Organic Chemistry II CHM 3150
Dr. Laurie S. Starkey, Cal Poly Pomona
Chapter 18, Aromatic Reactions (Ch 17/18 Part 3) – Practice Problems

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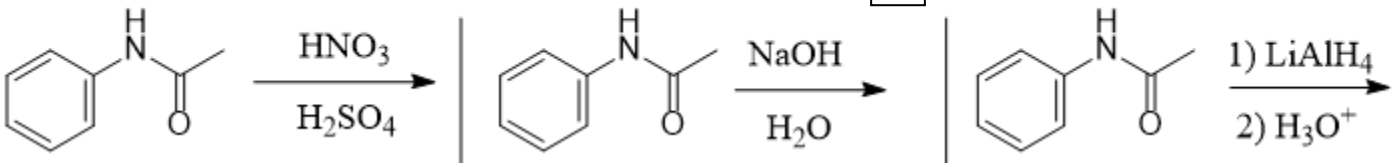
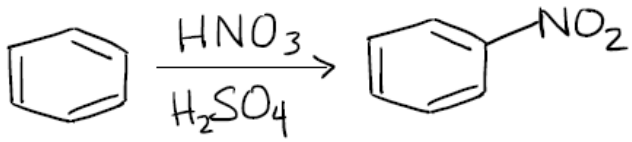
https://pollev.com/lauriestarke263

Predict the major products for the following reactions. **1**



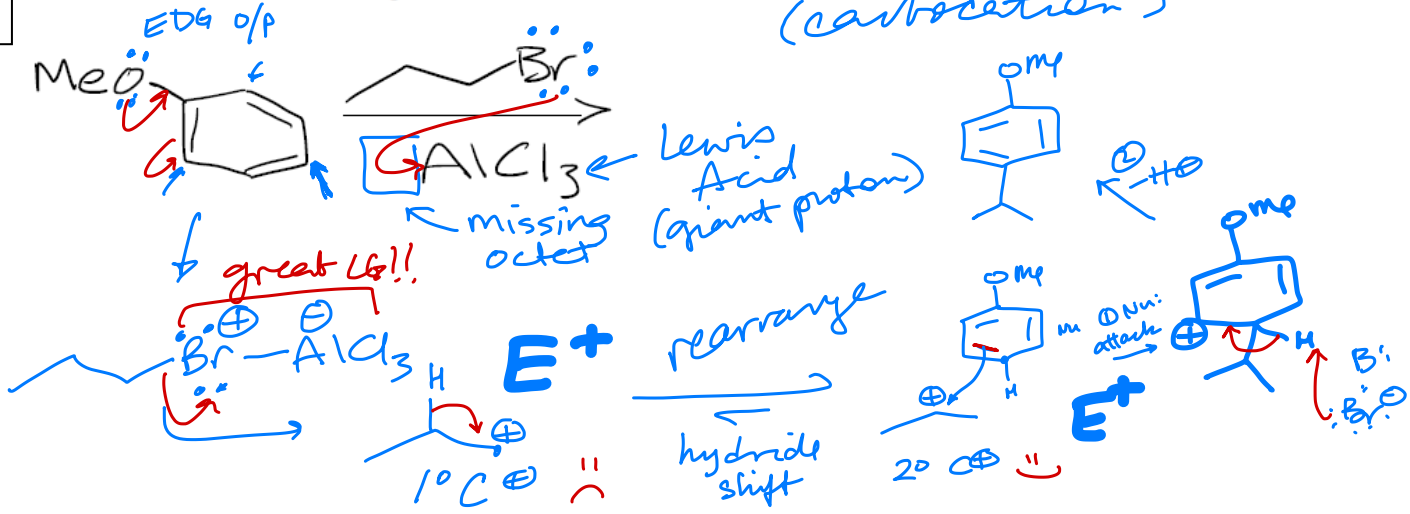
2 Which of the following is NOT a likely step in the mechanism of the following reaction?



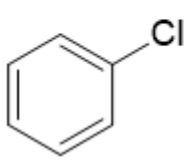
3 Predict the major product and provide a mechanism for the following reaction.

