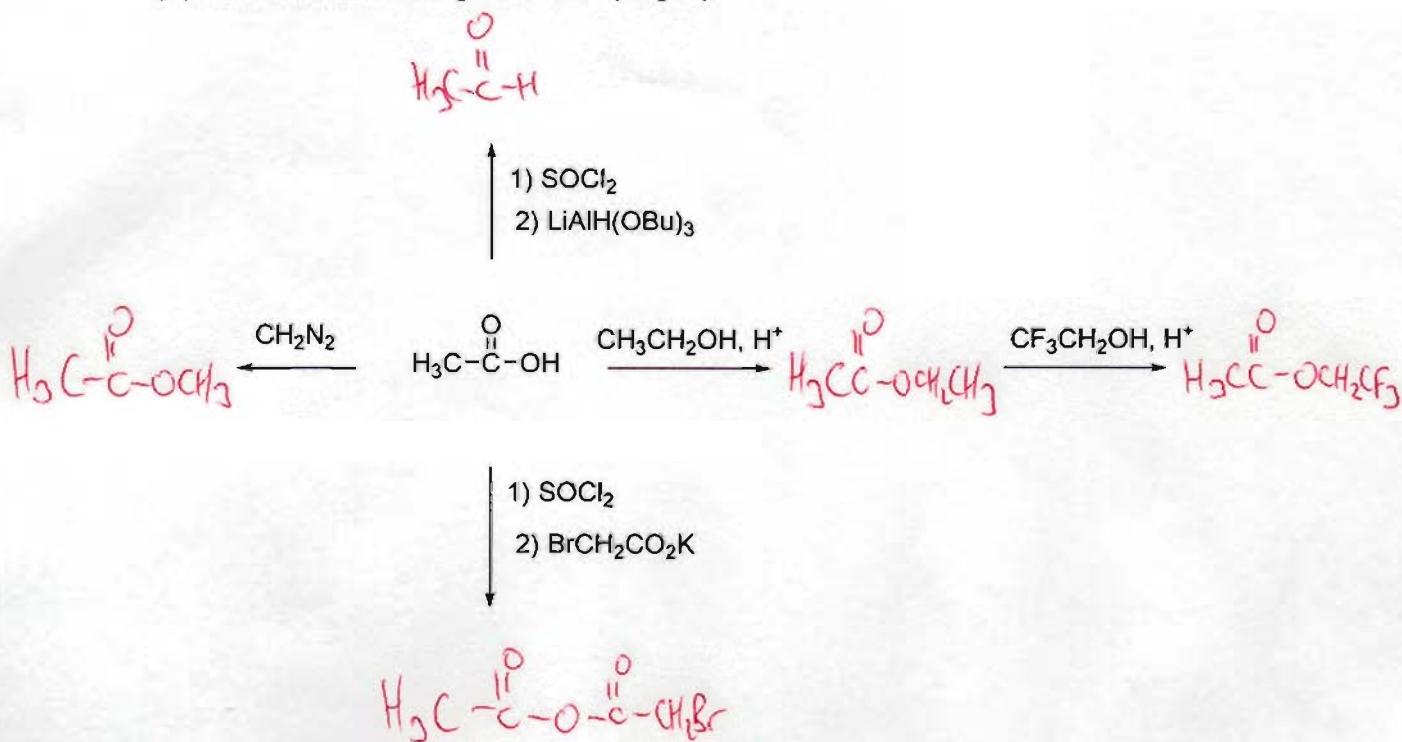
6) Benzoic acid can be made from a wide variety of benzene derivatives.
Fill in the missing reagents. (12pts)



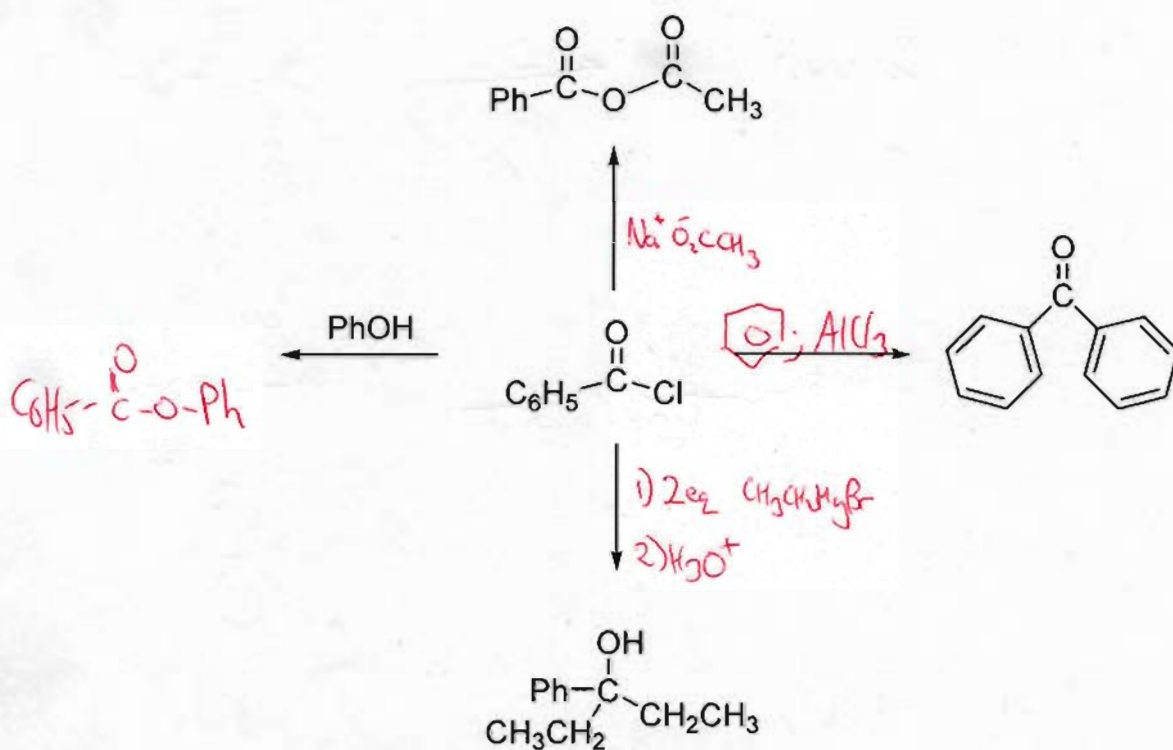
(7) Write the mechanism for the reaction of ammonia with an ester, yielding a primary amide. (7pts)



