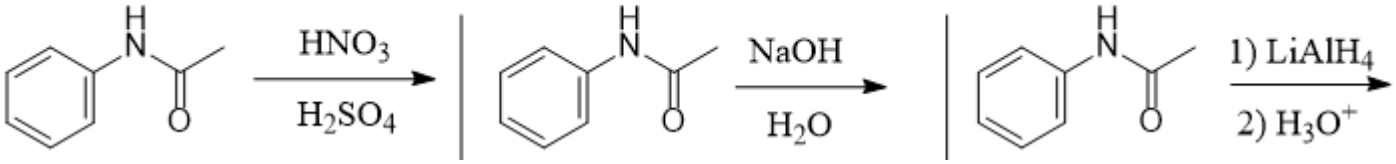
Organic Chemistry II CHM 3150
Dr. Laurie S. Starkey, Cal Poly Pomona
Chapter 18, Aromatic Reactions (Ch 17/18 Part 3) – Practice Problems

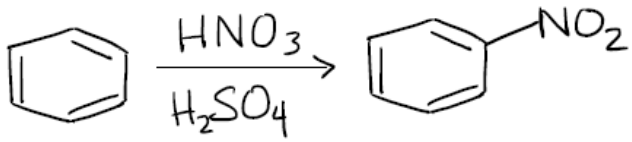
For clicker question voting, go to:
https://pollev.com/lauriestarke263

1

Predict the major products for the following reactions.

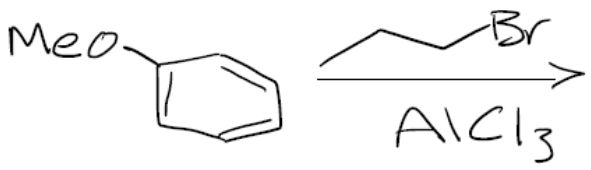


2 Which of the following is NOT a likely step in the mechanism of the following reaction?

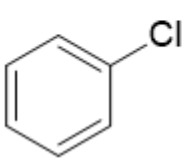


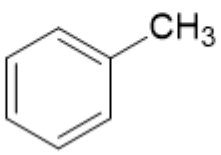
3 Predict the major product and provide a mechanism for the following reaction.

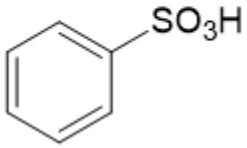
4



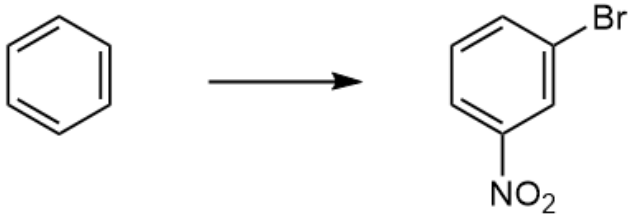
5 Provide the reagents needed to convert benzene into each of the given target compounds.