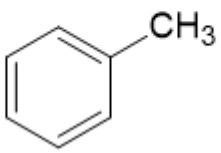
4

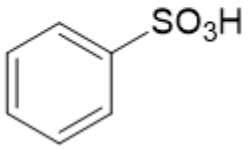
Friedel-Craft Alkylation (carbocation)



5 Provide the reagents needed to convert benzene into each of the given target compounds.

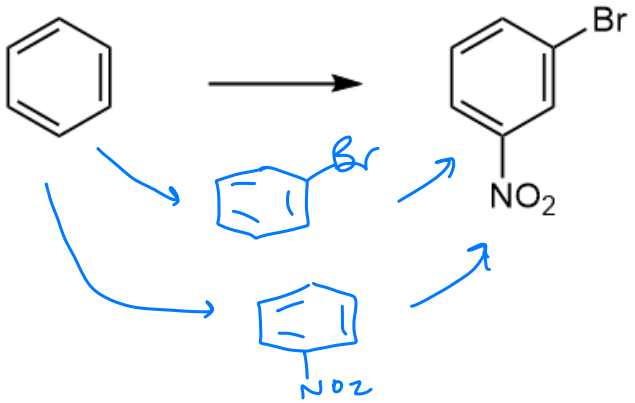




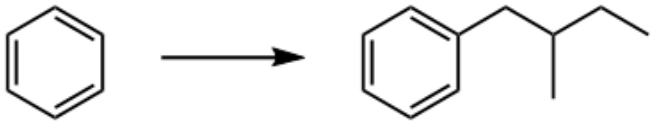


Provide the reagents necessary to transform the given starting material into the desired product.