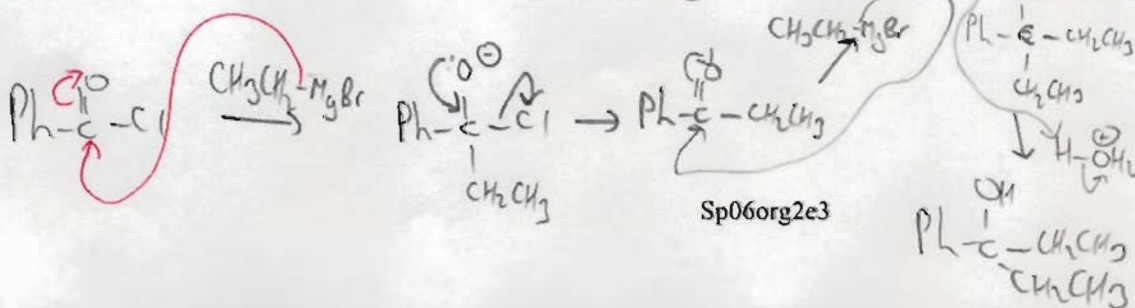
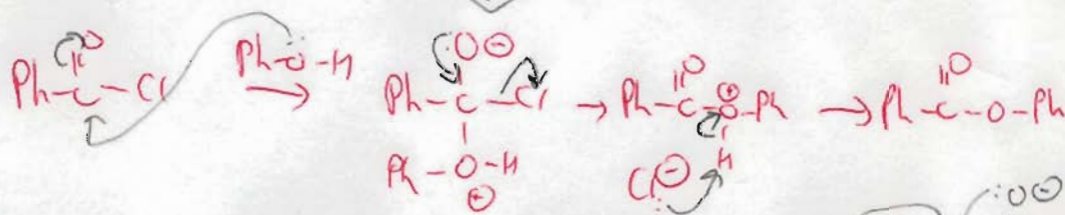
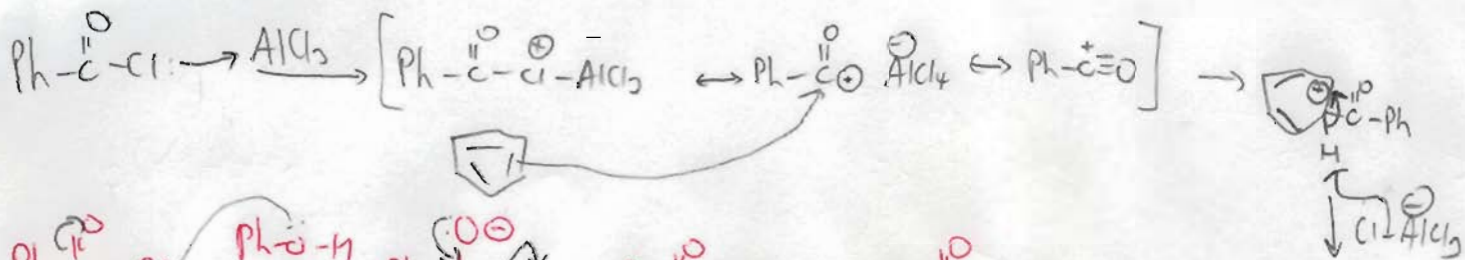
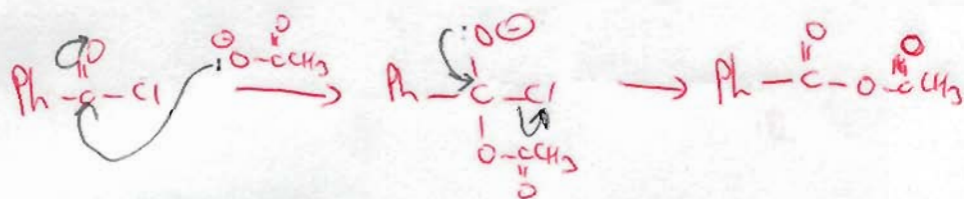
(8) Provide the five products. (10pts)



9) (i) Fill in all the missing products or reagents. (8pts)



(ii) Draw the mechanism for one of the above reactions in part (9i). (6pts)



****BONUS QUESTION (2 points)****

Last weekend Dr. Roche bought a new car - what color is it?
(*one word answer*)

Black.