Sp2006 Org II Quiz #2 Ch 17 (20 questions for 20 points)

NAME:_____

If you object to your graded script being placed in a box outside my office then check here_____

(1-10) are True or False.

1) Toluene (methylbenzene) is a 6π Hückel aromatic compound.

2) Conversion of benzene to nitrobenzene proceeds via electrophilic aromatic substitution.

3) Para substitution means a 1,4 arrangement on a benzene ring.

4) The formation of the sigma complex for an electrophilic aromatic substitution is exothermic.

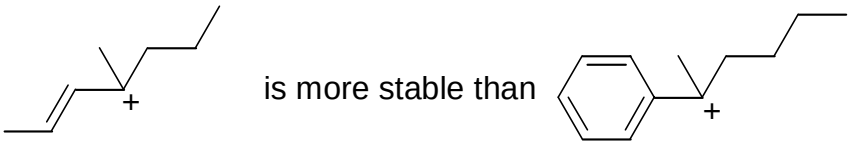
5) Oxidation of phenols generates quinones.

6) Birch reduction reaction conditions include hydrogen gas and a catalyst.

7) Oxidative cleavage of n-butylbenzene with hot, basic potassium permanganate produces a benzoic acid potassium salt.

8) Iodine is a meta directing, activating substituent for electrophilic aromatic substitution

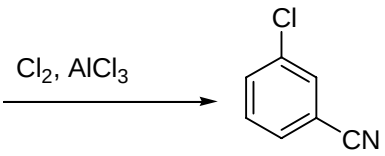
9)



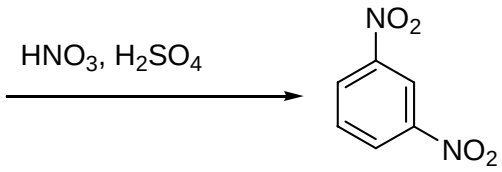
10) Catalysts such as $AlCl_3$ and $FeBr_3$ are consumed during the EAS reactions, and are really better described as reagents, not catalysts.

11-12) Give the starting materials for the following reactions.

11)

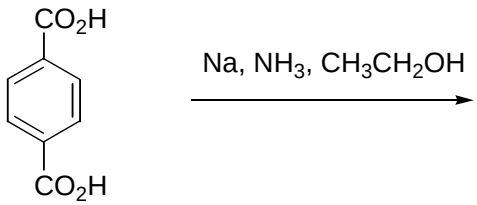


12)

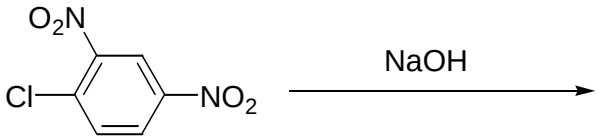


13-14) Draw the products.

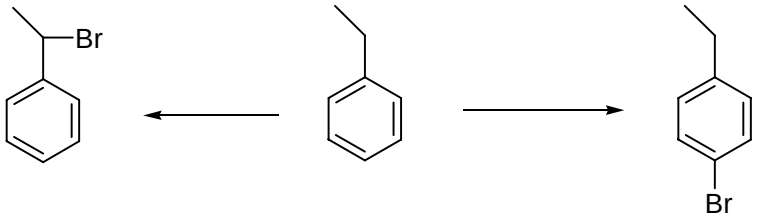
13)



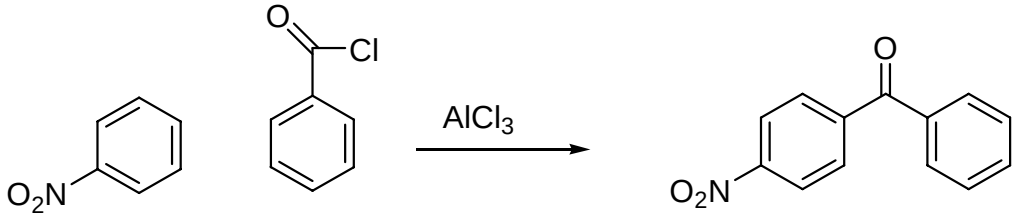
14)



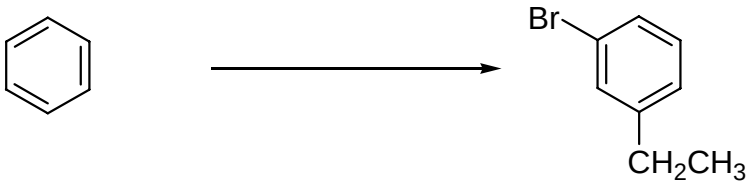
15-16) Give the reagents for both of these substitutions.



17-18) State **two** fundamental problems with the below Friedal Crafts acylation reaction.



19-20) Bearing in mind that $-CH_2CH_3$ and –Br are both ortho/para directors, design a synthetic route for the below transformation.



Sp2006 Org II Quiz #2 Ch 17 **(20 questions for 20 points)**

NAME: ANNIE SOUL

If you object to your graded script being placed in a box outside my office then check here_____

(1-10) are True or False.