6



8

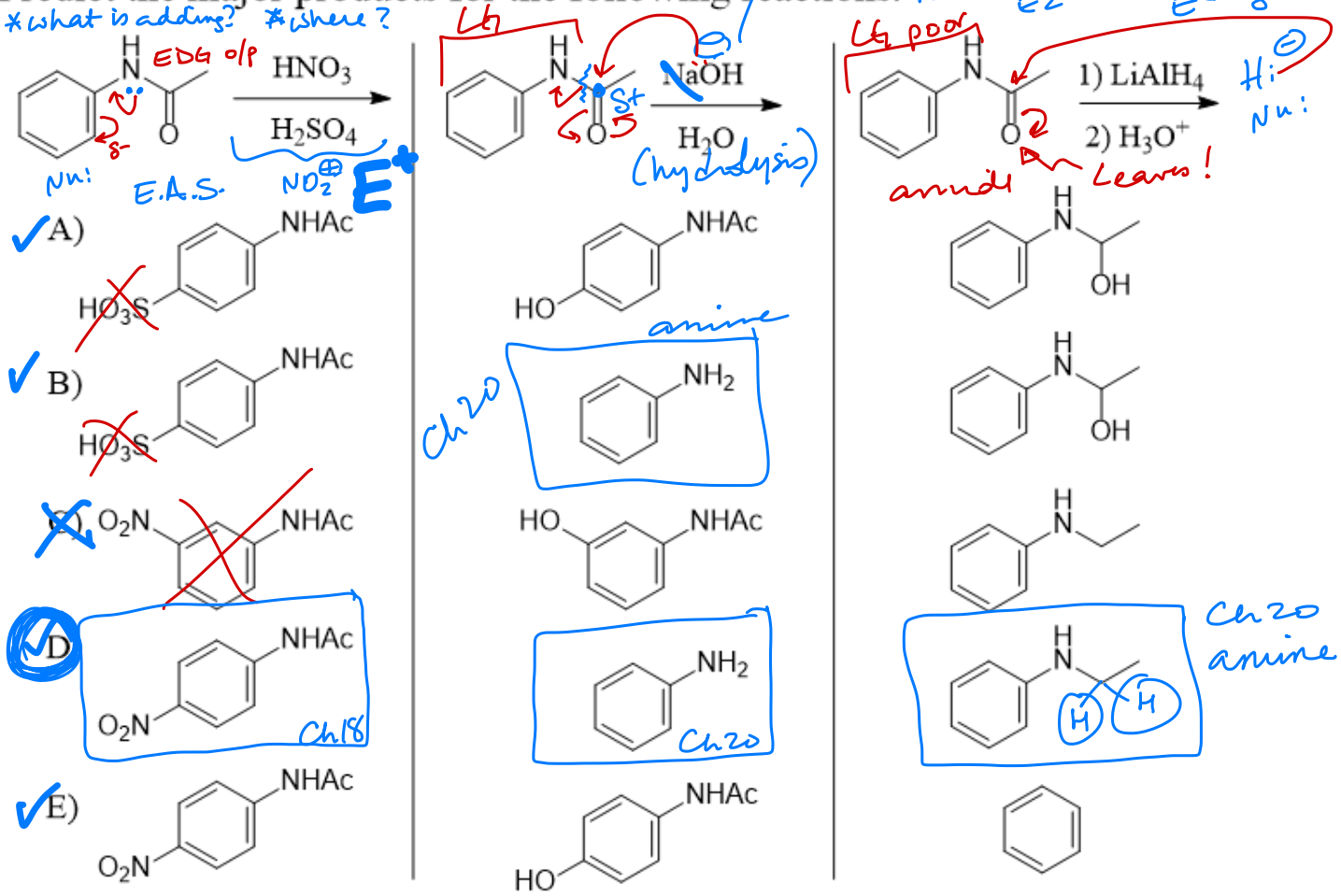


7

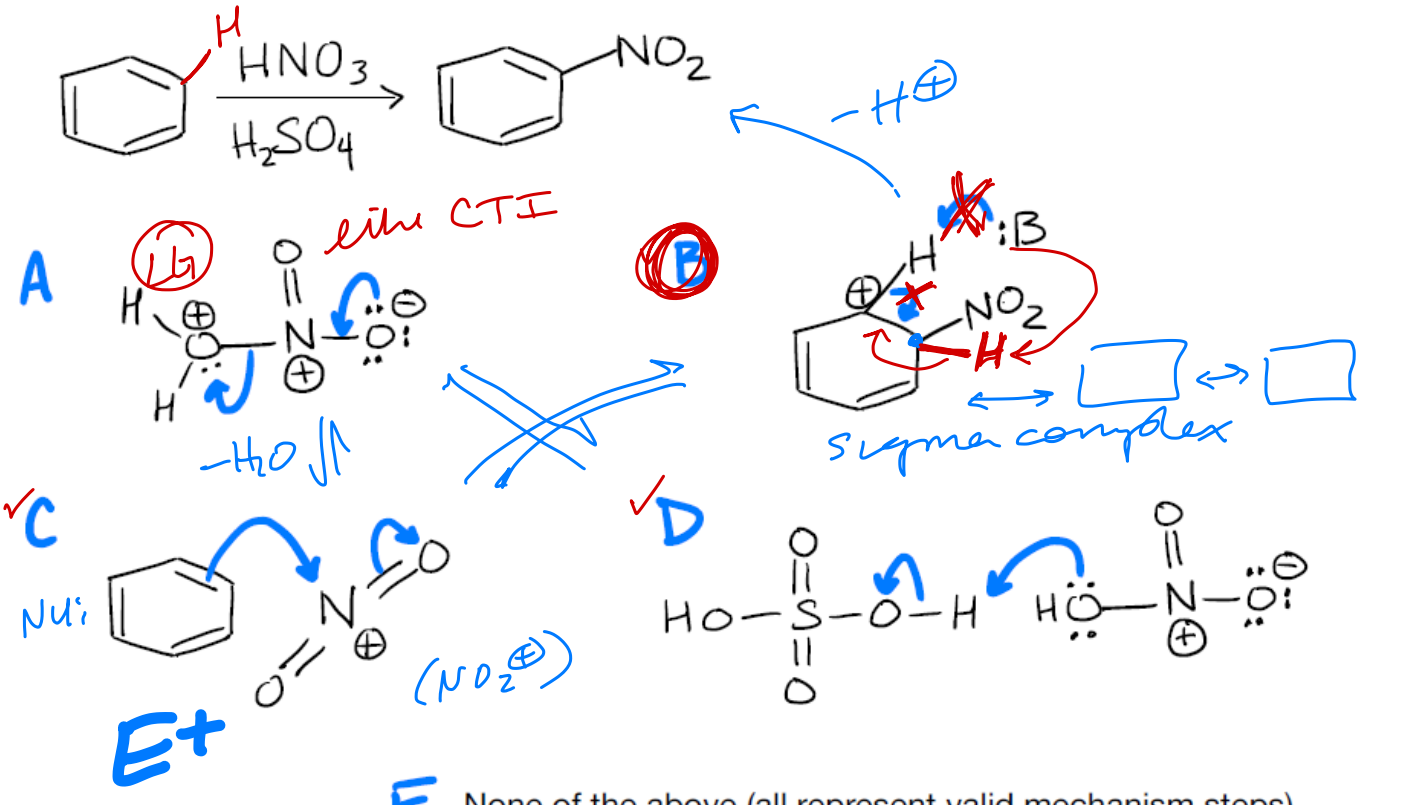
F.C. Acylation
⇒ ? + ?

Predict the major products for the following reactions.