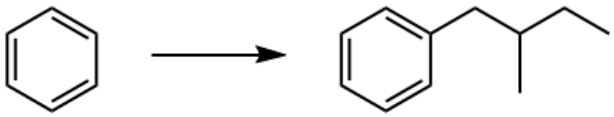


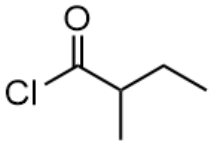


6 Provide the reagents necessary to transform the given starting material into the desired product.

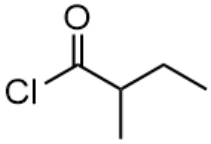


7 Provide the reagents necessary to transform the given starting material into the desired product.



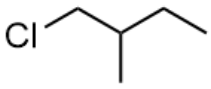
I 1)  + $AlCl_3$

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

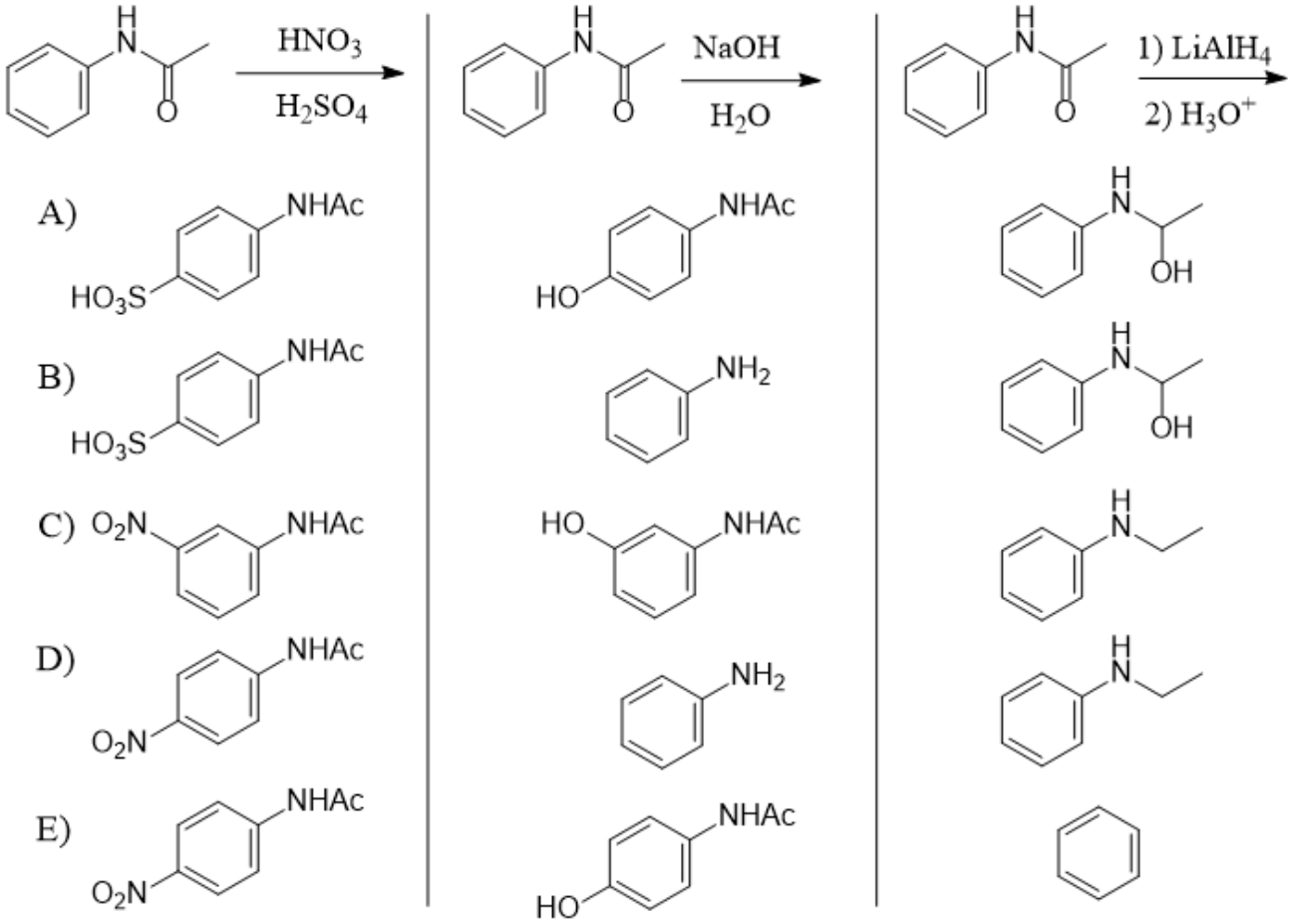
D) I and II only

E) I, II and III

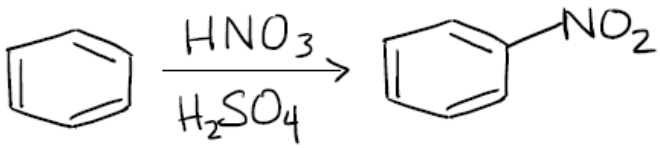
8 

Predict the major products for the following reactions.

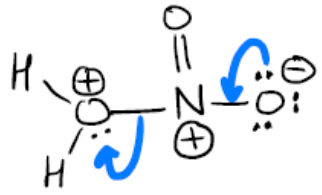
1



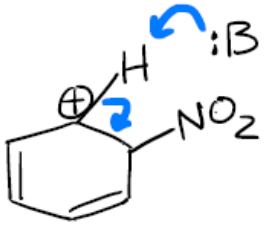
2 Which of the following is NOT a likely step in the mechanism of the following reaction?



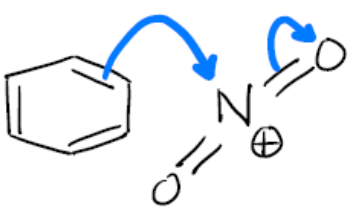
A



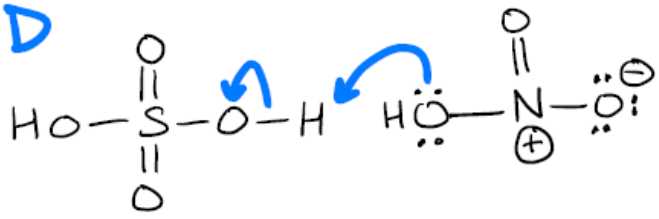
B



C



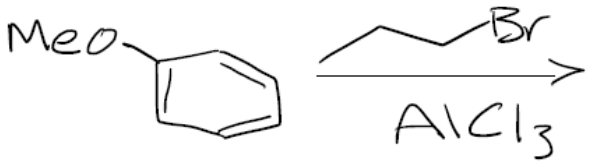
D

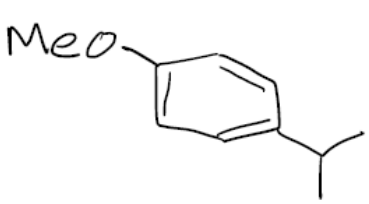


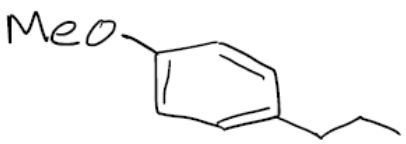
E None of the above (all represent valid mechanism steps).