1) Toluene (methylbenzene) is a 6π Hückel aromatic compound. TRUE

2) Conversion of benzene to nitrobenzene proceeds via electrophilic aromatic substitution. TRUE

3) Para substitution means a 1,4 arrangement on a benzene ring. TRUE

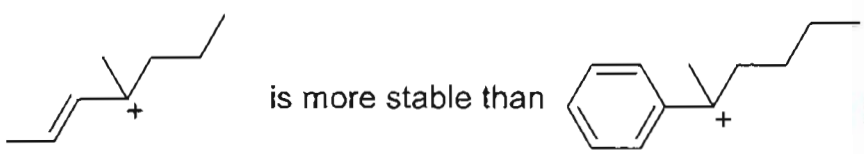
4) The formation of the sigma complex for an electrophilic aromatic substitution is exothermic. FALSE

5) Oxidation of phenols generates quinones. TRUE

6) Birch reduction reaction conditions include hydrogen gas and a catalyst. FALSE

7) Oxidative cleavage of n-butylbenzene with hot, basic potassium permanganate produces a benzoic acid potassium salt. TRUE

8) Iodine is a meta directing, activating substituent for electrophilic aromatic substitution FALSE

9)  is more stable than FALSE

10) Catalysts such as $AlCl_3$ and $FeBr_3$ are consumed during the EAS reactions, and are really better described as reagents, not catalysts. FALSE

11-12) Give the starting materials for the following reactions.

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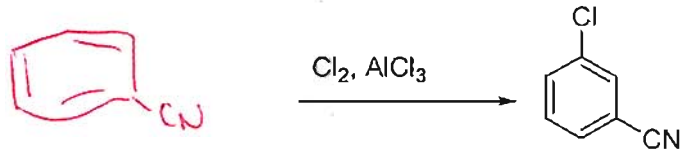

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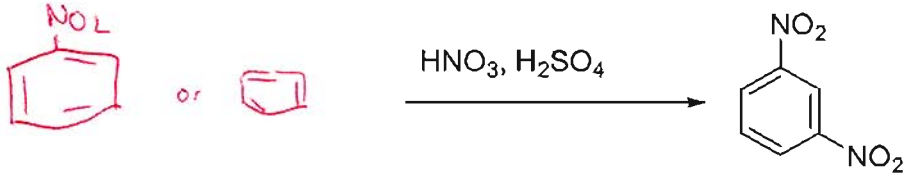

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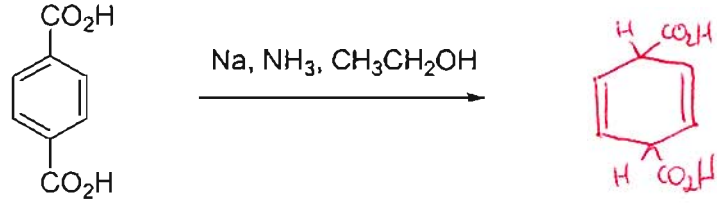
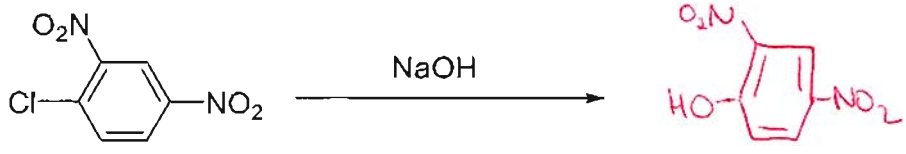


14)



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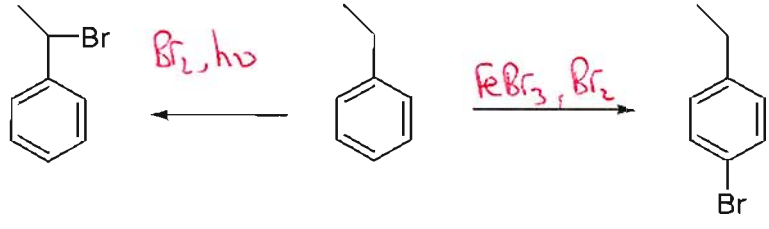

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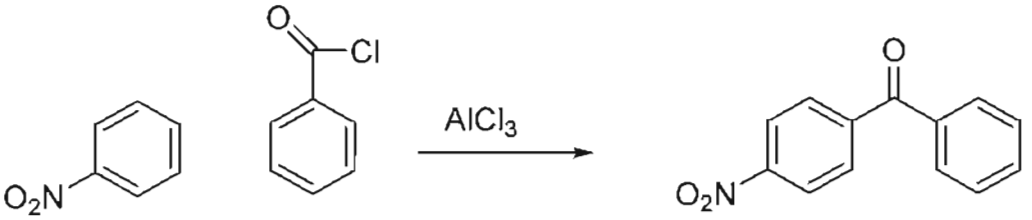

1) F.C. reactions do not work on deactivated aromatics (like O_2N-C$_6$H$_5$)

2) $-NO_2$ group is meta directing, whereas the product is para.

19-20) Bearing in mind that $-CH_2CH_3$ and –Br are both ortho/para directors, design a synthetic route for the below transformation.