1



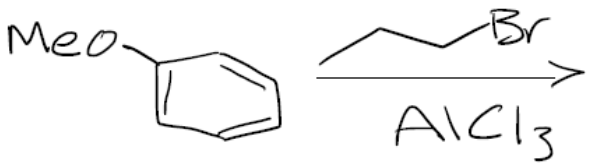
2 Which of the following is NOT a likely step in the mechanism of the following reaction?



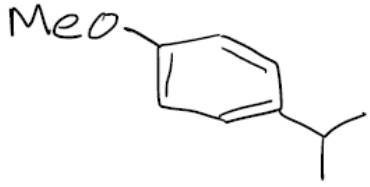
E None of the above (all represent valid mechanism steps).

3

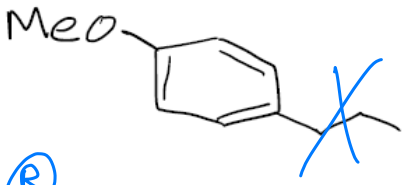
Predict the major product for the following reaction.



A 67

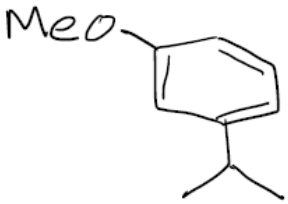


B 15

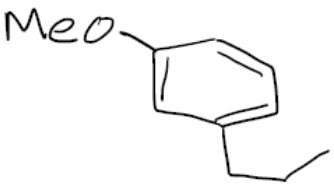


Isopropyl R

C 15

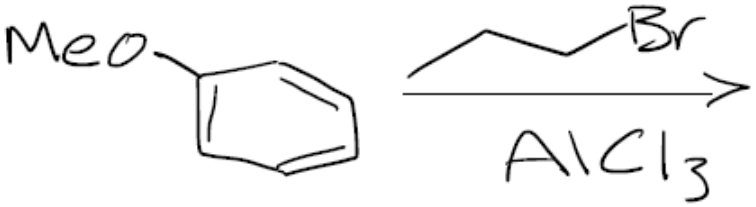


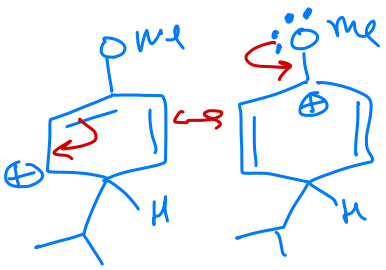
D



4

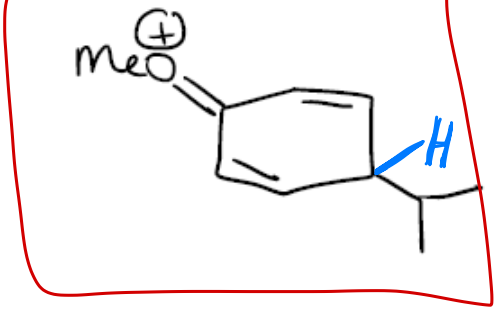
Which of the following is NOT a likely intermediate in the mechanism of the following reaction?





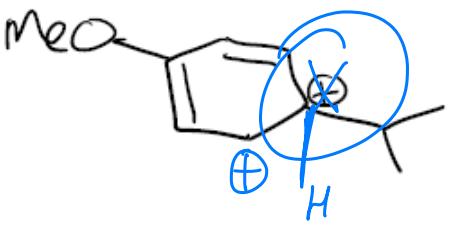
extra resonance form

So A



B

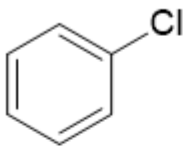
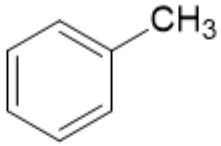
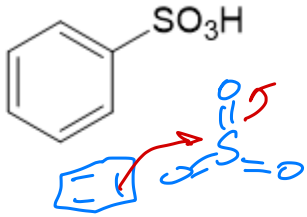
25 C