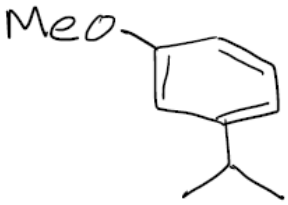
3

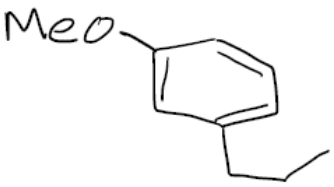
Predict the major product for the following reaction.



A 

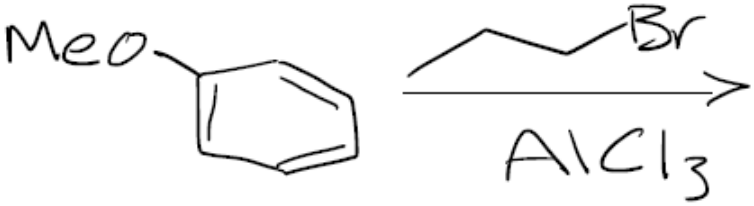
B 

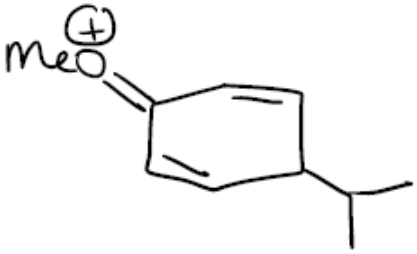
C 

D 

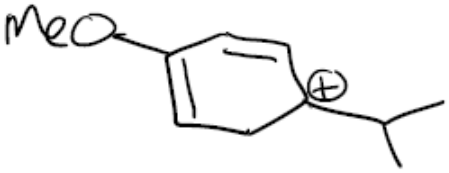
4

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



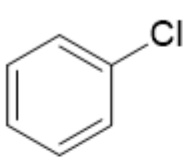
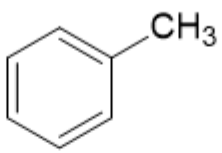
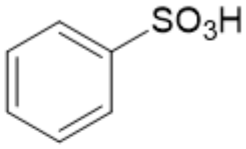
A 

B 

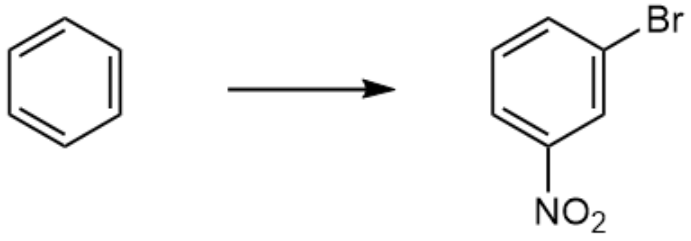
C 

D 

5 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.



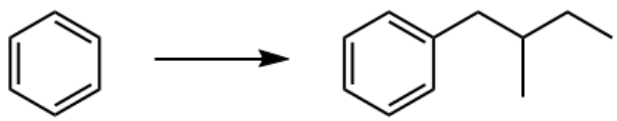
A) 1) Br_2, $FeBr_3$
2) HNO_3, H_2SO_4

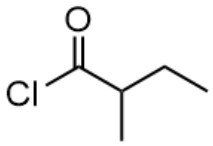
B) 1) CH_3Br, $AlCl_3$
2) HNO_3, H_2SO_4

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

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

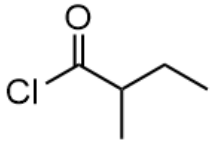
7 Provide the reagents necessary to transform the given starting material into the desired product.



I  + $AlCl_3$

1)

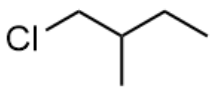
2) Zn(Hg), HCl

II  + $AlCl_3$

1)

2) NH_2NH_2, TsOH

3) KOH, H_2O, heat

III  + $AlCl_3$

A) I only

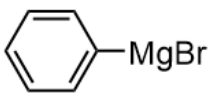
B) II only

C) III only

D) I and II only

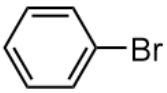
E) I, II and III

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

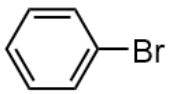
A) 1) 

2) H_3O^+

B) 1) Mg

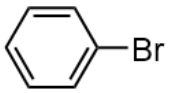
2) 

C) 1) $LiAlH_4$

2) 

3) PCC

D) 1) $SOCl_2$

2) 

+ $AlCl_3$

E) 1) $SOCl_2$

2) 

+ $AlCl_3$