D 25

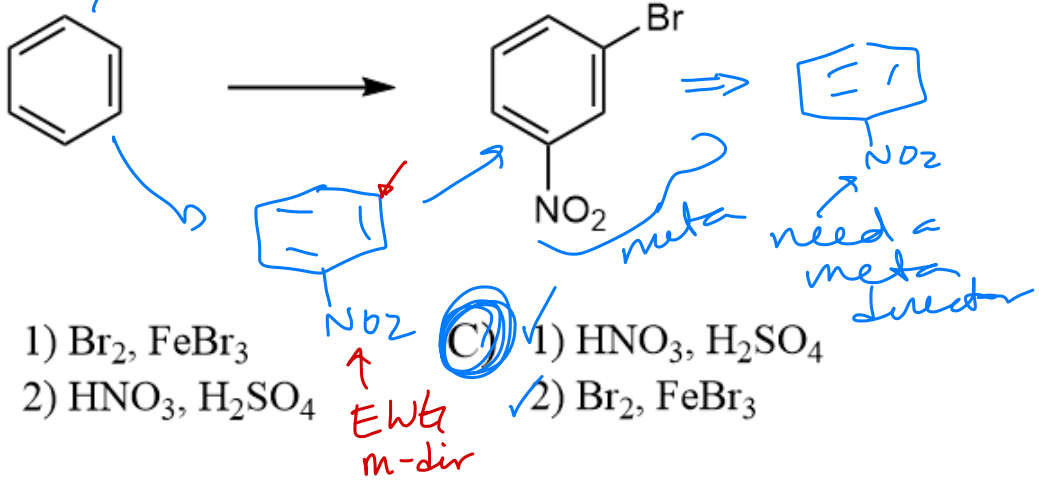
5 ✱ Exam III: list of reagents is provided!!

Provide the reagents needed to convert benzene into each of the given target compounds.

			
A)	Cl_2, $FeCl_3$	MeMgBr	HNO_3, H_2SO_4
B)	Cl_2, $FeCl_3$	MeI, $AlCl_3$	SO_3, H_2SO_4
C)	HCl, NaCl	MeMgBr	SO_3, H_2SO_4
D)	HCl, NaCl	MeI, $AlCl_3$	HNO_3, H_2SO_4
E)	HCl, NaCl	MeI, $AlCl_3$	SO_3, H_2SO_4

6

Provide the reagents necessary to transform the given starting material into the desired product.



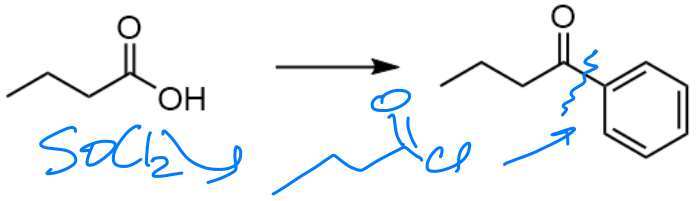
A) 1) Br_2, $FeBr_3$
2) HNO_3, H_2SO_4

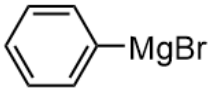
B) 1) CH_3Br, $AlCl_3$
2) HNO_3, H_2SO_4

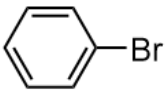
C) 1) HNO_3, H_2SO_4
2) Br_2, $FeBr_3$

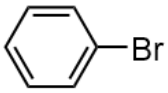
D) 1) HNO_3, H_2SO_4
2) CH_3Br, $AlCl_3$

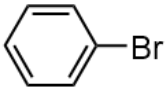
7 Provide the reagents necessary to transform the given starting material into the desired product.



A) 1) 
2) H_3O^+

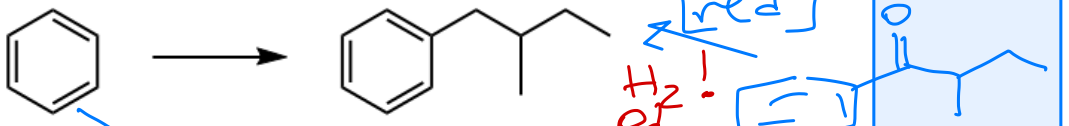
B) 1) Mg
2) 

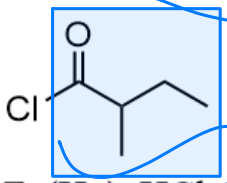
C) 1) $LiAlH_4$
2) 
3) PCC

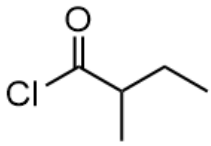
D) 1) $SOCl_2$
2) 
+ $AlCl_3$

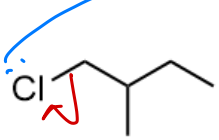
E) 1) $SOCl_2$
2) 
+ $AlCl_3$

8 Provide the reagents necessary to transform the given starting material into the desired product.



I 1) 
+ $AlCl_3$
2) Zn(Hg), HCl*

II 1) 
+ $AlCl_3$
2) NH_2NH_2, TsOH
3) KOH, H_2O, heat *

III 
+ $AlCl_3$

A) I only
B) II only
C) III only
D) I and II only
E) I, II and III